Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.: 14442
MEPA Analyst: Anne Canaday
Phone: 617-626-1035

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **Boston-Logan International Airport Runway Safety Area Improvements Project**		
Street: **Harborside Drive**		
Municipality: **East Boston**	Watershed: **Boston Harbor**	
Universal Tranverse 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: **2010**	Estimated completion date: **2011**	
Approximate cost: **$60 million (Includes both Runway 33L and Runway 22R ends)**	Status of project design: **10%**	
Proponent: **The Massachusetts Port Authority (Massport)**		
Street: **One Harborside Drive, Suite 200S**		
Municipality: **East Boston**	State: **MA**	Zip Code: **02128-2909**
Name of Contact Person From Whom Copies of this ENF May Be Obtained: **Stewart Dalzell**		
Firm/Agency: **Massachusetts Port Authority**	Street: **One Harborside Drive, Suite 200S**	
Municipality: **East Boston**	State: **MA**	Zip Code: **02128-2909**
Phone: **(617) 568-3524**	Fax: **(617) 568-3518**	E-mail: **SDalzell@massport.com**

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☒Yes ☐No

Has this project been filed with MEPA before?
☒ Yes (EOEA No. 5122) - For the Runway 33L end ☐No

Has any project on this site been filed with MEPA before?
☒ Yes (EOEA No. 5122) ☐No

Is this an Expanded ENF (see 301 CMR 11.05(7)) 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

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): **This is a project funded by, and on land owned by, an agency of the Commonwealth. Additional funding will be sought from FAA.**

Are you requesting coordinated review with any other federal, state, regional, or local agency?
☒Yes — **Proponent will prepare a joint EA/EIR for review by FAA and EOEEA.**
☐No

List Local or Federal Permits and Approvals: **NPDES General Permit for Stormwater Discharge from Construction Activities and Stormwater Notice of Intent (U.S. Environmental Protection Agency); Finding of No Significant Impact (FAA); Section 10 and Section 404 Permit (US Army Corps of Engineers); Section 401 Water Quality Certification, Wetlands Variance, and Chapter 91 License (Massachusetts Department of Environmental Protection); Consistency Determination (Massachusetts Office of Coastal Zone Management); FAA Airport Layout Plan Approval.**

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

☐ Land	☐ Rare Species	☒ Wetlands, Waterways, & Tidelands
☐ Water	☐ Wastewater	☐ Transportation
☐ Energy	☐ Air	☐ Solid & Hazardous Waste
☐ ACEC	☐ Regulations	☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				☒ Order of Conditions
Total site acreage	~2,400 acres, incl. 700 acres of Boston Harbor (entire airport)			☐ Superseding Order of Conditions
				☒ Chapter 91 License
				☒ 401 Water Quality Certification
New acres of land altered		10.6 acres		☐ MHD or MDC Access Permit
Acres of impervious area	1.5 acres	3.4 acres	4.9 acres	☐ Water Management Act Permit
Square feet of new bordering vegetated wetlands alteration		0		☐ New Source Approval
Square feet of new other wetland alteration		215,320 sq. ft. (Total for both Runway 33L and Runway 22R ends)		☐ DEP or MWRA Sewer Connection/ Extension Permit
Acres of new non-water dependent use of tidelands or waterways		4.9 acres (Total for both Runway 33L and Runway 22R ends)		☒ Other Permits (*including Legislative Approvals*) – Specify:
STRUCTURES				**MA Coastal Zone Management - Federal Consistency Determination**
Gross square footage	0	0	0	**Section 10 and Section 404 Permit from US Army Corps of Engineers**
Number of housing units	0	0	0	
Maximum height (in feet)	0	0	0	**Wetlands Variance**
TRANSPORTATION				**FAA Airport Layout Plan Approval**
Vehicle trips per day: Site	0	0	0	
Vehicle trips per day: Airport-wide	0	0	0	
Parking spaces: Site	0	0	0	
Parking spaces: Airport-wide	0	0	0	
WASTEWATER				
Gallons/day (GPD) of water use	0	0	0	
GPD water withdrawal	0	0	0	
GPD wastewater generation/ treatment	0	0	0	
Length of water/sewer mains (in miles)	0	0	0	

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☒Yes — **Proposed runway safety area enhancements for Runway 33L and 22R are within NHESP mapped priority habitats for rare species but will not affect grassland areas.**

☐No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include 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 (Specify_____) ☒No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) ☐No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

Description of Site and Program

The Massachusetts Port Authority (Massport) is proposing to enhance the runway safety areas (RSAs) at the ends of Runway 33L and Runway 22R at Boston-Logan International Airport (Logan Airport). The proposed improvements are required to enhance the RSAs, to the extent feasible, to be consistent with the Federal Aviation Administration's (FAA's) current airport design criteria for RSAs and to enhance rescue access in the event of an emergency. Typical RSAs are 1,000 feet long by 500 feet wide. RSAs are safety improvements and 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. The existing RSA is 187.5 feet long and 500 feet wide. Within this area is a 158-foot long and 170-foot wide Engineered Material Arresting System (EMAS) bed, installed in 2006 as an interim safety measure. 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 in a way that minimizes damage to the aircraft. The existing EMAS bed is capable of arresting a Boeing 757-200 exiting the runway at a speed of 38 knots or less or a Boeing 737-800 at 42 knots or less, but provides minimal arrestment for the design aircraft, the Boeing 747-400. The existing Runway 33L RSA is also too short to provide undershoot protection consistent with the FAA criteria. 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 (Advisory Circular 150/5300-13, Airport Design, March 28, 2007) to the extent feasible.

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. The EMAS bed provides the minimum arrestment speed acceptable by the FAA (40 knots) for the design aircraft, the Boeing 757-200. The Runway 22R EMAS bed also provides arrestment at higher speeds for many of the smaller aircraft frequently using this runway. The arresting performance improves with lighter aircraft (e.g. EMAS bed will arrest a Boeing 737-800 that leaves the runway at 51 to 57 knots or less and a CRJ-200 that leaves the runway at 60 to 66 knots or less). 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. This request is consistent with that commitment.

Description of Alternatives

An extensive screening process was conducted and a wide range of alternatives have been considered and analyzed for this project. Chapter 3, *Alternatives Considered*, provides complete descriptions of the alternatives. The following alternatives were considered:

Runway 33L

- **FAA Full 1,000-Foot RSA**
- **Shorten and/or shift runway and enhance RSA with EMAS**
- **RSA with EMAS, including width and platform options**
- **No-Action**

An inclined safety area alternative was not considered for Runway 33L because it cannot provide protection for aircraft in the event of an undershoot. Furthermore, the inclined safety area previously permitted (EOEA #5122) was not constructed due to concerns by pilots related to the transition between the proposed inclined safety area and the existing light pier. The FAA design criteria require that the alternatives for Runway 33L provide protection for both aircraft overruns and undershoots.

Runway 22R

- **Enhanced EMAS**
- **Inclined Safety Area**
- **No Action**

After eliminating several alternatives due to cost or unacceptable environmental impacts, the alternatives being carried forward to the Draft EA/EIR are the 600-foot long by 300-foot wide RSA with EMAS on a pile-supported deck and the no action alternative for Runway 33L, and the inclined safety area and no action alternative for Runway 22R.

Any of the Build Alternatives for either runway would increase impervious surface and alter wetland resources, as summarized in the Wetlands, Waterways, and Tidelands Section of this form and in Chapter 4, *Description of Environmental Resources, Impacts, and Permits Required.* Placing fill for the Build Alternatives could affect wave direction/velocity and sediment erosion/deposition and thus the recommended action for Runway 33L involves construction of a pile-supported deck to support the proposed EMAS enhancement. None of the alternatives would be expected to degrade water quality. There would be no increase in aircraft operations, runway use, or vehicular traffic, and no historic or archaeological resources would be impacted.

Description of Mitigation Measures and Environmental Benefits

The attached narrative provides details on project-related impacts and proposed mitigation measures. Mitigation measures will be identified in the Draft EA/EIR for both runway ends for each of the Build Alternatives considered.

- **Loss of Salt Marsh would be required at the Runway 22R end. Measures to minimize or avoid impacts will be identified, and measures to compensate for Salt Marsh loss will be developed in**

consultation with the Boston Conservation Commission, Massachusetts Department of Environmental Protection, and the US Army Corps of Engineers. Compensatory wetland mitigation measures may include the restoration of previously filled or degraded Salt Marsh as well as the construction of new Salt Marsh areas.

- **Impacts to shellfish beds may result from any alternative with in-water construction. To the extent any impacts result, potential mitigation measures and areas will be identified in the Draft EA/EIR, in consultation with the National Marine Fisheries Service, Division of Marine Fisheries, and the City of Boston.**
- **Impacts to submerged aquatic vegetation (eelgrass) would occur at the Runway 33L end. The potential impacts to eelgrass will be assessed, and mitigation strategies identified during preparation of the Draft EA/EIR. A federal and state interagency eelgrass working group has been established to address this issue. The first working group meeting was held in April 2009.**
- **The Draft EA/EIR will describe proposed mitigation measures to protect water quality during the construction period and, if required, post-construction. Massport anticipates that the existing stormwater collection and treatment system at Logan Airport is expected to be adequate to protect receiving water quality in compliance with the Airport's National Pollutant Discharge Elimination System (NPDES) permit.**

Massachusetts Port Authority
One Harborside Drive, Suite 200S
East Boston, MA 02128-2909
Telephone (617) 428-2800
www.massport.com

June 30, 2009

The Honorable Ian A. Bowles, Secretary
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***

Dear Secretary Bowles:

On behalf of the Massachusetts Port Authority (Massport), I am pleased to submit for your review, the Environmental Notification Form (ENF) for the *Boston-Logan International Airport Runway Safety Area Improvements Project.*

Massport is proposing to enhance the runway safety areas (RSAs) at the ends of Runway 33L and Runway 22R at Boston-Logan International Airport. The proposed improvements are required to enhance the RSAs, to the extent feasible, to be consistent with the current Federal Aviation Administration's 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. The ENF describes the purpose of, and need for, the proposed RSA enhancements, the alternatives considered, and the potential environmental impacts.

A 30-day public comment period for the ENF will begin on July 8th, 2009, the publication date of the next Environmental Monitor, and will end on August 7, 2009. The attached distribution list indicates that all parties on the distribution list will be sent a copy of the ENF. The ENF will be available for inspection at a number of public libraries (as shown on the ENF distribution list) and on Massport's website (www.massport.com).

Massport hopes that you and other reviewers of the ENF find the document informative. We look forward to your review of this document and to close consultation with you and other reviewers in the coming weeks.

In coordination with your staff, a public consultation session is scheduled with MEPA and the FAA for 3:00 PM on July 30, 2009, at the Logan Office Center, One Harborside Drive, East Boston (Logan Airport) in the Board Room to receive comments on the project and for MEPA and FAA's use in determining the scope for a combined federal and state Draft Environmental Assessment/Environmental Impact Report (Draft EA/EIR).

Please feel free to contact me at (617) 568-3524 if you have any questions.

Very truly yours,

Stewart Dalzell
Deputy Director, Economic Planning and Development

Cc: R. Doucette/FAA