January 31, 2012

Secretary Richard K. Sullivan, Jr.
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Director Maeve Vallely Bartlett
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Re: Boston-Logan International Airport Runway Safety Area Improvements Project
Notice of Project Change (EEA File #14442)

Dear Secretary Sullivan and Director Bartlett:

On behalf of the Massachusetts Port Authority (Massport), I am pleased to submit a Notice of Project Change (NPC) for the Boston-Logan International Airport Runway Safety Area Improvements Project (EEA No. 14442) for public review in accordance with the MEPA regulations. This document has been prepared to respond to all of the requirements for a NPC in accordance with the Massachusetts Environmental Policy Act (MEPA) regulations. Specifically, as we work to complete the Runway 33L Runway Safety Area (RSA) improvements later this year, Massport now proposes to replace the outer approximately 1,900 feet of the existing timber light pier that extends approximately 2,400 feet southeast of Runway-End 33L. The current Runway 33L RSA project is replacing the inner 500 feet of the light pier. The existing timber pier would be replaced with a new structure of the same length in essentially the same footprint, using concrete pilings. The in-kind replacement will reduce the total number of pilings significantly (from over 500 to approximately 170). As part of the reconstruction, the new light pier will also be constructed to accommodate upgraded navigational aids. As described in the attached materials, the pier improvements will include new navigational aids that will facilitate implementation of the reduced aircraft approach minimums previously reviewed and approved by the FAA in a Record of Decision dated August 2, 2002, for the Logan Airside Improvements Planning Project (Airside Project/EOEA #10458).

The proposed replacement of the Runway 33L light pier does not trigger any of the MEPA thresholds. However, Massport has elected to submit an NPC for review under the MEPA regulations. The proposed project change does meet the requirements for the Secretary to find the project change is insignificant according to 301 CMR 11.10(6). The light pier replacement is expected to be Categorically Excluded by the FAA from further review under the National Environmental Policy Act (NEPA). As part of the cumulative effects section of the Draft Environmental Assessment/Environmental Impact Report, there was brief reference to the future replacement of the remaining 33L timber light pier from the seaward edge of the new RSA deck to the end of the pier. Although the remainder of the light pier was not proposed for replacement as part of the 33L RSA project at that time primarily for funding availability, replacement was
deemed “reasonably foreseeable” due to the advanced age of the timber structure and therefore disclosed as part of the environmental review process.

As construction of the Runway 33L RSA project has proceeded, several factors have triggered consideration of replacement of the remaining timber light pier at this time. Pile-driving at the runway end requires that the runway be closed since the tall cranes penetrate protected FAA aircraft arrival and departure surfaces. The ongoing 33L RSA project will replace the first 500 feet of the existing light pier. Reconstruction of the remaining light pier in 2012 while the runway is already closed for completion of the RSA project minimizes the need for additional/extended runway closures. Completing the pier replacement concurrently with the in-water work at Runway 33L for the RSA project uses resources efficiently and reduces the period of time in-water work would occur at Runway 33L. In addition, current economic conditions make work at this time more cost-effective, particularly when conducted as an add-on to the existing RSA project. Accordingly, Massport proposes to accelerate the replacement of the remaining timber light pier by conducting that work during the full runway shutdown already scheduled in 2012 for completion of the Runway 33L RSA improvements.

The 20-day public comment period for the NPC would begin on February 8, 2012, with the publication of the next Environmental Monitor, and would conclude on February 28, 2012. All parties on the distribution list are being sent a complete copy of the NPC package or notice of availability and the document will be available for inspection at a number of public libraries and on Massport’s website (www.massport.com).

Please feel free to contact me at (617) 568-3524 if you have any questions about the light pier replacement project.

Very truly yours,

Massachusetts Port Authority

Stewart Dalzell, Deputy Director
Environmental Planning and Permitting

cc:  A. Canaday/MEPA
     L. Richards/Massport
     R. Doucette/FAA
     L. Standley/VHB
Boston-Logan International Airport
Runway Safety Area Improvements Project
Replacement of the Runway 33L Light Pier

Notice of Project Change

Boston-Logan International Airport
East Boston, Massachusetts
EEA No. 14442

Prepared for Massachusetts Port Authority

Prepared by Vanasse Hangen Brustlin, Inc.
Watertown, Massachusetts

January 31, 2012
Contents

Notice of Project Change (NPC) Form and Figures

NPC Description

NPC Distribution List

Attachment A: Secretary’s Certificate on the Final EIR, EEA No. 14442
Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs ■ MEPA Office

Notice of Project Change

The information requested on this form must be completed to begin MEPA Review of a NPC in accordance with the provisions of the Massachusetts Environmental Policy Act and its implementing regulations (see 301 CMR 11.10(1)).

EEA # 14442

Project Name: Boston-Logan International Airport Runway Safety Area Improvements Project

Street Address: HarborSide Drive

Municipality: East Boston

Universal Transverse Mercator Coordinates: UTM 19, 46 93 783N, 3 34 992E

Latitude: 42° 22’ 44” N

Longitude: 71° 00’ 16” W (for Runway 33L)

Estimated commencement date: Summer 2012

Estimated completion date: Fall 2012

Project Type: Transportation

Status of project design: 30 %complete

Proponent: Massachusetts Port Authority

Street Address: One HarborSide Drive, Suite 200S

Municipality: East Boston

State: MA

Zip Code: 02128

Name of Contact Person: Stewart Dalzell

Firm/Agency: Massachusetts Port Authority

Street Address: One HarborSide Drive, Suite 200S

Municipality: East Boston

State: MA

Zip Code: 02128

Phone: 617-568-3524

Fax: (617) 568-3518

E-mail: SDalzell@massport.com

With this Notice of Project Change, are you requesting:

a Single EIR? (see 301 CMR 11.06(8))

Yes ☐ No ☐

a Special Review Procedure? (see 301CMR 11.09)

Yes ☐ No ☐

a Waiver of mandatory EIR? (see 301 CMR 11.11)

Yes ☐ No ☐

a Phase I Waiver? (see 301 CMR 11.11)

Yes ☐ No ☐

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

The proposed change to the EEA No. 14442 does not meet or exceed any of the MEPA review thresholds.

Which State Agency Permits will the project require?

The proposed project requires a MA Chapter 91 License and a MA Wetlands Protection Act Order of Conditions.

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:

Effective January 2011
This is a project funded by in part by Massport. The total cost of the project is approximately $10M. The light pier is partially on land owned by Massport and partially within Commonwealth tidelands. No land transfer is required.

PROJECT INFORMATION

In 25 words or less, what is the project change? The RSA project has been amended to include replacing the existing deteriorated Runway 33L timber light pier.

See full project change description beginning on page 3.

Date of publication of availability of the ENF in the Environmental Monitor: (Date: 07/08/2009)

Was an EIR required? □ Yes ☑ No; if yes, was a Draft EIR filed? □ Yes ☑ No (Date: July 31, 2010)

was a Final EIR filed? □ Yes ☑ No (Date: January 31, 2011)

was a Single EIR filed? □ Yes ☑ No (Date: )

Have other NPCs been filed? □ Yes (Date(s): ) ☑ No

If this is a NPC solely for lapse of time (see 301 CMR 11.10(2)) proceed directly to ATTACHMENTS & SIGNATURES.

PERMITS / FINANCIAL ASSISTANCE / LAND TRANSFER

List or describe all new or modified state permits, financial assistance, or land transfers not previously reviewed: The proposed project requires a new Chapter 91 License and a new Wetlands Protection Act Order of Conditions. It does not require any new or modified financial assistance or land transfers.

Are you requesting a finding that this project change is insignificant? A change in a Project is ordinarily insignificant if it results solely in an increase in square footage, linear footage, height, depth or other relevant measures of the physical dimensions of the Project of less than 10% over estimates previously reviewed, provided the increase does not meet or exceed any review thresholds. A change in a Project is also ordinarily insignificant if it results solely in an increase in impacts of less than 25% of the level specified in any review threshold, provided that cumulative impacts of the Project do not meet or exceed any review thresholds that were not previously met or exceeded. (see 301 CMR 11.10(6)) □ Yes ☑ No; if yes, provide an explanation of this request in the Project Change Description below.

FOR PROJECTS SUBJECT TO AN EIR

If the project requires the submission of an EIR, are you requesting that a Scope in a previously issued Certificate be rescinded? □ Yes ☑ No; if yes, provide an explanation of this request.

If the project requires the submission of an EIR, are you requesting a change to a Scope in a previously issued Certificate?
SUMMARY OF PROJECT CHANGE PARAMETERS AND IMPACTS

<table>
<thead>
<tr>
<th>Summary of Project Size &amp; Environmental Impacts</th>
<th>Previously reviewed</th>
<th>Net Change</th>
<th>Currently Proposed</th>
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</thead>
<tbody>
<tr>
<td><strong>LAND</strong></td>
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<td></td>
</tr>
<tr>
<td>Total site acreage</td>
<td>~2,400 acres, incl. 700 acres of Boston Harbor (entire airport)</td>
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<td>~2,400 acres, incl. 700 acres of Boston Harbor (entire airport)</td>
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<tr>
<td>Acres of land altered</td>
<td>2.1 acres (33L perimeter road and Taxiway C)</td>
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<tr>
<td>Acres of impervious area</td>
<td>11,000 s.f. (perimeter road and taxiway at Runway 33L)</td>
<td>0 acres (direct replacement of existing structure)</td>
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<tr>
<td>Square feet of bordering vegetated wetlands alteration</td>
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<td>0 acres</td>
</tr>
<tr>
<td>Square feet of other wetland alteration</td>
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<td>Due to the reduction of piles supporting the light pier, there will be a net reduction of wetland impacts.</td>
<td>3.27 ac (33L RSA)</td>
</tr>
<tr>
<td>Acres of non-water dependent use of tidelands or waterways</td>
<td>3.27 acres (33L RSA)</td>
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<td>3.27 acres</td>
</tr>
<tr>
<td><strong>STRUCTURES</strong></td>
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<td>Number of housing units</td>
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<td>Maximum height (in feet)</td>
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<td>Parking spaces</td>
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<tr>
<td>Gallons/day (GPD) of water use</td>
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<tr>
<td>GPD water withdrawal</td>
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<tr>
<td>GPD wastewater generation/ treatment</td>
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</tr>
<tr>
<td>Length of water/sewer mains (in miles)</td>
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<td>0</td>
</tr>
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</table>
Does the project change involve any new or modified:
1. conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97? □ Yes □ No
2. release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction? □ Yes □ No
3. impacts on Rare Species? □ Yes □ No
4. demolition of all or part of any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth? □ Yes □ No
5. impact upon an Area of Critical Environmental Concern? □ Yes □ No

If you answered ‘Yes’ to any of these 5 questions, explain below:

PROJECT CHANGE DESCRIPTION (attach additional pages as necessary). The project change description should include:
(a) a brief description of the project as most recently reviewed
(b) a description of material changes to the project as previously reviewed,
(c) if applicable, the significance of the proposed changes, with specific reference to the factors listed 301 CMR 11.10(6), and
(d) measures that the project is taking to avoid damage to the environment or to minimize and mitigate unavoidable environmental impacts. If the change will involve modification of any previously issued Section 61 Finding, include a draft of the modified Section 61 Finding (or it will be required in a Supplemental EIR).

See attached project change description.
ATTACHMENTS & SIGNATURES

Attachments:
1. Secretary's most recent Certificate on this project
2. Plan showing most recent previously-reviewed proposed build condition
3. Plan showing currently proposed build condition
4. Original U.S.G.S. map or good quality color copy (8-1/2 x 11 inches or larger) indicating the project location and boundaries
5. List of all agencies and persons to whom the proponent circulated the NPC, in accordance with 301 CMR 11.10(7)

Signatures:

Date: 1/31/12
Signature of Responsible Officer: [Signature]
Date: [Signature]
Signature of person preparing NPC (if different from above)

Stewart Dalzell
Name (print or type)
Massachusetts Port Authority
Firm/Agency
One Harborside Drive
Street
East Boston, MA 02128
Municipality/State/Zip
617-568-3524
Phone
Logan International Airport

- Runway 15R
- Runway 4L
- Runway 22R
- Runway 33L
- Light Pier

Legend

- RSA Enhancement Study Area

Legend

USGS Site Location Map of 33L Light Pier

Data Sources:
USGS DRG (1987) - MassGIS
Runway 33L Light Pier Replacement Project/Supplement to NPC Form

Project Change Description

Massport is proposing to replace the existing Runway 33L approach light pier with a new approach light pier of the same length in the same location, as part of the Runway 33L Safety Area Improvements project currently under construction. The proposed replacement of the existing light pier does not trigger any MEPA thresholds. As part of the cumulative effects section of the Draft EA/EIR, there was brief reference to the future replacement of the remaining 33L timber light pier from the seaward edge of the new RSA deck to the end of the pier. Although the remainder of the light pier was not proposed for replacement as part of the 33L RSA project at that time primarily for funding availability, replacement was deemed “reasonably foreseeable” due to the advanced age of the timber structure and therefore disclosed as part of the environmental review process.

As construction of the Runway 33L RSA project has proceeded, several factors have triggered consideration of replacement of the remaining timber light pier at this time. Pile-driving at the runway end requires that the runway be closed since the tall cranes penetrate protected FAA aircraft arrival and departure surfaces. The ongoing 33L RSA project will replace the first 450 feet of the existing light pier. Reconstruction of the remaining light pier in 2012 while the runway is already closed for completion of the RSA project avoids the need for additional/extended runway closures. Completing the pier replacement concurrently with the in-water work at Runway 33L for the RSA project uses resources efficiently and reduces the period of time in-water work would occur at Runway 33L. In addition, current economic conditions make work at this time more cost-effective, particularly when conducted as an add-on to the existing RSA project. Accordingly, Massport proposes to accelerate the replacement of the remaining timber light pier by conducting that work during the full runway shutdown already scheduled in 2012 for completion of the Runway 33L RSA improvements.

The timber pier was originally constructed in the early 1960s and has required increasing levels of repair and maintenance in recent years. The existing piers have suffered deterioration since constructed, mainly caused by the marine environment of Boston Harbor. The existing timber components, particularly those members located within the tidal zone, have suffered deterioration including abrasion from waves and ice flows, heavy marine growth, missing or disconnected braces, fungal rot, cracking and splitting due to age and weathering. The timber components of this structure are considered flammable, which is a concern given their location and importance to airport operations.
Massport proposes to replace the outer approximately 1,900 feet of the existing timber light pier that extends approximately 2,400 feet southeast of Runway-End 33L. The current Runway 33L RSA project is replacing the inner 500 feet of the light pier. The existing timber pier would be replaced with a new structure in essentially the same footprint, using concrete pilings. The in-kind replacement will reduce the total number of pilings significantly (from over 500 to approximately 170). As part of the reconstruction, the new light pier will also be constructed to accommodate upgraded navigational aids. The pier improvements will provide the infrastructure necessary to support navigational aids that will facilitate implementation of the reduced aircraft approach minimums previously reviewed and approved by the FAA in a Record of Decision dated August 2, 2002, for the Logan Airside Improvements Planning Project (Airside Project).

Construction is anticipated to occur between May and November 2012, with in-water work occurring between July and October 2012. The analysis of impacts from the proposed light pier replacement project determined that there would be no impact to aquatic resources, as cranes and pile driving equipment will work from barges. No adverse impacts from noise or air quality would be expected from the Runway 33L Light Pier Replacement Project. The construction-phase noise and air emissions mitigation measures successfully implemented for the Runway 33L RSA project will be implemented for the pier replacement. The Runway 33L Light Pier Replacement construction will incorporate appropriate water quality protection measures and would not be expected to have any adverse impact on water quality. In-water silt producing work, including pile driving and pile removal, will be conducted between July 1st and November 1st to respect time of year restrictions for winter flounder. In the event that unknown submerged cultural resources are identified during project construction, Massport will follow measures identified in the Unanticipated Discovery Plan for the Off-Shore Parts of the Boston-Logan International Airport Runway Safety Area Improvements Project dated April 1, 2011 that was reviewed and approved by the Board of Underwater Archaeological Resources for the Logan RSA project.
Figure 1

Location of Runway 33L Approach Light Pier
Logan RSA

Figure 2
Runway 33L
Eelgrass Survey

Legend

- Limit of Eelgrass Bed (June 2008)
- MassGIS Eelgrass Bed (2001)
- Video Transects

Percent Eelgrass Cover (Visual Estimate)

- 1% - 20%
- 21% - 40%
- 41% - 60%
- 61% - 100%

Data Sources:
CR Environmental, Inc.
USGS Digital Raster Graphic (DRG) Boston North - Office of Geographic and Environmental Information (MassGIS)
Notice of Project Change

The Massachusetts Port Authority (Massport) is proposing to replace the existing Runway 33L approach timber light pier with a new approach light pier of the same size in the same location. The replacement of the Runway 33L approach light pier is a new element of the ongoing Boston-Logan International Airport Runway Safety Area (RSA) Improvement Project requiring a Notice of Project Change under the Massachusetts Environmental Policy Act (MEPA) regulations. The proposed replacement of the existing light pier is an independent action with insignificant impacts and does not trigger any MEPA thresholds.

1.0 Project Description

The Boston-Logan International Airport RSA Improvement Project (EOEEA No. 14442) proposed to enhance the RSAs at the ends of Runway 33L and Runway 22R at Boston-Logan International Airport (Logan Airport). The proposed improvements are required, to the extent feasible, to be consistent with the current Federal Aviation Administration’s (FAA) airport design criteria for RSAs and to enhance rescue access in the event of an emergency. RSAs are safety improvements and do not extend runways or have any effect on normal runway operations, runway capacity, or types of aircraft that can use the runways.

Massport proposed distinct RSA improvements for Runway 33L and Runway 22R. The proposed Runway 33L RSA improvements include constructing a 600-foot long RSA with Engineered Materials Arresting System (EMAS) portions of which would be on a 470-foot long by 303-foot wide pile-supported deck. The proposed Runway 22R improvement enhances the existing RSA by constructing an inclined safety area (ISA), similar to the ISA previously constructed at the Runway 22L end.

As described in the Draft Environmental Assessment/Environmental Impact Report (Draft EA/EIR) submitted to the MEPA Office on July 15, 2010, the Runway 33L component of the safety improvements project involves replacement of approximately 450 linear feet of the existing 2,400-foot Runway-End 33L timber light pier with a new pile-supported RSA deck. The project approvals also included minor modification of a section of the remaining light pier out to the existing “cross bar” which is approximately 1,000 feet from the runway threshold.

As part of the cumulative effects section of the Draft EA/EIR, there was brief reference to the future replacement of the remaining 33L timber light pier from the seaward edge of the new RSA deck to the end of the pier. Although the remainder of the light pier was not proposed for replacement as part of the 33L RSA

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1 An EMAS bed is constructed of collapsible concrete blocks with predictable deceleration forces. When an aircraft rolls into an EMAS bed, the tires of the aircraft collapse the lightweight concrete, and the aircraft is slowed down to a safe stop in a way that minimizes damage to the aircraft.
project primarily for funding availability, replacement was deemed “reasonably foreseeable” due to the advanced age of the timber structure and therefore disclosed as part of the environmental review process.

As construction of the Runway 33L RSA project has proceeded, several factors have triggered consideration of replacement of the remaining timber light pier at this time including:

- Pile-driving at the runway end requires that the runway be closed since the tall cranes penetrate protected FAA aircraft arrival and departure surfaces. Reconstruction of the light pier in 2012 while the runway is already closed for completion of the RSA project minimizes the need for additional/extended runway closures.

- Silt-producing in-water work is prohibited between February 15 and June 30 of each year for habitat protection; accordingly, work on the light pier would need to be conducted between July 1 and October 30, after which the runway cannot be closed due to operational needs.

- Completing the pier replacement concurrently with the in-water work at Runway 33L for the RSA project uses resources efficiently and reduces the period of time in-water work would occur at Runway 33L.

- Current economic conditions make work at this time more cost-effective, particularly when conducted as an add-on to the existing RSA project.

- Based on the pier demolition work required for the Runway 33L RSA project (those areas within the RSA footprint), portions of the light pier were found to be more deteriorated than previously documented.

Accordingly, Massport proposes to accelerate the planned replacement of the remaining timber light pier by conducting that work during the full runway shutdown already scheduled in 2012 for completion of the Runway 33L RSA improvements.

1.1 Existing Conditions
The approach light pier at Runway 33L extends approximately 2,400 feet into Boston Harbor. The timber pier was originally constructed in 1960 and has required increasing levels of repair and maintenance in recent years. As the pier aged, the risk of fire has also increased. The timber pier is not equipped with a fire-suppression system.

The approach light pier is outfitted with a medium intensity approach light system with runway alignment (MALSR). The existing approach light pier consists of a main longitudinal walkway running parallel to the runway centerline with traverse platforms that support the light frames and antenna frames. Additional platforms are connected to the walkway, which support equipment and storage shelters. The light frames are spaced at 100 feet intervals along the runway centerline. Conduits serving the lighting system are mounted on the outside face of the railing posts above the walkway deck.

The Runway 33L approach light pier is 5 feet wide and is primarily used as an access pier for use by FAA in maintaining the approach lights. A series of timber platforms measuring 15 feet long with varying widths extend southerly from the main pier, and support approach lights. Approximately 800 feet from shore (and
1,000 feet from the runway threshold), the pier widens to a 36-foot by 94-foot wide platform with a 190-foot long timber pier extension along the northern side of the platform. At the northernmost end of the walkway is a 20-foot by 25-foot timber storage shed platform. At the end of the main pier, approximately 2,400 feet from shore, the pier transitions to an 18-foot by 30-foot timber platform.

The piers are timber trestle-type structures with closely spaced timber pile bents supporting timber stringers and plank walkways. The pile bents are made up of mix of battered (diagonal) and vertical 12-inch diameter piles. The existing piers have suffered deterioration since constructed in the early 1960s, mainly caused by the marine environment of Boston Harbor. Repairs were completed in December 2004 consisting of replacing damaged members in-kind, mostly within the tidal zone, along with other deficient/deteriorated members and hardware.

A condition inspection of the approach light pier was performed in 2009. This inspection concluded that the overall condition of the pier was fair. The existing timber components, particularly those members located within the tidal zone, have suffered deterioration including abrasion from waves and ice flows, heavy marine growth, missing or disconnected braces, fungal rot, cracking and splitting due to age and weathering. It should be noted that the 2009 inspection reports included a recommendation to perform a comprehensive coring program to determine the extent of marine borer activity, which is currently unknown.

A similar timber approach light pier at the Runway 4R end is not currently proposed for replacement, but Massport may need to replace the Runway 4R structure within the next few years.

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Runway 33L Light Pier, August 2008

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1.2 Proposed Project

Massport proposes to replace the outer approximately 1,900 feet of the existing timber light pier that extends approximately 2,400 feet southeast of Runway-End 33L. The replacement will include all sections of the pier extending over Boston Harbor from the seaward edge of the new Runway-End 33L RSA pile-supported deck to the outer end of the pier (Figure 1). The existing timber pier would be replaced with a new structure in essentially the same footprint, using concrete pilings. The in-kind replacement will reduce the total number of pilings significantly.

As part of the reconstruction, the new light pier will also be constructed to accommodate upgraded navigational aids. The pier improvements will provide the infrastructure necessary to support navigational aids that will facilitate implementation of the reduced aircraft approach minimums previously reviewed and approved by the FAA in a Record of Decision dated August 2, 2002, for the Logan Airside Improvements Planning Project (Airside Project). Although discussed in the Airside EIS/EIR, the reduction of minimums is a fully-federal FAA action and was not subject to state review.

When the new light pier is completed and operational, the remaining portions of the existing timber structure would be demolished. Construction is anticipated to occur between May and November 2012, with in-water work occurring between July and October 2012. The exact layout and spacing of the piles is under development. However, the proposed light pier requires fewer piles that what currently exists. Cranes and pile driving equipment will work from barges.

2.0 MEPA Thresholds

The proposed replacement of the Runway 33L light pier does not trigger any of the MEPA thresholds. However, Massport has elected to submit a notice of project change for review under the MEPA regulations.

The proposed project change does meet the requirements for the Secretary to find the project change is insignificant according to 301 CMR 11.10(6) as follows:

301 CMR 11.10 (6)(a): Expansion of the Project. A change in a Project is ordinarily insignificant if it results solely in an increase in square footage, linear footage, height, depth, or other relevant measures of the physical dimensions of the Project of less than 10% over estimates previously reviewed, provided the increase does not meet or exceed any review thresholds.

The proposed replacement of the existing timber light pier will not increase the square footage, linear footage, height, depth, or other relevant measures of the physical dimensions. The replacement of the light pier will occur in essentially the same footprint as the existing timber light pier. The proposed concrete replacement light pier will result in a significant reduction of the number of piles in the sea floor as fewer piles are necessary to support the structure than the number required to support the existing timber pier. The proposed light pier replacement does not trigger any MEPA thresholds and, if conducted as a separate action, would not require public review.
301 CMR 11.10 (6)(b): Generation of further impacts, including an increase in release or emission of pollutants or contaminants during or after completion of the Project. A change in a Project is ordinarily insignificant if it results solely in an increase in impacts of less than 25% of the level specified in any review threshold, provided that cumulative impacts of the Project do not meet or exceed any review thresholds that were not previously met or exceeded.

The proposed replacement of the light pier would not result in new impacts. The concrete replacement structure would reduce the number of pilings required as significantly fewer are required to support the replacement structure than the number currently supporting the existing timber light pier. The proposed project does not trigger any MEPA thresholds and the cumulative impacts of the RSA Improvement Project and the light pier replacement do not exceed any thresholds that were previously met or exceeded.

301 CMR 11.10 (6)(c): Change in the expected date for Commencement of the Project, Commencement of Construction, completion date for the Project, or schedule of work on the Project.

The RSA Improvements at Runway 33L are currently under construction. Construction of the Runway 33L RSA improvements began during summer 2011, and are still expected to be completed during 2013 as described in the previous environmental review. The replacement of the light pier will be completed concurrently with the Runway 33L RSA improvements and will not impact the Runway 33L RSA improvement construction schedule.

301 CMR 11.10 (6)(d): Change of the Project site.

There is no change in the project site. The existing approach light pier extends approximately 2,400 feet into Boston Harbor from the end of Runway 33L. The Runway 33L RSA improvements are currently under construction at the end of Runway 33L. The light pier will be reconstructed in essentially the same footprint as the existing light pier. The proposed light pier will have the same alignment and length as the existing light pier.

310 CMR 11.10 (6)(e): New application for a Permit or New request for Financial Assistance or a Land Transfer.

The proposed project does not require any new applications for state permits. Massport does not request any new financial assistance or land transfers.

310 CMR 11.10 (6)(f): For a Project with net benefits to environmental quality and resources or public health, any change that prevents or materially delays realization of such benefits.

This standard is not applicable to the proposed project. The proposed light pier replacement will accelerate the environmental benefits associated with a smaller piling footprint.

310 CMR 11.10 (6)(g): For a Project involving a lapse of time, changes in the ambient environment or information concerning the ambient environment.

This standard is not applicable to the proposed project.
3.0 Previous MEPA Review

In June 2009, Massport submitted an Environmental Notification Form (ENF) to the Massachusetts Executive Office of Energy and Environmental Affairs (EEA), in accordance with MEPA and its implementing regulations (301 CMR 11.00). The ENF explained the purpose of the project, which is to reduce the risk of injury to passengers and damage to aircraft in emergency situations by enhancing the RSAs at the ends of Runway 33L and Runway 22R consistent with FAA’s design criteria. This project purpose was adopted by the U.S. Army Corps of Engineers (USACE) as the basic project purpose for Section 404 of the Clean Water Act permitting. The ENF was circulated to interested parties and a Public Notice of Environmental Review was published on July 8, 2009, in accordance with MEPA regulations 301 CMR 11.05 and 301 CMR 11.15. A public scoping meeting was held on July 30, 2009, to solicit public input on development of the Draft EA/EIR scope.

The Secretary of EEA issued a Certificate on the ENF on August 14, 2009, confirming the need to prepare an Environmental Impact Report (EIR). The Certificate approved coordinated submission of required documentation under NEPA and stated that “the planning for this project would be best served by a coordinated review and the submission of a single set of documents to satisfy the requirements of both MEPA [Section 11.09(4)(c)] and NEPA.”

The Draft EA/EIR was filed with the MEPA Office on July 15, 2010. A Public Notice of Environmental Review was published in the Environmental Monitor on July 21, 2010, in accordance with MEPA regulations 301 CMR 11.05 and 301 CMR 11.15. The extended public comment period ended on September 3, 2010. The Secretary of EEA issued the Certificate on the Draft EA/EIR on September 29, 2010, confirming that the Draft EIR properly and adequately complied with the MEPA regulations, and a Final EIR must address the topics outlined in the Certificate. The Certificate further approved continuing the coordinated submission of required documentation under NEPA.

The Draft EA/EIR included brief reference to the replacement of the light pier. As part of the Runway 33L RSA improvements project, the pile-supported deck will replace approximately 450 linear feet of the existing light pier. Additionally, the Runway 33L RSA improvements included minor modifications of the remaining light pier out the existing “cross bar”, which is approximately 1,000 feet from the runway threshold. The full replacement of the remaining portions of the Runway 33L light pier was discussed as part of the cumulative effects section. The Draft EA/EIR described the project as “reasonable foreseeable” due to the age of the timber structure and required disclosure as part of the environmental review process.

The Final EA/EIR was filed with the MEPA Office on January 31, 2011. A Public Notice of Environmental Review was published in the Environmental Monitor on February 9, 2011, in accordance with the MEPA regulations. The comment period ended on March 11, 2011. The Secretary of EEA issued the Certificate on the Final EA/EIR on March 18, 2011, confirming that the Final EIR properly and adequately complied with the MEPA regulations, and that the proposed project could continue to state permitting.

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4.0 Alternatives

Massport has considered four alternatives for the replacement of the Runway 33L light pier. Those alternatives included: the No-Action Alternative; the Deferred Construction Alternative; the Timber Replacement Alternative; and the Concrete Replacement Alternative.

The No-Action Alternative would maintain the remaining timber-supported light pier for some period of time, with increasing maintenance requirements. It is likely that the pier would need to be replaced within the next five to ten years due its advanced age and deteriorating condition as well as the need to remove a fire hazard.

The Deferred Construction Alternative is similar to the No-Action Alternative. As noted, the existing light pier has a finite life and would need to be repaired in the near term. Reconstructing the light pier as a stand-alone project in the future would increase airfield operation impacts due to additional closures, would require additional in-water construction periods creating disturbance to the natural environment, and would be more costly.

The light pier could be replaced in-kind with new timber pilings and walkway structure under the Timber Replacement Alternative. Construction of this alternative would be time-consuming, costly, and would require significant on-going maintenance due to the timber materials. In the salt water environment, the timber pier would have a shorter life-span than other construction materials and would require treatment to withstand deterioration due to salt water. Under the Timber Replacement Alternative, the timber light pier would continue to be a fire hazard.

The Concrete Replacement Alternative is the proposed action. The existing light pier would be replaced with a concrete pile-supported walkway and associated light bars. The new support pilings would have a substantially smaller harbor bottom impact as fewer concrete pilings would be required than what currently supports the existing timber light pier. This alternative would eliminate the need for new treated wood pilings, which are required under the Timber Replacement Alternative to withstand the salt water environment. Long-term maintenance would be reduced and a fire hazard would be removed. For these reasons, Massport has chosen the Concrete Replacement Alternative as the preferred alternative for replacing the existing light pier.

5.0 Description of Environmental Consequences

Although the design of the concrete light pier has not been fully developed, the proposed concrete light pier will be located in essentially the same footprint and would significantly reduce the number of piles. The Draft and Final EA/EIR provided a detailed description of the existing environment within the study area of the Runway 33L RSA improvements.

5.1 Wetlands

The existing light pier extends 2,400 feet into Boston Harbor. Depths in this section of Boston Harbor range from -20 feet North American Vertical Datum of 1929 (NAVD) to -25 feet NAVD. The only wetland resource area
protected under the Massachusetts Wetlands Protection Act (WPA) within the area of the existing light pier is Land Under the Ocean. While the exact impact to Land Under the Ocean from replacing the light pier is unknown at this time, the number of piles impacting the resource area will be less than the existing impact as significantly fewer concrete piles are necessary to support the light pier than the existing number of timber piles.

There is no eelgrass mapped within the footprint of the light pier or within the area immediately adjacent to the light pier that would be a temporary construction area. The nearest mapped eelgrass bed is located 1,400 feet northwest of the outermost tip of the light pier (see Figure 2). Similarly, no shellfish are known to exist in these subtidal waters, which are not mapped as Land Containing Shellfish. Therefore, there will be no impacts to eelgrass or to shellfish.

5.2 Waterways
The Runway 33L light pier is located in Chapter 91 waterways. The approach light system installed on the existing wooden pier which extends 2,400 feet into Boston Harbor from the end of Runway 33L already requires boats to circumnavigate the pier, and thus physically excludes boating traffic from the proposed Runway 33L RSA Improvements Project Area. The existing approach light pier is a license Chapter 91 structure (License No. 4285, dated April 21, 1960, and License No. 4422, dated March 9, 1961).

There would be no new impacts to Chapter 91 waterways from the reconstruction of the light pier as the proposed concrete light pier would be located in essentially the same footprint.

5.3 Fish, Wildlife, and Plants
The proposed project is the replacement of the existing light pier in essentially the same footprint with significantly fewer piles. There will be no impacts to fish, wildlife, and plants from the replacement of the light pier.

Fish and benthic organisms would continue to move around the light pier in the same fashion as these species do now. There are no known shellfish beds in the area of the light pier, but the new pilings could provide attachment substrate that is suitable for some benthic organisms (mussels, anemones, sponges, barnacles, etc). There are no impacts to wildlife (birds and mammals) as the light pier is maintained to prevent bird nesting which could interfere with the functionality of the approach light system. There would be only negligible impacts to aquatic plants as plants would be impacted during pile driving.

There is no estimated or priority habitat of rare species mapped by the Massachusetts Natural Heritage and Endangered Species Program in the area of the existing light pier.

To protect Essential Fish Habitat in this area, Massport will not undertake construction between February 15\textsuperscript{th} and June 30\textsuperscript{th}, the Massachusetts Division of Marine Fisheries (DMF) and National Marine Fisheries Service (NMFS) recommended time-of-year restriction for in-water, silt-producing work for the protection of winter flounder (\textit{Pseudopleuronectes americanus}) using nearshore areas for spawning, larval settlement, and juvenile
development. This time-of-year restriction is schedule is in place for the construction of the Runway 33L RSA improvements.

Construction equipment (barges, cranes, pile-drivers, etc.) would operate in the vicinity of the Runway 33L light pier. The resulting activity and noise would likely cause fish to avoid the work area. Construction, particularly pile-driving, can generate high noise levels underwater that could potentially harm fish species in close proximity. Construction would not reduce the habitat size below the level sufficient to sustain species commonly found in the affected area or adversely impact sensitive habitat supporting floral or faunal species not commonly occurring in the affected area.

5.4 Federally Listed Threatened or Endangered Species
The FAA and NMFS completed an Endangered Species Act (ESA) Section 7 Consultation, specifically for sea turtles and whales, during the preparation of the Draft and Final EA/EIR for the RSA Improvements Project. Prior to the filing of the Draft EA/EIR, the FAA made a preliminary determination that the Runway 33L pile-supported deck is not likely to adversely affect any threatened or endangered species listed under the jurisdiction of NMFS. NMFS concurred with the FAA’s determination, and indicated that the ESA Section 7 Consultation is complete and that the Runway 33L RSA would not adversely affect sea turtles or whales. The FAA has reinitiated the Section 7 Consultation for the replacement of the existing light pier. The FAA has made the preliminary determination that the replacement of the light pier would not adversely affect any of the threatened or endangered species listed under the jurisdiction of NMFS based on the rationale for the Runway 33L RSA Section 7 determination. The U.S. Fish and Wildlife Service (USFWS) indicated that there are no federally listed threatened or endangered species under its jurisdiction within the Project area.

5.5 Water Quality
There would be no impacts to water quality due to the replacement of the existing light pier. All runoff from the existing light pier currently discharges into Boston Harbor from the pier walkway. Vehicles are not supported on the pier walkway, and only Massport or FAA personnel on foot access the light pier for maintenance of the pier and approach light system. Runoff will continue to be discharged to Boston Harbor in the same fashion.

Potential impacts associated with the reconstruction of the light pier include temporary increased sediment within the water column during installation or removal of sub-surface features, and the accidental release of construction materials or construction by-products. Spill prevention measures will be deployed in order to prevent pollution from construction equipment or material. Protective measures, such as silt curtains and silt fencing, will be deployed throughout the construction phase in order to prevent sediment from affecting water quality at the construction site.

4 Comment Letter on the ENF received from the Massachusetts Division of Marine Fisheries, dated August 7, 2009.
5.6 Historical, Archaeological, and Cultural Resources
The replacement of the existing light pier would not have any impacts on historical, archaeological, or cultural resources. The Massachusetts Historical Commission (MHC) has previously determined there would be no impacts from the RSA Improvement Project as there are no historical, archaeological, or cultural resources protected under Section 106 in the vicinity of Runway 33L.\(^\text{10}\) Although the Massachusetts Board of Underwater Archaeological Resources does not have a record of underwater archaeological resources in the project area, it is possible that a resource could be found during construction.\(^\text{11}\) Massport has reinitiated consultation with MHC and the Board of Underwater Archaeological Resources to determine if the replacement of the existing light pier would have impacts on any historical, archaeological, and cultural resources. The existing Unanticipated Discoveries Plan approved by the Board of Underwater Archaeological Resources\(^\text{12}\) would extend to cover the reconstruction of the light pier.

5.7 Solid and Hazardous Waste
Removing the timber pilings of the existing light pier will generate solid waste to be disposed of off-site. The timber pilings are coated with creosote and would be treated as special waste and disposed of in accordance with Massachusetts Department of Environmental Protection (MassDEP) guidance and regulations. Construction is not expected to have any adverse impact on solid waste or hazardous materials. Construction waste will be recycled, as appropriate.

Spill control and containment BMPs already in-place for the RSA project would be used during construction to mitigate potential spills or accidental discharges of fuel, hydraulic fluid, and other construction materials, from construction equipment operating on barges. The Environmental Monitor for the RSA project will include this area in the routine weekly inspections.

5.8 Visual Setting
The replacement of the existing timber light pier with a concrete light pier would not have significant impacts on the visual setting. The existing light pier is outfitted with a MALSR lighting system which would be upgraded to a Category III Instrument Light System and High Intensity Approach Lighting System, which requires adding lights to the proposed pier extensions on the existing Runway 33L light pier. These lights would be slightly higher than the existing lights, and would be distant (approximately 5,000 feet) from the nearest residential receptors within the Point Shirley neighborhood of Winthrop.

The replacement of the light pier would have a negligible change on the view of the Airport from the nearest neighborhood of Point Shirley and Deer Island. The only change that may be noticeable is the change in the density of the pilings supporting the light pier as the concrete replacement pier requires significantly fewer than the existing timber pier.

\(^\text{10}\) Letter received from the Massachusetts Historical Commission, dated December 7, 2007.
\(^\text{11}\) Comment Letter on the ENF received from the Massachusetts Board of Underwater Archaeological Resources, dated July 27, 2009.
\(^\text{12}\) Letter from the Massachusetts Board of Underwater Archaeological Resources to Massport, dated April 28, 2011.
5.9 Other Construction Impacts

The proposed reconstruction of the Runway 33L light pier will follow the same construction procedures in place for the Runway 33L RSA improvements construction. Reconstruction of the Runway 33L light pier will be primarily undertaken from the water. Cranes and pile driving equipment will work from barges. Most materials will be delivered to the project site via barges; however, some materials associated with the pier reconstruction (such as railings, electrical conduit, and junction boxes) as well as workers will arrive via truck through the north security gate and the northern portion of the airfield perimeter road. Security procedures will be the consistent with Massport requirements and those in place for the Runway 33L RSA construction. All trucks will adhere to the requirement of not using City of Boston local roads. Because the number of additional workers and materials arriving by road will be negligible, there will be no cumulative effect on traffic. Other construction impacts, such as air quality and noise impacts, would be fewer than if the light pier was reconstructed as a separate future project. Since the light pier replacement construction would occur concurrently with the construction of the Runway 33L RSA, air quality and noise impacts associated with construction would not be extended for a longer period of time.

6.0 Mitigation Measures

The proposed reconstruction of the existing timber light pier with a concrete light pier would reduce the number of piles in Boston Harbor. The concrete replacement light pier requires fewer piles to support the pier than the existing timber pier requires. The removal of piles will have a net benefit to wetlands, specifically Land Under the Ocean.

No adverse noise impacts or air quality would be expected from the Runway 33L Light Pier Replacement Project. The reconstructed light pier would not result in any new operational procedures. Construction-phase noise and air emissions mitigation measures successfully implemented for the Runway 33L RSA project will be implemented for the pier replacement.

The Runway 33L Light Pier Replacement construction will incorporate appropriate water quality protection measures and would not be expected to have any adverse impact on water quality; any potential construction phase impacts will be mitigated. In-water silt producing work, including pile driving and pile removal will be conducted between July 1st and November 1st of any construction year to respect time of year restrictions for winter flounder.

In the event that unknown submerged cultural resources are identified during project construction, Massport will follow measures identified in the Unanticipated Discovery Plan for the Off-Shore Parts of the Boston-Logan International Airport Runway Safety Area Improvements Project dated April 1, 2011 that was reviewed and approved by the Board of Underwater Archaeological Resources for the Logan RSA project.

A construction management plan will be implemented to avoid or minimize any temporary construction impacts. It will be consistent with the construction management plan prepared for the Runway 33L RSA construction.
7.0 Required Permits and Approvals

The Runway 33L light pier replacement will require permits and approvals from federal and state agencies. Specifically, the proposed project requires:

- In accordance with the National Environmental Policy Act (NEPA), the FAA is anticipated to document that the proposed replacement of the existing light pier meets the requirements for a Categorical Exclusion in accordance with section 309b of the FAA Order 1050.1E.  

- The replacement of the existing light pier will require an Airport Layout Plan Approval from the FAA.

- The United States Army Corps of Engineers (USACE) Section 10 and Section 404 Individual Permit for the RSA project will be modified to include the replacement of the remaining light pier.

- A new Massachusetts Chapter 91 License will be requested for the replacement of the light pier.

- An Massachusetts Wetlands Protection Act Order of Conditions from the Boston Conservation Commission will be sought, although a Section 401 Water Quality Certification is not required and will not be requested from the Boston Conservation Commission or MassDEP.

The FAA will continue to consult with NMFS under Section 7 of the ESA to determine if the replacement of the Runway 33L light pier would have adverse impacts to threatened and endangered species under their jurisdiction.

The FAA will also coordinate with MHC, as the State Historic Preservation Office, to determine if the proposed project will have an adverse effect on historic, cultural, or archaeological resources under Section 106. Massport will continue to coordinate with the Board of Underwater Archaeological Resources regarding submerged cultural resources that may be encountered during construction.

In accordance with Section 11.10(7) of the MEPA regulations (301 CMR 11.00), Massport is distributing this NPC to the following federal, state, and local agencies and interested parties. As required by Section 11.10(7), “the proponent shall circulate copies of the Notice of Project Change to any Agency or Permit who received the ENF or commented on the ENF or any EIR…”.

It is our understanding that this document will be noticed in the Environmental Monitor published on February 8, 2012 commencing the 20-day public MEPA review period. Therefore, comments on the NPC are due by February 29, 2012.
# Federal Aviation Administration

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Doucette</td>
<td>Manager Environmental Programs</td>
<td>Federal Aviation Administration New England Region 12 New England Executive Park, Box 510 Burlington, MA 01803</td>
</tr>
<tr>
<td>Byron Rakoff</td>
<td>Branch Manager, Planning and Programming</td>
<td>Federal Aviation Administration New England Region 12 New England Executive Park, Box 510 Burlington, MA 01803</td>
</tr>
<tr>
<td>Ralph Nicosia-Rusin</td>
<td></td>
<td>Federal Aviation Administration New England Region 12 New England Executive Park, Box 510 Burlington, MA 01803</td>
</tr>
<tr>
<td>Craig Bailey</td>
<td>Senior Civil Engineer</td>
<td>Federal Aviation Administration New England Region 12 New England Executive Park, Box 510 Burlington, MA 01803</td>
</tr>
</tbody>
</table>

# U.S. Environmental Protection Agency

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timothy Timmermann</td>
<td></td>
<td>U.S. Environmental Protection Agency, Region 1 5 Post Office Square Suite 100 Boston, MA 02109-3912</td>
</tr>
<tr>
<td>Matthew Schweisberg</td>
<td></td>
<td>U.S. Environmental Protection Agency, Region 1 5 Post Office Square Suite 100 Boston, MA 02109-3912</td>
</tr>
<tr>
<td>Erica Sachs</td>
<td></td>
<td>U.S. Environmental Protection Agency, Region 1 5 Post Office Square Suite 100 Boston, MA 02109-3912</td>
</tr>
<tr>
<td>Edward Reiner</td>
<td></td>
<td>U.S. Environmental Protection Agency, Region 1 5 Post Office Square Suite 100 Boston, MA 02109-3912</td>
</tr>
<tr>
<td>Philip Colarusso</td>
<td></td>
<td>U.S. Environmental Protection Agency, Region 1 5 Post Office Square Suite 100 Boston, MA 02109-3912</td>
</tr>
</tbody>
</table>

# U.S. Army Corps of Engineers

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonel Charles P. Samaris</td>
<td>Commander and District Engineer</td>
<td>U.S. Army Corps of Engineers New England District 696 Virginia Road Concord, MA 01742-2751</td>
</tr>
<tr>
<td>Karen Kirk Adams</td>
<td></td>
<td>U.S. Army Corps of Engineers New England District 696 Virginia Road Concord, MA 01742-2751</td>
</tr>
<tr>
<td>Theodore Lento</td>
<td></td>
<td>U.S. Army Corps of Engineers New England District 696 Virginia Road Concord, MA 01742-2751</td>
</tr>
<tr>
<td>Charles N. Farris</td>
<td></td>
<td>U.S. Army Corps of Engineers New England District 696 Virginia Road Concord, MA 01742-2751</td>
</tr>
</tbody>
</table>

# National Marine Fisheries Service

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<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary A. Colligan</td>
<td></td>
<td>National Oceanic and Atmospheric Administration 55 Great Republic Drive Gloucester, MA 01930</td>
</tr>
<tr>
<td>Peter D. Colosi, Jr</td>
<td></td>
<td>National Oceanic and Atmospheric Administration 55 Great Republic Drive Gloucester, MA 01930</td>
</tr>
<tr>
<td>Danielle Palmer</td>
<td></td>
<td>National Oceanic and Atmospheric Administration 55 Great Republic Drive Gloucester, MA 01930</td>
</tr>
<tr>
<td>Susan Tuxbury</td>
<td></td>
<td>National Oceanic and Atmospheric Administration 55 Great Republic Drive Gloucester, MA 01930</td>
</tr>
<tr>
<td>NEPA Reviewer</td>
<td></td>
<td>National Oceanic and Atmospheric Administration 55 Great Republic Drive Gloucester, MA 01930</td>
</tr>
<tr>
<td>National Marine Fisheries Service</td>
<td></td>
<td>Northeast Regional Office, Office of Protected Species 55 Great Republic Drive Gloucester, MA 01930</td>
</tr>
</tbody>
</table>
Notice of Project Change
Boston Transportation Department

Thomas Tinlin
Commissioner
Boston Transportation Department
One City Hall Square, Room 721
Boston, MA 02201

Robert D’Amico
Boston Transportation Department
One City Hall Square, Room 721
Boston, MA 02201

Boston Parks and Recreation Department

Antonia Pollak
Commissioner
Boston Parks and Recreation Dept.
1010 Massachusetts Avenue
Boston, MA 02118

Dr. Barbara Ferrer
Executive Director
Boston Public Health Commission
1010 Massachusetts Avenue
Boston, MA 02118

Boston Public Health Commission

Vincent G. Mannering
Executive Director
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

Boston Water and Sewer Commission

Charles Jewel
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

John Lopes
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

Boston Neighborhood Services

Jay Walsh, Director
Neighborhood Services
Boston City Hall, Room 205
Boston, MA 02201

Ernani DeAraujo
East Boston Liaison
Neighborhood Services
Boston City Hall, Room 205
Boston, MA 02201

Town of Winthrop

James McKenna
Town Manager
Winthrop Town Hall
Winthrop, MA 02152

Peter Roche, Chair
Winthrop Planning Board
Winthrop Town Hall
Winthrop, MA 02152

Jerome Falbo
Town of Winthrop Air Pollution Noise and Airport Hazards Committee
Winthrop Town Hall
Winthrop, MA 02152

Mary Kelley
Chair, Winthrop Conservation Commission
Winthrop Town Hall
Winthrop, MA 02152

Peter T. Gill
Council President
Winthrop Town Hall
Winthrop, MA 02152

Phillip Boncore
Councilor-At-Large
Winthrop Town Hall
Winthrop, MA 02152

J. Larry Powers
Councilor-At-Large
Winthrop Town Hall
Winthrop, MA 02152

Paul Varone
VP and Councilor- Precinct 1
Winthrop Town Hall
Winthrop, MA 02152

James Letterie
Councilor- Precinct 2
Winthrop Town Hall
Winthrop, MA 02152

Paul Varone
VP and Councilor- Precinct 1
Winthrop Town Hall
Winthrop, MA 02152

Boston Neighborhood Services

Ernani DeAraujo
East Boston Liaison
Neighborhood Services
Boston City Hall, Room 205
Boston, MA 02201

Boston Water and Sewer Commission

Charles Jewel
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

John Lopes
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

Boston Transportation Department

Thomas Tinlin
Commissioner
Boston Transportation Department
One City Hall Square, Room 721
Boston, MA 02201

Robert D’Amico
Boston Transportation Department
One City Hall Square, Room 721
Boston, MA 02201

Boston Parks and Recreation Department

Antonia Pollak
Commissioner
Boston Parks and Recreation Dept.
1010 Massachusetts Avenue
Boston, MA 02118

Dr. Barbara Ferrer
Executive Director
Boston Public Health Commission
1010 Massachusetts Avenue
Boston, MA 02118

Boston Public Health Commission

Vincent G. Mannering
Executive Director
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

Boston Water and Sewer Commission

Charles Jewel
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

John Lopes
Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119

Boston Neighborhood Services

Jay Walsh, Director
Neighborhood Services
Boston City Hall, Room 205
Boston, MA 02201

Ernani DeAraujo
East Boston Liaison
Neighborhood Services
Boston City Hall, Room 205
Boston, MA 02201

Town of Winthrop

James McKenna
Town Manager
Winthrop Town Hall
Winthrop, MA 02152

Peter Roche, Chair
Winthrop Planning Board
Winthrop Town Hall
Winthrop, MA 02152

Jerome Falbo
Town of Winthrop Air Pollution Noise and Airport Hazards Committee
Winthrop Town Hall
Winthrop, MA 02152

Mary Kelley
Chair, Winthrop Conservation Commission
Winthrop Town Hall
Winthrop, MA 02152

Peter T. Gill
Council President
Winthrop Town Hall
Winthrop, MA 02152

Phillip Boncore
Councilor-At-Large
Winthrop Town Hall
Winthrop, MA 02152

J. Larry Powers
Councilor-At-Large
Winthrop Town Hall
Winthrop, MA 02152

Paul Varone
VP and Councilor- Precinct 1
Winthrop Town Hall
Winthrop, MA 02152

James Letterie
Councilor- Precinct 2
Winthrop Town Hall
Winthrop, MA 02152

Paul Varone
VP and Councilor- Precinct 1
Winthrop Town Hall
Winthrop, MA 02152
Town of Winthrop (continued)

Nicholas DelVento
Councilor-Precinct 3
Winthrop Town Hall
One Metcalf Square
Winthrop, MA 02152

Linda Calla
Councilor-Precinct 6
Winthrop Town Hall
One Metcalf Square
Winthrop, MA 02152

Craig G. Mael
Councilor-Precinct 4
Winthrop Town Hall
One Metcalf Square
Winthrop, MA 02152

Russell Sanford
Councilor-Precinct 5
Winthrop Town Hall
One Metcalf Square
Winthrop, MA 02152

Community Groups and Interested Parties

Sandra Kunz, Chairman
Logan CAC
89 Hollingsworth Avenue
Braintree, MA 02184

Frederick Salvucci
Massachusetts Institute of Technology
Building One
77 Massachusetts Avenue
Cambridge, MA 02139

Diane J. Modica
Executive Director
East Boston Chamber of Commerce
175 McClellan Highway, Suite 1
East Boston, MA 02128

Alice Christopher
972 Bennington Street
East Boston, MA 02128

Thomas Bruno
Orient Heights Neighborhood Association
21 Annayvoy Street
East Boston, MA 02128

Vivien Li
Executive Director
Boston Harbor Association
374 Congress Street, Suite 307
Boston, MA 02210

Joseph Mason
East Boston Land Use Council
2 Neptune Road #352
East Boston, MA 02128

Fran Carbone
174 Bayswater Street
East Boston, MA 02128

Robert Driscoll
179 Grovers Avenue
Winthrop, MA 02125

Thomas Briand, President
East Boston Residents & Homeowners Assoc.
83 Byron Street
East Boston, MA 02128

Bob Streilitz
East Boston Piers PAC
1 Brighton Street
East Boston, MA 02128

Mary Berninger
156 St. Andrew Road
East Boston, MA 02128

Mary Ellen Welch
East Boston Greenways
225 Webster Street, Apt 4
East Boston, MA 02128

Gail Miller
232 Orient Ave
East Boston, MA 02128

Association for Public Transportation, Inc.
P.O. Box 51029
Boston, MA 02205-1029

Craig G. Mael
Councilor-Precinct 4
Winthrop Town Hall
One Metcalf Square
Winthrop, MA 02152

Russell Sanford
Councilor-Precinct 5
Winthrop Town Hall
One Metcalf Square
Winthrop, MA 02152

Robert Driscoll
179 Grovers Avenue
Winthrop, MA 02125

Ron Hardaway
118 Bayswater Street
East Boston, MA 02128

Karen Buttiglieri
56 Beachview Road
East Boston, MA 02128

Debra Cave
ONE East Boston
106 White Street
East Boston, MA 02128

Clark Moulaison
East Boston Main Streets
146 Maverick Street
East Boston, MA 02128

Susan Horn
65 St. Andrews Road
East Boston, MA 02128

Maria Conti
Secretary, EB Piers PAC
44 Saratoga Street
East Boston, MA 02128

David Arinella
20 Thurston Street
East Boston, MA 02128
Community Groups and Interested Parties (continued)

AIR Inc.
c/o Aaron Toffler, Esquire
34 Kimball Street
Needham, MA 02492

Robert Stanley, Master Digger
Stanley Seafood
833 North Shore Road
Revere, MA 02151

Karen Maddalena
Chairperson
Jeffries Point Neighborhood Assoc.
4 Lamson Street
East Boston, MA 02128

John Kassel
President
Conservation Law Foundation
62 Summer Street
Boston, MA 02116

Jack Craddock
CEO/President
East Boston Neighborhood Health Center
10 Grove Street
East Boston, MA 02128

Bruce Berman
Save the Harbor/Save the Bay
Boston Fish Pier,
212 Northern Avenue, Suite 304 West,
Boston, MA 02210

Libraries

Boston Public Library
Connolly Branch
433 Centre Street
Jamaica Plain, MA 02128

Boston Public Library
Main Branch
666 Boylston Street
Boston, MA 02117

Boston Public Library
South Boston Branch
646 East Broadway
South Boston, MA 02127

Boston Public Library
62 Summer Street
Boston, MA 02116

State Transportation Library
10 Park Plaza
Boston, MA 02116-3973

Everett Public Library
410 Broadway
Everett, MA 02149

Chelsea Public Library
569 Broadway
Chelsea, MA 02150

Revere Public Library
179 Beach Street
Revere, MA 02151

Massachusetts Port Authority CEO and Board of Directors

David S. Mackey, Interim Executive Director/CEO
Massachusetts Port Authority
One Harbor Drive, Suite 200S
East Boston, MA 02128

Richard Davey, Chairman
Board of Directors
Massachusetts Port Authority
One Harbor Drive, Suite 200S
East Boston, MA 02128

Douglas Husid
Board of Directors
Massachusetts Port Authority
One Harbor Drive, Suite 200S
East Boston, MA 02128

Paul J. McNally
Board of Directors
Massachusetts Port Authority
One Harbor Drive, Suite 200S
East Boston, MA 02128

Kathryn West
Board of Directors
Massachusetts Port Authority
One Harbor Drive, Suite 200S
East Boston, MA 02128

Ida Lamattina
President
Gove Street Citizens Committee
123 Cottage Street
East Boston, MA 02128

John Deneny
40 Mohawk Path
Holliston, MA 01746

John Vitagliano
19 Seymour Street
Winthrop, MA 02152

Libraries (continued)

Chelsea Public Library
569 Broadway
Chelsea, MA 02150

Revere Public Library
179 Beach Street
Revere, MA 02151

Winthrop Public Library
One Metcalf Square
Winthrop, MA 02152

Boston Public Library
Charlestown Branch
179 Main Street
Charlestown, MA 02129

Boston Public Library
East Boston Branch
270 Meriden Street
East Boston, MA 02128

Boston Public Library
One Harborside Drive, Suite 200S
East Boston, MA 02128

Boston Public Library
South Boston Branch
646 East Broadway
South Boston, MA 02127

Chelsea Public Library
569 Broadway
Chelsea, MA 02150

Revere Public Library
179 Beach Street
Revere, MA 02151

Winthrop Public Library
One Metcalf Square
Winthrop, MA 02152

Boston Public Library
Charlestown Branch
179 Main Street
Charlestown, MA 02129

Boston Public Library
Boston, MA 02128

Chelsea Public Library
569 Broadway
Chelsea, MA 02150

Revere Public Library
179 Beach Street
Revere, MA 02151

Winthrop Public Library
One Metcalf Square
Winthrop, MA 02152

Boston Public Library
Charlestown Branch
179 Main Street
Charlestown, MA 02129

Boston Public Library
Boston, MA 02128

Chelsea Public Library
569 Broadway
Chelsea, MA 02150

Revere Public Library
179 Beach Street
Revere, MA 02151

Winthrop Public Library
One Metcalf Square
Winthrop, MA 02152

Notice of Project Change
Attachment A:

Secretary’s Certificate on the Final EIR, EEA No. 14442
March 18, 2011

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Boston-Logan International Airport Runway Safety Area
               Improvements Project
PROJECT MUNICIPALITY : East Boston
PROJECT WATERSHED : Boston Harbor
EOEA NUMBER : 14442
PROJECT PROPONENT : The Massachusetts Port Authority
DATE NOTICED IN MONITOR : February 9, 2011

As Secretary of Energy and Environmental Affairs, I hereby determine that the Final
Environmental Impact Report (FEIR) submitted on the above project *adequately and properly*
complies with the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and with its
implementing regulations (301 CMR 11.00). The project may proceed to state permitting.

As described in the FEIR, the Massachusetts Port Authority (Massport) is proposing
safety upgrades to two existing runways at Boston-Logan International Airport (Logan Airport).
The safety upgrades have been mandated by, and will be funded at a significant level by, the
Federal Aviation Administration (FAA). Specifically, in November 2005, Congress mandated
that all commercial service airports (including Logan Airport) improve their runway safety areas
(RSAs) to meet FAA minimum standards, to the extent feasible, by 2015. To achieve this goal,
FAA’s Airport Capital Improvement Program for Logan Airport has allocated funding, beginning
in 2011, for the completion of construction of the Logan Airport 33L RSA project (described in
detail below) no later than 2013. The 22R RSA project (also described below) must be completed
by 2015. Federal funding is expected to amount to approximately $50 million of the total $70-75
million cost of the project.
The proposed project clearly serves the important purpose of enhancing public safety for air travelers at Logan Airport, and I strongly support the Massport’s and the FAA’s goals for these runways. In addition, after reviewing the FEIR and the comments received, I am convinced that the project can be undertaken in a manner that avoids, minimizes and mitigates environmental impacts to the maximum extent feasible. Although a few remaining details remain to be finalized, Massport has presented a robust and comprehensive proposal that will ensure that all unavoidable impacts to wetland and coastal resources associated with the project are fully mitigated. I commend Massport for the significant level of technical effort, agency coordination, and public outreach that is reflected in the FEIR. I also ask that the state permitting agencies continue to work closely with Massport during project permitting to ensure that this critical public project is able to meet the required permitting deadlines set by the FAA to obtain federal funding.

Project Overview

The proposed project consists of enhancing the RSAs at the ends of Runway 33L and Runway 22R at Logan Airport. The proposed improvements are required to enhance the RSAs to be consistent with the current FAA airport design criteria for RSAs and to enhance rescue access in the event of an emergency. RSAs are safety measures designed exclusively to function in the event of an undershoot, overshoot or excursion from the runway. RSAs do not extend runways or have any effect on normal runway operations, runway capacity or types of aircraft which can use the runways.

The existing RSA at the end of Runway 33L does not meet standard FAA design criteria for overrun and undershoot protection for the design aircraft for that runway, the Boeing 747-400. Typical RSAs are 1,000 feet long by 500 feet wide. The existing RSA is 187.5 feet long and 500 feet wide and is therefore too short to provide protection consistent with FAA criteria. Within this area is a 158-foot long and 170-foot wide Engineered Material Arresting System (EMAS) bed constructed of collapsible concrete blocks with predictable deceleration forces, installed in 2006 as an interim safety measure. When an aircraft rolls into an EMAS bed, the tires of the aircraft collapse the lightweight concrete and the aircraft is slowed down in a way that minimizes damage to the aircraft. The proposed project is intended to enhance the Runway 33L RSA so that it provides overrun and undershoot protection consistent with the design criteria in the FAA’s Airport Design Advisory Circular to the extent feasible. As described in greater detail below, the Preferred Alternative for the Runway 33L RSA includes constructing a 600-foot long RSA with EMAS on a 303-foot wide pile-supported deck.

The existing RSA at the end of Runway 22R meets the minimum FAA design criteria for overrun protection for the runway’s design aircraft but does not comply with undershoot requirements. However, given that Runway 22R is very rarely used for arrivals and has an 815-foot displaced threshold, it is unlikely that aircraft would ever undershoot this end of the runway. Therefore, the Runway 22R RSA enhancement is intended to protect aircraft in the event that an aircraft arriving on Runway 4L overruns and fails to stop on the runway. The RSA is 215 feet
long and 500 feet wide, and includes a 190-foot long and 170-foot wide EMAS bed. As a condition of approving the installation of the existing EMAS bed, the FAA required Massport to consider options for further enhancing the level of safety provided by the existing RSA. Therefore, the preferred alternative for the Runway 22R RSA presented in the FEIR includes a new 500-foot wide inclined safety area (ISA) to be constructed of gravel fill that will be graded down to the mean lower low water elevation to provide a smoother transition from the runway and EMAS bed down to the water.

As proposed, the two components of this project will have significant and permanent impacts upon coastal wetlands, salt marsh, and shellfish beds. While Massport is working to minimize adverse impacts, there are still unavoidable permanent impacts to coastal wetlands. At Runway End 22R, Massport is proposing to fill coastal bank (530 linear feet (LF)), salt marsh (35,040 square feet (SF)), coastal beach (26,630 SF), land containing shellfish (1.4 acres or 62,370 SF), land under ocean (700 SF) and Buffer Zone to create an Inclined Safety Area. At Runway End 33L, Massport is proposing to construct a pile-supported deck over coastal bank (395 LF), coastal beach (4,385 to 4,570 SF), land containing shellfish (460 SF to 1,175 SF), land under the ocean (395 to 1,045 SF) including 1.4 to 1.5 acres (60,100 to 66,600 SF) of eelgrass bed, and Buffer Zone (not quantified) to extend the existing EMAS. Also, fish and shellfish habitat would be displaced, altered or eliminated by the pilings for Runway 33L, and approximately 62,370 square feet of Land Containing Shellfish will be lost due to the placement of fill as part of Runway 22R safety improvements.

State Permits and Jurisdiction

This project is subject to a mandatory EIR pursuant to Section 11.03(3)(a)(2) of the MEPA regulations because it involves Agency Action and will result in wetland alterations that require a Variance in accordance with the Wetlands Protection Act. The project will require a 401 Water Quality Certificate and a Chapter 91 License from the Department of Environmental Protection (MassDEP). The proposed project may also require approval from the Massachusetts Natural Heritage and Endangered Species Program. To initiate public review under the state wetlands regulatory process, Massport has filed a Notice of Intent (NOI) with the Boston Conservation Commission to obtain an Order of Conditions pursuant to the Wetlands Protection Act (WPA). However, the Wetlands Protection Act regulations do not allow salt marsh alteration or allow for any adverse effects on marine fisheries habitat or wildlife habitat caused by destruction of eelgrass beds. Massport has therefore requested a Variance under the Wetlands Protection Act regulations to allow the proposed salt marsh and eelgrass alteration. MassDEP will undertake review of the request for a Variance at the conclusion of the MEPA process.

In addition, both the proposed RSA enhancements for Runway 33L and Runway 22R will require fill materials to be placed below the extreme high water line. Therefore, an Individual Section 10/404 permit from the U.S. Army Corps of Engineers (USACE) is required. The authority for these permits is Section 10 of the Rivers and Harbors Act for any structures or work within tidal waters up to mean high water and Section 404 of the Clean Water Act for placing fill
or dredged material up to the extreme high water line or within adjacent wetlands. The proposed project may also be subject to Coastal Zone Management (CZM) federal consistency review, in which case the project must be found to be consistent with CZM’s enforceable program policies. The project must comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharges from a construction site.

The project will be undertaken by Massport, a State Agency, and financed in part by funds from the Commonwealth. Therefore, MEPA jurisdiction for this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Inter-Agency and Public Coordination

The FAA determined that the proposed project required an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA). The FAA has received and adopted this Final EIR/EA to identify alternatives to the Massport’s proposed project and to document the potential environmental effects associated with the construction and operation of proposed safety improvements at Logan Airport. The FAA has prepared a draft Finding of No Significant Impact for the proposed project, based on its review of the comments on the Draft EA and the information provided in the Final EA/EIR. It is my view that the planning for this project has been served well by the coordinated review and the submission of a single set of documents to satisfy the requirements of both MEPA and NEPA.

Massport established two working groups to discuss avoidance and minimization of impacts to coastal wetland resources, and ultimately mitigation options, as conceptual design of the proposed Runway 33L and Runway 22R Runway Safety Area improvements advanced. These Working Groups included local, state, and federal resource agency representatives, and met multiple times from April 2009 to January 2011. Massport has committed to continued coordination with the Working Groups throughout the permitting process.

Massport has also presented the proposed RSA improvements to local officials and affected members of the public well in advance of any regulatory filings and during the NEPA and MEPA process. In addition to local Conservation Commissions and community groups, Massport has additionally been coordinating with the shellfish industry. A meeting was held in December, 2010 and March, 2011, with the local shellfishing community to review the project and provide input on the mitigation strategy. Massport has continued to update neighborhood groups and local elected officials as the project planning and review has proceeded.

REVIEW OF THE FEIR

General

The FEIR provided an updated project description since the Draft EIR. It described each state agency action required for the project. The FEIR provided sufficient information to allow
the permitting agencies to understand the environmental consequences related to the project.

The FEIR also contained refined conceptual designs for the proposed mitigation sites as well as refined mitigation goals based on the Agency Working Groups feedback. As described in detail in the Mitigation Section specific mitigation aspects remain to be more fully developed as part of the permitting process.

Preferred Alternatives

Runway 33L

The Preferred Alternative for the Runway 33L RSA improvements includes constructing a 600-foot long RSA with EMAS on a 303-foot wide pile-supported deck. The deck, extending over the water, would be 470 feet long. The Preferred Alternative also includes moving the existing offset localizer to a new pile-supported deck at the end of the RSA, and upgrading the approach light system to a Category III Instrument Landing System (Cat III ILS) which includes a High-intensity Approach Lighting System with Sequenced Flashing Lights (ALSF-2). Part of the existing timber light pier (approximately 500 feet) would be removed and the approach lights would be incorporated into the new deck. The existing EMAS bed would be extended to a total length of 500 feet. As part of this alternative, the existing 20-foot wide airport perimeter road would be relocated between the runway’s threshold and the EMAS bed (it is currently located at the end of the existing EMAS bed). Emergency access ramps to the water would be installed on the north and south sides of the RSA and ladders or concrete steps would be provided on the sides and end of the RSA.

While the Preferred Alternative for Runway 33L RSA improvements would result in impacts to coastal wetland resources, including Coastal Bank, Coastal Beach, Land Under the Ocean, and Submerged Aquatic Vegetation (eelgrass), impacts from this alternative are less than that proposed for the three preliminary alternatives previously reviewed. The Preferred Alternative would maintain runway utility and capacity, and would provide protection and functionality near equivalent to a RSA that fully meets the FAA design criteria. Massport and FAA retained this alternative based on the safety benefits achieved, reduced environmental impacts, and cost feasibility.

However, with respect to specific final design of the pile-supported deck, Massport has considered various pile types and configurations which were described in detail in the Draft EIR. These alternate deck structures and piling combinations were evaluated at the conceptual design level to assess costs, minimize impacts, and evaluate constructability. Because the overall impacts of the different deck and piling configurations to coastal wetlands resources and coastal processes would be similar, all five options were retained to provide flexibility in the design/build process. The preferred alternative will be identified once the design/build contractor has been selected, and is likely to be a modification of one of these five construction options. Massport has committed to continue to identify methods to refine the preferred alternative further to minimize adverse impacts to the maximum degree possible.
To summarize, all five deck and pile options would contain the following elements:
- A RSA approximately 600 feet long by 300 feet wide located partially on land and partially on the proposed deck with various pile supporting options.
- A deck structure approximately 470 feet long, with a surface area of approximately 141,000 square feet (3.2 acres);
- An EMAS bed approximately 500 feet long by 170 feet wide located within the RSA;
- Two 25-foot wide emergency access ramps located approximately 30 feet northeast and 70 feet southwest of the proposed deck protected by riprap placed around the edge of the ramps;
- A steel sheet pile cutoff wall approximately 350 feet long at the inshore limit of the deck to prevent settlement and erosion of the backland areas;
- A new deck to support the localizer, approximately 300 feet wide by 60 feet long, supported by thirty-three 16-inch diameter vertical piles;
- Finger pier extensions to the existing light pier to accommodate a lighting upgrade; and
- Relocating the existing perimeter road, utilities, and a portion of Taxiway C.

Runway 22R

The proposed Runway 22R improvements enhance the existing RSA by constructing an inclined safety area (ISA). This Preferred Alternative was advanced to the conceptual design phase because it would enhance the existing RSA and rescue access in the event of an emergency, at a construction cost which appears to be feasible while minimizing impacts to environmental resources.

The proposed Runway 22R ISA would be similar to the ISA previously constructed at the Runway 22L end. It would require gravel fill to be placed approximately 130 feet north from the top of Coastal Bank and would be graded over the full 500-foot width of the extended safety area down to the mean lower low water elevation. The proposed Runway 22R ISA would include placing approximately 8,700 cubic yards of fill, contained within a perimeter barrier of stone-filled gabions located below grade and surfaced with crushed stone. Emergency access ramps would not be required because the ISA itself would provide first responders with access between the water and the airfield. The perimeter road would not be relocated.

Wetland Resources

Impacts Associated With Runway 33L

The proposed Runway 33L RSA improvements would affect coastal wetlands resources of approximately 3.27 acres. The proposed Runway 33L safety improvements would result in permanent impacts to Coastal Bank, Coastal Beach/Tidal Flats, Land Containing Shellfish, Submerged Aquatic Vegetation (eelgrass), and Land Under the Ocean. A portion of this area is also defined as waters of the United States, and is subject to federal jurisdiction. There is a state-jurisdictional buffer zone extending 100 feet from the top of Coastal Bank. Work proposed
within the buffer zone includes removing a segment of the existing perimeter road (which will be relocated outside of the buffer zone) and converting that area to grass. Work within the buffer zone also includes reconstructing the existing EMAS bed. The hydrological analysis indicates that the proposed pile-supported deck would not change coastal currents or wave impacts in the vicinity of the Runway 33L RSA.

Each of the proposed Runway 33L deck construction options would result in the alteration of 315 linear feet of the man-made Coastal Bank to install the sheet piling and fill structure that would support the approach slab and landward end of the RSA deck. An additional 80 linear feet of the riprap slope would be altered for the emergency access ramps. This would convert the existing rip-rap bank to a sheet pile bank or crushed stone ramps, and would not affect the functions or significant interests of the Coastal Bank including storm damage prevention and flood control. The new sheet pile bank would maintain the stability of the Coastal Bank.

Each of the proposed Runway 33L construction options would also result in the alteration of Coastal Beach (the intertidal beach), ranging from 65 square feet (Option 3) to 250 square feet (Option 1), to install the fill structure that would support the approach slab and landward end of the RSA deck, and to install some of the deck pilings. An additional 4,320 square feet of Coastal Beach would be converted to two emergency access ramps.

The proposed Runway 33L RSA improvements would affect Land Under the Ocean, especially the protection of marine fisheries and wildlife habitat. Each of the construction options would result in the loss of Land Under the Ocean to install pilings needed to support the RSA deck (including the localizer). The area of loss is directly related to the size and number of pilings, and ranges from 395 square feet (Option 3) to 1,045 square feet (Option 5). Eelgrass (submerged aquatic vegetation) is a habitat type of the state-regulated Land Under the Ocean, and is also considered to be a Special Aquatic Site under the federal Section 404(b)(1) guidelines. The analysis assumes that the entire portion of the eelgrass bed under the proposed Runway 33L deck would be shaded and would no longer receive sufficient light to survive. It is conservatively estimated that this would result in the loss or impairment of 60,100 square feet of eelgrass due to direct shading from the proposed deck (approximately 3 percent of the entire existing eelgrass bed), as this area would not receive enough light for eelgrass survival. An additional 6,500 square feet of eelgrass near the deck is expected to be indirectly affected by shading, although this is less certain. Each of the deck construction options would result in the same impacts to eelgrass, since the size of the RSA (and localizer) deck would be the same under all five construction options.

Each of the proposed Runway 33L construction options would also result in the alteration of Land Containing Shellfish (a state-regulated resource area that overlays Coastal Beach and Land Under the Ocean) as a result of placing pilings to construct the RSA improvements. Direct impacts, those associated with direct placement of pilings, range from 4,780 square feet (Option 3) to 5,495 square feet (Option 5) assuming that all of Coastal Beach and Land Under the Ocean
supports shellfish. Distinct areas known to support shellfish, specifically blue mussels (Mytilus edulis), were delineated and the impacts calculated. Direct impacts to the blue mussel beds range from 14 square feet (Option 1) to 72 square feet (Option 2). Remaining mussel beds will be undisturbed.

*Impacts Associated With Runway 22R*

The proposed Runway 22R safety improvements would result in permanent impacts to Coastal Bank, Salt Marsh, Coastal Beach, Land Under the Ocean, Land Containing Shellfish, and Land Subject to Coastal Storm Flowage. A portion of this area is also defined as waters of the United States, and is subject to federal jurisdiction. There is a state-jurisdictional buffer zone extending 100 feet from the top of Coastal Bank. There are no permanent impacts to this buffer zone, which contains the perimeter road and a portion of the existing Runway 22R EMAS bed. The ISA is not expected to change wave direction or velocity or to result in increased erosion or deposition because of its orientation.

The proposed Runway 22R ISA improvements would result in the alteration of 530 linear feet of Coastal Bank in order to construct the ISA. The proposed ISA would maintain or improve the stability of the bank. Approximately 26,630 square feet of Coastal Beach/Tidal Flat would be lost due to the construction of the Runway 22R ISA. It is not likely to impact any adjacent or downdrift Coastal Beach and will not interfere with littoral drift. Approximately 35,040 square feet of Salt Marsh (including 7,110 square feet of Phragmites-dominated Salt Marsh) would be lost due to the construction of the Runway 22R. The proposed Runway 22R ISA would impact the interests significant to Salt Marsh, and therefore, requires a WPA Variance because work would not meet the regulatory performance standards described in the WPA.

Approximately 700 square feet of Land Under the Ocean would be lost due to the placement of fill required to construct the inclined safety area. There are no eelgrass beds located within the proposed Runway 22R ISA improvements area. The proposed Runway 22R RSA improvements would have no adverse effects on marine fisheries and wildlife habitat protected by Land Under the Ocean, as high densities of polychaetes, mollusks, or macrophytic algae are not present in the vicinity of Runway 22R. Approximately 62,370 square feet of Land Containing Shellfish would be lost due to the placement of fill required to construct the inclined safety area. The proposed Runway 22R would affect the interests significant to Land Containing Shellfish mapped by the DMF as a conditionally restricted designated shellfish growing area.

*Variance from the Wetlands Protection Act (WPA)*

Because of the extent of wetlands impacts outlined above, this project will require MassDEP to issue a Variance from the WPA Regulations. In order to grant a Variance request, section 310 CMR 10.05 of the regulations requires MassDEP to consider three main criteria: 1) that there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with the wetlands regulations; 2) that mitigation measures are proposed that will
allow the project to be conditioned so as to contribute to the protection of the interests identified in the Wetlands Protection Act; and 3) that the variance is necessary to accommodate an overriding community, regional, state or national public interest, or to avoid an unconstitutional taking of property without compensation. The FEIR described how the project will comply with these requirements. MassDEP has stated in its comments that the information required for consideration of a request for a Wetland Protection Act Variance have been developed in sufficient detail for MassDEP to adequately review the variance request. As described in detail in the Mitigation Section specific mitigation aspects remain to be more fully developed as part of the MassDEP on-going review of the project variance request.

Waterways and Tidelands Impacts

The Preferred Alternatives for safety improvements to Runways 22R and 33L include proposed changes on both filled and flowed tidelands. Pursuant to 310 CMR 9.03(3)(b), no MassDEP authorization is required for Massport activities on filled tidelands at Logan Airport. However, portions of the proposed RSA enhancements seaward of the mean high water line (flowed tidelands) would require a Chapter 91 license. Although the proposed RSA improvements would involve work in Chapter 91 waterways and tidelands, the FEIR states that there are no significant impacts to the public’s interests in these tideland areas. The only interests currently provided by the proposed RSA Project Sites are shellfishing, living marine resources, and water quality. Limited shellfishing will continue to be permitted within the Security Zone, in those areas that have historically supported that activity.

Runway 33L

The proposed RSA improvements would have permanent impacts to waterways and tidelands protected under the Chapter 91. Although the physical loss of tideland (based on the footprint of the area of natural substrate replaced by pilings) varies minimally among the proposed deck/piling options, the options would result in the same deck footprint. The affected Chapter 91 resources are therefore considered to be the area of the deck footprint seaward of the mean high tide line, approximately 142,410 square feet (3.27 acres) and extending approximately 470 feet seaward of the high tide line. The waters adjacent to Logan Airport, extending 500 feet seaward of the mean high water line, are designated as the Logan Airport Security Zone under M.G.L. Chapter 90, Section 61. Although the proposed RSA improvements would involve work in Chapter 91 waterways and tidelands, there are no material impacts to the public’s interests in these tideland areas. The only public interests currently provided by the proposed RSA Project Sites are limited shellfishing, living marine resources, and water quality. Limited shellfishing will continue to be permitted within the Security Zone, subject to Massport’s oversight, in those areas that have historically supported that activity.

Runway 22R

The proposed Runway 22R ISA improvements would have permanent impacts to
waterways and tidelands. An area of approximately 1.4 acres below the mean high water line
would be affected due to the construction of the ISA, a nonwater-dependent use. No public
access is currently allowed within the proposed Project area. Limited shellfish harvesting by
licensed clammers is allowed within the Security Zone with prior notice from the Massachusetts
Division of Marine Fisheries (DMF).

Licensing Requirements

MassDEP has determined that the portions of the proposed project subject to Chapter 91
jurisdiction are considered to be nonwater-dependent uses, since airports do not require direct
access to tidelands. This finding is particularly significant in this instance since new fill and
structures for nonwater-dependent use are generally prohibited seaward of the mean high water
mark [310 CMR 9.32(1)(a)]. While there are limited exceptions to this prohibition which allow
placement of fill in some cases, according to MassDEP, they do not appear to be applicable to
the proposed fill at Runway 22R. MassDEP has further indicated that the pile-supported structure
for nonwater-dependent use proposed at the end of Runway 33L is likewise prohibited by the
Waterways regulations. The project may therefore require a Variance from the Chapter 91
performance standards.

MassDEP has stated that the FEIR is generally responsive in the context of the Chapter
91 variance provisions. The FEIR shows that there are no alternatives that allow the project to
proceed in compliance with 310 CMR 9.00; that the project includes measures to minimize
interference with public interests in waterways and has proposed mitigation to compensate for
any remaining detriments to the public interest in tidelands; and has made a good argument that
the project is necessary to accommodate an overriding regional/state/federal interest. As stated
in its comment letter, MassDEP has received a draft license application from Massport. MassDEP
has asked Massport for for information regarding the Logan Airport Security Zone and whether
the zone will need to be expanded in connection with this project. Another important aspect of
the variance analysis will include a review of eelgrass, salt marsh and shellfish mitigation that
Massport continues to refine in connection with wetlands and water quality mitigation and
relative to the standards for Nonwater-dependant Infrastructure ay 310 CMR 9.55.

The areas in which work is proposed are not currently accessible to the public and would
not be accessible to the public for the foreseeable future. These areas are within the state-
legislated Logan Airport security zone restrictions on public access. This security zone extends
500 feet seaward of the high water mark. The substantive standards that MassDEP will use to
evaluate the project are those related to Nonwater-dependent Infrastructure Facilities found at
310 CMR 9.55. Since public access is restricted at this site due to security concerns, MassDEP’s
review would concentrate instead on the resource impacts to salt marsh, eelgrass, and loss of
shellfish habitat and adequate mitigation of those impacts in accordance with 310 CMR
9.55(1)(b-c).
Public Benefit Determination

In accordance with 301 CMR 13.03, the Draft EIR included detailed information on how the project will meet the requirements for a positive Public Benefit Determination including information describing the nature of the tidelands affected by the project and the public benefit of the project, the purpose and effect of the project, the impact on abutters and the surrounding community, enhancement to the property, benefits to the public trust rights in tidelands or other associated rights, environmental protection and preservation, public safety, and the general welfare. I acknowledge that the proposed project presents a somewhat unique circumstance where public access to tidelands is not possible. The FEIR addressed how the project would be able to provide additional opportunities for access to tidelands for shellfishing in other locations. The FEIR also provided further information on the overall public benefits provided by the project since promoting access to tidelands is not appropriate.

As required by the statute and regulations, I will issue a Public Benefits Determination that makes detailed findings concerning the project’s benefits to the public trust rights in tidelands. In accordance with M.G.L. c. 30, s. 62I, the Proponent shall file a copy of this Certificate and the corresponding Public Benefits Determination with MassDEP within 30 days of today’s date to notify the Department that work will be conducted within tidelands. MassDEP will then have the authority to enforce the conditions outlined herein and in the Public Benefits Determination pursuant to the statute.

Fisheries Species and Habitat Resources

Massport has met twice in the past three months with local shellfishing representatives and the DMF to discuss the project and how the interests of local shellfishing representatives and other marine fisheries representatives can be protected. Massport should continued coordination with shellfishing representatives and agencies to minimize adverse impacts to shellfish beds and shellfishing.

Impacts at Runway 33L

Approximately 3.27 acres of habitat that could be used by fish species would be altered by the proposed Runway 33L pilings and shaded by the deck. The NMFS has designated Essential Fish Habitat (EFH) within marine, estuarine and freshwaters of the U.S. that includes Boston Harbor. The DMF has recommended a time of year restriction for in-water, silt producing work extending from February 15th through June 30th for the protection of winter flounder, one of the fish species for which Boston Harbor is designated as EFH. Winter flounder use near-shore areas for spawning, larval settlement, and juvenile development.

The Natural Heritage and Endangered Species Program (NHESP) indicated that, with respect to the work proposed under the MA WPA, the proposed Project would not adversely affect the actual resource area habitat for upland sandpiper, a state-protected species, and that the proposed Runway 33L and Runway 22R safety improvements would not result in a “take” of
The proposed Runway 33L RSA improvements would replace a portion of Coastal Beach/Tidal Flat, eliminating habitat for certain benthic organisms, but the pilings could provide attachment substrate for other benthic organisms. Impacts to plants would include the loss of habitat (coastal beach and land under the ocean) for marine algae and eelgrass.

**Impacts at Runway 22R**

The Coastal Bank at this location is dominated by the invasive common reed (*Phragmites australis*). Wetlands were identified based on the presence of Salt Marsh grasses (*Spartina alterniflora* and *S. patens*) and common glasswort (*Salicornia europaea*). The proposed Runway 22R ISA would replace a portion of the Coastal Beach/Tidal Flat present at Runway 22R with a stone substrate. This would alter habitat for benthic organisms. A small amount of intertidal habitat that could be used by fish species (approximately 1.4 acres, including salt marsh and coastal beach) would be altered.

The proposed Runway 22R ISA would require the removal of salt marsh grasses present at the end of Runway 22R, to be replaced with gravel fill. A stand of common reed (*Phragmites australis*) at the Runway 22R end would also be removed. The removal of common reed and salt marsh vegetation eliminate areas of potential wildlife hazards within the FAA-designated Wildlife Hazard Area, because these are potential roosting sites for starlings and red-winged blackbirds and potential habitat for shorebirds, brant, and seagulls.

The project site is part of a historically important area for Boston Harbor shellfishermen. The intertidal mudflats surrounding Logan Airport are part of shellfish area GBH5.3, conditionally restricted, available for commercial harvest. Several commenters have stated that in recent years, a number of shellfish beds near Logan Airport and the Town of Winthrop have re-opened to shellfishing, thanks to a cleaner Harbor. The mudflats on the project site support commercially harvested shellfish beds including soft-shell clams (*Mya arenaria*) and blue mussels (*Mytilus edulis*). The site is favored by shellfishermen because of its wide intertidal flat, enabling access to harvestable area on smaller tides. DMF acknowledges Massport’s efforts to engage the local shellfishing community and has stated in comment letters several inaccuracies in the FEIR that must be clarified prior to permitting that warrant clarification. For example, the DMF states that the 5,130 bushels/year estimate of soft-shell clams does not include GBH5.4 “Wood Island”. This estimate only accounts for classification areas in the RSA in which projects are proposed. In addition, DMF clarifies that the FEIR incorrectly states that there is no evidence of invasive tunicates in Boston Harbor which DMF and others have documented in Boston Harbor.

**Rare Species**

The project site is located within Priority Habitat, as indicated in the 13th Edition of the MA Natural Heritage Atlas, for Upland Sandpiper (*Bartramia longicauda*) and Grasshopper Sparrow (*Ammomanus savannarum*), bird species state-listed as “Endangered” and
“Threatened”, respectively, pursuant to the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (MESA; 321 CMR 10.00). The NHESP has stated that the proposed Project would not adversely affect the actual resource area habitat for upland sandpiper, a state-protected species.

In a letter to Massport, dated March 26, 2010, the NHESP determined that the proposed project would not result in a prohibited “take” of state-listed species. However, that letter was in response to a Notice of Intent filing that did not include the proposed Taxiway C-1 connector included in the Final Environmental Impact Report. The NHESP has no concerns with the majority of the proposed runway safety area improvements; however, the work associated with the proposed Taxiway C-1 connector will need to include minor conditions to avoid a prohibited “take” of state-listed species. Conditions are likely to include a timing restriction with no work occurring on the Taxiway C-1 connector during the breeding season of the above state-listed birds. The NHESP anticipates being able to resolve any outstanding rare species issues through the MESA review process.

The proposed Runway 33L RSA improvements would replace a portion of Coastal Beach/Tidal Flat, eliminating habitat for certain benthic organisms, but the pilings could provide attachment substrate for other benthic organisms. The U.S. Fish and Wildlife Service (USFWS) has previously stated that there are no federally-listed or proposed, threatened or endangered species or critical habitat under its jurisdiction within the Runway 33L project area. Impacts to plants would include the loss of habitat (coastal beach and land under the ocean) for marine algae and eelgrass. The proposed Runway 33L RSA improvements are not likely to affect federally-listed whale species, including the North Atlantic right, the humpback, the fin, the sei, and the sperm whales, as the proposed RSA would be constructed in an area too shallow to be used by whales and none have been reported in the immediate vicinity of the proposed improvements.

Although sea turtles have never been reported in Boston Harbor, NMFS considers that sea turtles may be found seasonally in Boston Harbor. The proposed Runway 33L pile-supported deck could impact habitat potentially used by sea turtles, but there likely would be no direct impacts to the species. The five construction options would have a similar effect on eelgrass and therefore on sea turtle habitats. The proposed Runway 22R ISA would result in the loss of approximately 1.4 acres of intertidal habitat and 700 square feet of subtidal habitat that could potentially be used by sea turtles.

Water Quality Certification and Stormwater

Runway 33L

According to the FEIR, the proposed Runway 33L safety improvements would not generate pollutants or affect water quality. The existing and proposed EMAS bed would not be accessed by vehicles other than during an emergency, due to its composition. The FEIR states that runways, taxiways, and aprons are not sources of pollutants. Frequent sweeping of the paved
portions of the site further reduces the quantity of sediments that are available for transport by stormwater runoff. All outfalls would continue to be regulated under the Airport’s existing National Pollutant Discharge Elimination System (NPDES) permit. Stormwater sampling of the airfield outfalls is an ongoing requirement of the NPDES permit and would continue following the construction of the Runway 33L RSA improvements. Additionally, stone rip rap at these outfalls prevents erosion and sedimentation resulting from stormwater discharges. According to the FEIR, runoff from the perimeter roadway and portions of the existing Runway 33L RSA do not enter the closed drainage system and sheet flow across the rip rap slope into Boston Harbor. Massport has state that this overland sheet flow from the RSA and adjacent areas do not constitute regulated discharges under the NPDES permit.

All of the proposed Runway 33L deck construction options would have the same water quality impacts. The five construction options would have the same drainage system and potential effects on stormwater in the vicinity of Runway 33L. Stormwater runoff from the deck will be discharged via scuppers located beneath the deck at several locations to prevent erosive forces from disturbing sediment and impacting the receiving water. To comply with the regulatory requirement to improve existing condition, Massport proposes to install stormwater treatment units at an outfall adjacent to the work area. The proposed stormwater management system complies with the Massachusetts Stormwater Management Regulations.

Runway 22R

According to the FEIR, the proposed Runway 22R ISA would have no permanent impacts to water quality. No vehicles would operate on the proposed ISA, no new impervious surfaces and no new stormwater conveyance systems would be created, and the proposed ISA would not result in any new discharge of untreated stormwater. There would be no change to the quality and quantity of stormwater runoff resulting because the proposed ISA is not an area with higher pollutant loading and would not generate permanent changes in total suspended solids (TSS).

Water Quality Certification

The Water Quality Certification application requires documentation of how the project meets the regulation requirements of 314 CMR 9.00 and the associated criteria for the evaluation of applications for discharge of dredged or fill material to salt marsh and land under water 310 CMR 9.06. State water quality standards contained in 314 CMR 9.00 and 314 CMR 4.00 would apply to the dredging that would be necessary to remove unsuitable substrate at the Runway 22R end, as well as to the potential temporary construction-period increases in sedimentation and turbidity from the construction activities at the ends of both the Runway 22R and 33L.

Temporary disturbances to water quality would occur during construction of the Runway 33R RSA improvements. Construction is likely to disturb benthic sediments in the water column and increase turbidity in the vicinity of operations. Runway 33L deck construction Options 5 and 6 are expected to generate excavated sediment and use drilling fluid during drilling of caissons.
Drilling fluid, likely composed of a bentonite slurry or a polymer fluid, would be displaced up and out of the steel casing as the concrete is pumped in.

Water quality in the vicinity of the proposed Runway 22R ISA improvements could be temporarily affected by short-term construction activities, particularly due to the excavation and dredging required to remove unsuitable substrate materials and to place new stone fill. The work would consist of the excavation and removal of soft organic soils in the intertidal and coastal bank areas and replacement with crushedstone/ granular soil to provide a stable base for the slope. The perimeter of the inclined safety area would be protected from erosion by the placement of gabions (partitioned, wire fabric containers filled with stone to form flexible, permeable structures for earth retention). Excavation of material within the intertidal zone would be completed during periods of low tide. The area would be surrounded by a siltation curtain/ debris boom to contain and minimize any debris or siltation. Construction completed at the Runway 22R end would follow a comprehensive Soil Erosion and Sediment Control Plan to minimize temporary impacts. The gabions wrapped with filter fabric installed during construction would also act as a barrier to sediment releases and reduce resulting turbidity.

With regards to water quality impacts, the Boston Harbor Association has requested that no snow dumping from Logan Airport or its runways is permitted. This past winter, an exception was made to allow snow from Massport properties to be disposed into Boston Harbor. However because of potential water quality impacts, and the winter, 2010 exemption should not establish a precedent for the future.

**Stormwater**

The Wetlands and 401 Water Quality Certification regulations, at 310 CMR 10.05(6) and 314 CMR 9.06(6), respectively, require compliance with ten Stormwater Standards to protect wetland interests. Unmanaged or improperly managed stormwater runoff causes detrimental effects to the interests protected in wetland resource areas including erosion, scour, sedimentation, changes to hydrology, changes to wetland plant communities, promotion of invasive plant species (e.g., Phragmites, an invasive plant species is now present at Logan Airport), and damaging effects to aquatic organisms including fin fish and shellfish. The velocity of the discharged stormwater is also of concern, since unchecked velocity may scour coastal beaches and lead to loss of aquatic plants, including the habitat aquatic plants provide to fin and shellfish.

For the 33L RSA, Massport proposes to collect and discharge stormwater runoff directly to wetland resource areas without any recharge or water quality treatment, which may impair interests protected by the Wetlands Protection Act, including fin fish and shellfish. The MEPA Certificate on the Draft EIR requested that measures must be proposed in the FEIR to comply with the ten Stormwater Standards. MassDEP has stated in its comments that the FEIR does not sufficiently address the Wetlands and 401 Water Quality Certification regulations related to the compliance with the MassDEP Stormwater Standards. MassDEP has provided detailed
comments on this subject that must be addressed during permitting. In addition, MassDEP has advised that measures may be proposed elsewhere on site to mitigate for lack of storwater treatment from Runway 33L, and measure to minimize the discharge of TSS at Runway 33L should be proposed.

**Underwater Archaeological Resources**

The area under the current Logan International Airport was comprised of islands and mudflats throughout most of the historic period. The Massachusetts Board of Underwater Archaeological Resources (Board) has indicated in its record the occurrence of at least 32 shipwrecks in Boston Harbor during the period of 1738-1893. However, the Board has indicated that this project will have no adverse effect.

As described in the FEIR, there are no historic resources directly adjacent to the proposed Runway 33L RSA. The Build Alternative would not affect any known historic or archaeological resources. The Massachusetts Board of Underwater Archaeological Resources does not have any record of underwater archaeological resources in the project area and it is highly unlikely that a resource would be found during construction due to the type of construction and project location which are all on a previously-filled area. There will also be no change to the Runway 22R end that may cause an adverse effect to any known historical, archaeological, or cultural resource. The Massachusetts Board of Underwater Archaeological Resources does not have record of underwater archaeological resources in the project area and it is highly unlikely that a resource would be found because the Runway 22R ISA is located almost entirely landward of mean low water. In order to mitigate for any unintended consequences to historic or archaeological resources during construction, an Unanticipated Discovery Plan would be developed by Massport and implemented during construction. The Massachusetts Board of Underwater Archaeological Resources and the Massachusetts Historical Commission should have the opportunity to review and comment on the plan prior to the start of the construction.

**Construction**

Although there are no permanent construction-period impacts, construction activities may have temporary effects on water quality from sedimentation; traffic and the transportation network in the vicinity of Logan Airport; noise that would affect area residents; and emission of air pollutants during the construction period.

As stated previously in this Certificate, water quality in the vicinity of the proposed RSA enhancement will be temporarily impacted by construction activities, particularly by dredging to remove unsuitable substrate materials. These activities could result in a temporary increase in suspended sediments the area of Boston Harbor in the immediate vicinity of the proposed work. Coastal resources and benthic organisms in the immediate vicinity of the proposed RSA enhancement could also be temporarily impacted by short-term construction activities.
Construction is likely to disturb benthic sediments in the water column and increase turbidity in the vicinity of operations. Runway 33L deck construction Options 5 and 6 are expected to generate excavated sediment and use drilling fluid during drilling of caissons. The FEIR states that barges would transport most of the required construction equipment, personnel, and materials. The only materials expected to be delivered by truck to the airport would be the EMAS blocks, concrete and asphalt. The FEIR states that Massport’s agreement with the Contractor will specify that direct construction truck traffic access to the Runway 33L construction site be through the North Gate for the duration of construction. The project anticipates 56 additional construction truck trips per day associated with the proposed Runway 33L RSA improvements. If necessary, Massport has committed to modify contractor schedules and access routes to minimize impacts.

Comments I have received from the City of Boston Environment Department request further information concerning the final construction plans for Runway 33L once a contractor is selected. I ask that Massport commit to sharing the detailed construction plans with the City of Boston once they are developed.

Unlike Runway 33L, construction of the proposed Runway 22R ISA would be primarily undertaken from the landside, with most of the materials and workers arriving by truck. The majority of workers would be transported to the site by shuttle bus. The FEIR states that Massport has committed that the contractor for the proposed Runway 22R ISA would be under the same access restrictions for direct construction truck traffic access as the Runway 33L construction. Vehicular traffic flow on the airport roadway network during construction would be managed so that the quality of traffic flow would not deteriorate to unacceptable levels of service. If necessary, Massport has the ability to modify contractor schedules and access routes to minimize impacts.

The proposed construction of the Runway 33L RSA and Runway 22R is expected to generate short-term construction-related air emissions, including exhaust emissions from on-road construction vehicles, off-road construction equipment and marine transport vessels; evaporative emissions from asphalt placement and curing; and the generation of fugitive dust from disturbance of unpaved areas. The construction improvements would generate noise associated with construction activities. Construction equipment is expected to be used only during daytime hours (7 AM to 7 PM) consistently throughout the Project’s construction phase to install the pile-supported deck.

As the project proceeds Massport should continue to outline specific environmental sustainability measures which will be implemented as part of this project, consistent with Massport’s leadership in this area at its other facilities. In particular, Massport should strive to require emissions control and use of alternative-fuels for construction vehicles where possible to reduce air pollutant and greenhouse gas emissions. I expect that the next Environmental Data Report submitted by Massport for review under MEPA will address its efforts to incorporate sustainability measures into construction projects such as this one.
Summary of Mitigation Measures

The proposed RSA Improvements Project would result in unavoidable impacts to Salt Marsh, Eelgrass (Submerged Aquatic Vegetation), and Land Containing Shellfish. The FEIR states that the proposed safety improvements would not affect the functions or significant interests of Coastal Bank. Temporary impacts to environmental resources during construction would be mitigated through emissions and noise controls, as well as soil and erosion controls to prevent adverse water quality impacts.

Massport has developed separate salt marsh and eelgrass mitigation processes, in consultation with the Salt Marsh and Eelgrass Working Groups. The Salt Marsh Working Group comprises representatives of the following agencies: FAA, USACE, U.S. Environmental Protection Agency (USEPA), MA Office of Coastal Zone Management (CZM), DEP, Massachusetts Department of Conservation and Recreation (DCR), Massachusetts Department of Fish and Game Division of Ecological Restoration (DER, formerly CZM WRP), and Boston Environment Department. The Eelgrass Working Group includes representatives from the FAA, USACE, USEPA, CZM, DEP, DCR, DER and DMF, and the Boston Environment Department. In response to overlapping interests in the mitigation strategies, the two Working Groups were merged into a single larger group which provided input on all resource mitigation strategies. The FEIR contained refined conceptual designs for the proposed mitigation sites as well as refined mitigation goals based on the Agency Working Groups feedback. As described in detail in below specific mitigation aspects remain to be more fully developed as part of the permitting process.

In the FEIR, the proponent has committed to provide the following mitigation measures:

**Eelgrass Mitigation**
- Restore 4.6 acres of eelgrass at two locations by transplanting eelgrass from the Runway 33L RSA area. (Initiate Prior to Construction)
- Monitor eelgrass restoration areas for a 5-year period and implement corrective actions if required. (Post-construction)

The FEIR states that mitigation for the unavoidable loss of eelgrass at Runway 33L would be provided by restoring eelgrass beds within Boston Harbor. Massport has identified two preferred locations for eelgrass restoration: White Head Flats in Hull, and New Harbor in Boston. The FEIR states that these sites were identified through a comprehensive site selection process that used information from previous studies of eelgrass habitat in Boston Harbor, updated site selection parameters, and field investigation of potentially suitable sites. Prior to the start of construction of the Runway 33L RSA deck, Massport will transplant eelgrass from the Runway 33L impact area to the restoration sites, for a total restored area of 4.6 acres (a 3:1 restoration ratio). Massport has proposed these sites will be monitored monthly during the first growing season, and annually for a period of five years to ensure that the restoration projects meet the success criteria established by the resource agencies.
In addition to the proposed locations specified in the FEIR, several of the comments received from agencies that have participated in the Eelgrass Mitigation Working Group have suggested other suitable sites for eelgrass restoration, including Governors Island Flats and Deer Island Flats. The comments indicate that Massport has discounted the Governor’s Island and Deer Island locations as viable mitigation sites due to the proximity to the runways and the potential of these sites to attract birds, which could interfere with aircraft. However, the commenters also state that the Governor’s Island and Deer Island are superior sites for eelgrass restoration than what was proposed in the FEIR. Based on my review of the FEIR and the comments, I am satisfied that Massport can work with the agencies during project permitting to determine a final location for the eelgrass restoration projects that will provide adequate mitigation for project impacts either at Massport’s proposed locations, or at the locations suggested by the permitting agencies. Massport should continue to work closely with the Eelgrass Working Group to agree on a final suitable location.

MassDEP has also stated that the proposed pre-construction and long term post-construction monitoring of the eelgrass mitigation sites will also be required to be more fully developed with respect to enhanced performance standards to include more frequent sampling and more rigorous standards to determine success. Massport will also be required to provide ongoing remediation of those mitigation areas shown to be in decline and not on target to achieve desired density and coverage after five years. Monitoring success should approximate the root/shoot density comparable to the existing (to be impacted) eelgrass meadow. I expect that the final permits will contain adequate conditions to ensure the success of these projects.

**Land Containing Shellfish Mitigation**

- Restore 1.1 acres of intertidal clam flats within the salt marsh mitigation site. (During construction)
- Monitor blue mussel population at the Runway 33L RSA area. Implement corrective actions if required. (Post-construction)
- Provide funding for shellfish enhancements in Boston Harbor (During construction)

Shellfish mitigation for the RSA Improvements Project will consist of three elements. The loss of the intertidal clam flats will be mitigated by restoring a historically-filled intertidal area in the Runney Marsh ACEC, as part of the salt marsh mitigation site. Approximately 0.7 acres of intertidal flats would be restored at this location. Massport will monitor the existing blue mussel beds under the Runway 33L deck, and monitor the new pilings, to verify the assumption that the new deck and pilings would enhance mussel habitat and provide additional substrate for mussel colonization. Prior to any work at the Runway 22R ISA, Massport will coordinate with the DMF and authorized shellfishers (through the Master Digger) and allow DMF to remove all harvestable-size soft-shell clams within the area of the ISA. All small clams may also be removed at the discretion of DMF and transplanted to a suitable location to augment existing soft-shell clam resources. Massport will provide a net benefit to the local population of shellfish by contributing funding to the DMF Boston Harbor Soft Shell Clam stock enhancement program,
consistent with the FAA and USDA Wildlife Hazard Avoidance Guidelines. Massport will execute a Memorandum of Agreement with DMF similar to the MOA (July 7, 2007) for the Runway 22L ISA project.

Salt Marsh Mitigation

- Restore 2.83 acres of salt marsh within the Rumney Marsh ACEC. (During Construction)
- Monitor compensatory Salt Marsh for success and invasive plant species, and implement an invasive species control plan. (5-year period following construction)

Mitigation for the unavoidable loss of salt marsh and mud flats at Runway 22R would be provided by restoring offsite, historically altered salt marsh in the vicinity of Boston Harbor. DEP has stated that a 2:1 replacement/creation ratio would be required as part of the MA WPA variance. The USACE would require the same mitigation ratio. MassDEP typically seeks strict replication by requiring mitigation sites to be on-site or adjacent to the affected site, in the same watershed, and in-kind with the same elevation, habitat type, hydrological connection, ecological functions, and other key characteristics. Higher ratios tend to be required for restoration, enhancement, or preservation. Therefore, based on current guidance, a 2:1 mitigation goal is proposed for salt marsh and a 1:1 mitigation goal for mud flats, which would total approximately 123,340 square feet (2.83 acres), as restoration or creation. The total mitigation goal is twice the combined area of affected salt marsh and intertidal beach (mud flats). According to the FEIR the Salt Marsh Mitigation Working group reviewed and concurred with this mitigation ratio.

In February 2010, Massport conducted a GIS analysis and aerial photo interpretation to identify potential mitigation sites within the study area. The study area includes most of the area within the Boston Harbor and other areas depicted in the Salt Marsh Mitigation Study Area. The site identification criteria considered FAA’s requirements for wildlife hazards. The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS), Wildlife Services, the entity responsible for determining whether a mitigation area would constitute a wildlife hazard, has reviewed the proposed salt marsh mitigation and concurred that these areas do not create or exacerbate a wildlife hazard. Based upon input from the interagency working group, Massport will create new salt marsh and mud flat in Rumney Marsh, in Saugus, Massachusetts, at a 2:1 mitigation ratio.

Massport will execute a Memorandum of Agreement with the Department of Conservation and Recreation (DCR) to proceed with salt marsh mitigation at the Rumney Marsh sites, and that the sand excavated from Rumney Marsh will be used for beach nourishment at Revere Beach. Several comment letters have expressed support of the re-use of the excavated sand for beach nourishment in Revere.

The FEIR describes very conceptual salt marsh mitigation plans that, as indicated in several comment letters, will require more complete detail on scaled (horizontal and vertical) contoured plans, cross-sections, final planting plans, benchmarks, and a monitoring plan prior to permitting. In addition, MassDEP states that mitigation site topographic and tidal datum will be
required as well as a clearer quantification of resource impacts and mitigation. Massport should strive to minimize the alteration of existing salt marsh while proposing a viable mitigation design. Grade elevations will be required below the highest spring tides of the year with portions below mean high tide.

As stated in the comment letter from the Boston Conservation Commission (BCC), there are numerous areas along the East Boston shoreline where debris removal could enhance tidal flat and coastal beach resource areas and improve waterfront aesthetics for the East Boston community which Massport should consider enhancing or restoring as part of its mitigation. The City of Boston’s Environment Department also referenced debris clean-up in its comments on the Draft EIR as a proposed mitigation measure. The BCC specifically suggests that the Condor Street Overlook Urban Wild could serve as a perfect example of a location in East Boston where debris removal could enhance tidal flat resource area and shoreline.

Construction Mitigation

Massport has committed to construction mitigation measures that would be incorporated into the contract documents and specifications governing the activities of contractors and subcontractors constructing elements of the proposed project, but the plans will ultimately be the responsibility of Massport. All construction activities would comply with FAA Advisory Circular 150/5370-10 (latest edition), Standards for Specifying Construction of Airports. Specific mitigation measures will be developed during the final design phase of the RSA Project and would be reviewed by the appropriate regulatory agencies as part of the permit applications. In order to mitigate for any unintended consequences to historic or archeological resources during construction, an Unanticipated Discovery Plan would be developed by Massport and implemented during construction.

Conclusion

Based upon my review of the FEIR and after consultation with the state permitting agencies, I am satisfied that the FEIR provided sufficient information to allow the state agencies to understand the environmental consequences of the project. Any remaining issues concerning the proposed mitigation measures can be resolved during the permitting processes. The final Section 61 Findings by each of the agencies should be forwarded to the MEPA Office for publication in the Environmental Monitor, in accordance with 301 CMR 11.12.

March 18, 2011

Date

Richard K. Sullivan, Jr., Secretary

Comments received:

02/28/2011 The Board of Underwater Archaeological Resources
Comments received (continued):

03/10/2011  U.S. Environmental Protection Agency
03/11/2011  Department of Environmental Protection
03/11/2011  The Boston Harbor Association
03/11/2011  City of Boston Conservation Commission
03/11/2011  John Denehy, Boston Clam Diggers Association
03/11/2011  Proponent’s Response to John Denehy, Boston Clam Diggers Association Letter
03/11/2011  Division of Marine Fisheries, NHESP
03/14/2011  Division of Marine Fisheries
03/15/2011  City of Boston Environmental Department

RKS/ACC/acc