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November 30, 2017

Ms. Sarah Porter, Conservation Agent
New Bedford Conservation Commission
133 William Street
New Bedford, MA 02740

RE: New Bedford Regional Airport Vegetation Management Plan

Dear Ms. Porter

As part of MassDOT Aeronautics Vegetation Management Program, we are pleased to submit New Bedford Regional Airport's Updated Yearly Operating Plans for your consideration. If you have any questions feel free to call me at (617) 412-3690 or email me at michael.garrity@dot.state.ma.us.

Sincerely,

Michael Garrity
Environmental Analyst

Cc: Paul L. Barton, Airport Commission Chairman
Scot Servis, Airport Manager
Robert Mallard, Airport Solutions Group
File

NOV 30 2017



Stantec

482 Payne Road, Scarborough Court, Scarborough, ME 04074

November 27, 2017

File: 195211029

Attention: Sarah Porter, Conservation Agent

New Bedford Conservation Commission

133 William Street

New Bedford, MA 02740

Dear Ms. Sarah Porter,

**Reference: New Bedford Regional Airport Yearly Operational Plan (YOP) Update
Vegetation Management Plan (VMP)
DEP File No. SE42-226 (New Bedford)**

On behalf of the New Bedford Regional Airport Commission and Massachusetts Department of Transportation – Aeronautics Division (MassDOT – Aeronautics), Stantec Consulting Services, Inc. (Stantec) is herein submitting the following information regarding the ongoing Vegetation Management Program at the New Bedford Regional Airport (EWB). This letter provides the updated 5-Year Vegetation Management Plan (i.e., Yearly Operational Plan) for the airport in compliance with the Airport Tree Clearing Limited Project provision 310 CMR 10.53(3)(f)(5) requirements as approved under the Order of Conditions. The proposed actual vegetation management is limited to the work approved under the Orders of Conditions previously issued for this project, unless future permits are issued for any new acquired easements.

YOP Update Requirement

In conformance with the Limited Project Provision for Vegetation Management at airports, Vegetation Management Plans need to be updated and presented to the Conservation Commission. As per 310 CMR 10.53(3)(n)(5)(f):

"Notices of Intent shall propose a five-year airport vegetation management plan. The vegetation management plan shall, at minimum, contain a purpose and goals statement, identify all airport protective zones, identify proposed vegetation management areas within the protective zones, and identify and prioritize future vegetation removal projects. Updated vegetation management plans shall be provided for each Notice of Intent filed after the expiration period of the most recent five-year vegetation management plan period."

In DEP's review and comment on the 1999 GENF for the "Massachusetts Statewide Airport Vegetation Management GEIR Update" (EOEA #12092), they issued guidance relative to future maintenance work extending beyond the permit period of the Order of Conditions.

"The Department [DEP] also supports the recommendation that the VMP (which is valid for 5 years) need not be rewritten for future maintenance projects unless substantial changes have taken

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place since the completion of the initial VMP and provided that subsequent Yearly Operating Plans (YOPs) are comparable to those approved as part of the initial VMP. When appropriate, the Certificate of Compliance issued for each project could be drafted to provide for annual maintenance, consistent with those methods approved as part of the VMP, without the need for subsequent regulatory review."

Consistent with the above DEP guidance, the VMP YOPs are an ongoing maintenance practices analogous to wetland vegetation control in a permitted detention basin. The updated YOPs modify only the timing and implementation of the same methodologies detailed under the continuing maintenance provision permitted under the original Order of Conditions. This continued maintenance will help to ensure the success of the Vegetation Maintenance Program at New Bedford Regional Airport. YOP updates will continue to be submitted as required in conformance with the Limited Project Provision 310 CMR 10.53 (3).

Update of the 5 Year Vegetation Management YOP

This update of the YOP will promote the future success of the existing New Bedford VMP by ensuring the proper treatment of vegetation regrowth within previously permitted VMAs. The updated YOP responds to the vegetative changes observed in the field (field work conducted in mid-2017 for this YOP update) and consists primarily of mowing, selective cutting, and follow-up herbicide treatments as necessary. It is an objective of this YOP update process to continue working successfully under the originally approved VMP in accordance with applicable permits and guidance, and using consistent management techniques.

This letter outlines the anticipated continuation of ongoing vegetation management at New Bedford Regional Airport, providing consistent maintenance practices of previously permitted management areas.

YOP Previously Conditioned Maintenance Methods

The New Bedford Conservation Commission issued an Order of Conditions for vegetation management at EWB, as outlined in the submitted Notice of Intent (NOI) Application, on December 31, 1996. The permitted VMP/NOI contained a 5-year Yearly Operational Plan (YOP) for vegetation management at New Bedford Regional Airport, covering the years 1998-2002. A YOP update was issued for the airport for the years 2012-2016 as part of the 2012 Vegetation Management Plan Update. The YOP update outlined vegetation management techniques and follow-up maintenance activities, including:

1. Areas of continued light mowing.

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2. Areas of rough-cut (heavy) mowing,
3. Areas of cutting and chipping of trees, and
4. Selected areas of drop and lop (felling of large trees, cutting of limbs, and leaving slash in place).
5. Herbicide application.

Vegetation management activities that have occurred since the initial primary vegetation removal, in compliance with the original Order of Conditions, have included maintenance mowing, tree clearing, and limited herbicide treatments of the Vegetation Management Areas (VMAs).

General Approach

The continued long-term vegetation maintenance activities for previously approved VMAs (see attached plans) involve the use of mechanical cutting, mowing, hand cutting, and herbicide treatments. Mechanical cutting and mowing will be used to control plant community height in previously managed VMAs, thereby promoting safe, navigable airspace protection zones in accordance with the VMP Update. In time, the mechanized work will result in the selection of plant species with low growth habits. This will eventually lead to the development of a more self-sustaining, low-growing plant community compatible with airspace geometry, and minimizing the frequency of future maintenance of those VMAs. These measures are proposed for locations that respect the habitat improvement areas for Eastern Box Turtle (EBT) per the 2010 New Bedford Regional Airport Conservation and Management Permit (CMP).

Monthly mowing of primarily herbaceous (turf) species will be conducted in the safety areas and primary surface grasslands on a regular basis during the growing season, except between June 1 and June 25, per the CMP. Annual mowing will occur in the short shrub zones, primarily located within the perimeter security fence line in areas close-in to the airport operations area (AOA). Annual mowing will not occur between April 15 and October 15, in accordance with the approved protocol in the CMP that protects Eastern Box Turtle (EBT) habitat. Of particular note is the maintenance of vegetation within the approach light plane at both ends of RW 5-23. This vegetation must stay below the height of the nearest approach light. Heavy mowing of this vegetation is necessary to maintain the approved condition of the light planes. Given the wetland conditions in the approach light planes, heavy mowing may require the use of temporary construction mats to avoid wetland soil disturbance. Annual rough mowing of the Phragmites monoculture at the Runway 5 end is also included in the YOPs.

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Herbicide treatments will occur as needed on Airport property; primarily within the Tall Shrub and Short Tree zones, and will consist of low-volume treatments of invasive and incompatible plant species (see Target Species List, Table 1). Invasive species are present at New Bedford Regional Airport, and can be controlled by herbicide treatment. Incompatible species will also require herbicide treatment in areas where cutting is impractical due to site constraints (soft soils, etc.). Additionally, herbicide can be used for targeting individual woody plants within a larger community of acceptable vegetation. Incompatible species are typically canopy species that have the potential to obstruct navigable airspace in future years. In time, herbicide treatments and mowing will decrease the frequency of invasive and incompatible species found on-site, thereby reducing herbicide volumes and frequency of application necessary for maintenance of those VMAs and conversion to a dominance of low-growing acceptable species. Herbicide treatments, combined with rough mowing, are permissible to manage the invasive Phragmites at the Runway 5 end.

Selective tree removal techniques (cut-and-chip and drop-and-lop) are prescribed for the outer approach and transition zones, and in environmentally sensitive areas; these are collectively referred to as "selective removals" in this YOP Update. Long term maintenance tree removal will be within discrete height management zones, using the drop-and-lop approach in very wet, unstable soil conditions, and more conventional mechanized removal techniques in VMAs with stable soils. Target specificity is an objective of these areas where individual mature trees, or small groups of mature trees, have been identified within the protected airspace and require maintenance. Depending on the VMA, the entire tree may be cut and removed from the site, or may be dropped and left in place with the scattering of the resultant debris.

Table 1. Target Species List for Herbicide Use

Target Species List for Herbicide Use		
Plant Type	Common Name	Species Name
Invasive Species	Glossy buckthorn	<i>Rhamnus frangula</i>
	Multiflora rose	<i>Rosa multiflora</i>
	Purple loosestrife	<i>Lythrum salicaria</i>
	Japanese knotweed	<i>Polygonum cuspidatum</i>
	Autumn olive	<i>Elaeagnus umbellata</i>
	Honeysuckle	<i>Lonicera spp.</i>
Incompatible Species (includes all canopy species including, but not limited to, those on this list)	Gray birch	<i>Betula populifolia</i>
	Red maple	<i>Acer rubrum</i>
	Aspen	<i>Populus spp.</i>
	Black locust	<i>Robinia pseudoacacia</i>
	Oak	<i>Quercus spp.</i>



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Table 2. Vegetation Maintenance Areas

Vegetation Maintenance Area	Vegetation Management	Vegetation Management Objectives
1	Light Mowing	Primarily infield areas and primary surfaces associated with the runway.
2	Rough Mowing/ Herbicide	Approach and transition surfaces of Runway 5-23; approach to RW32
2A	Phragmites Mowing	Runway 5 end
3	Selective Cut-and-Chip/ Herbicide	RW 14 end
4	Selective Drop and Lop	RW 5 and RW32 ends



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Table 3. Proposed Update of Yearly Operational Plan (YOP)

Proposed Update of Yearly Operational Plan (YOP)		Proposed Update of Yearly Operational Plan (YOP)
1	1	Monthly mowing of infield and safety areas, and annual mowing of peripheral areas.
	2	Rough mowing and stump grinding in the RW 5 end light plane area. Rough mowing at the RW 23 end.
	2A	None
	3	None
	4	None
	5	EBT habitat area maintenance per Conservation and Management Plan.
2	1	Monthly mowing of infield and safety areas, and annual mowing of peripheral areas.
	2	Rough mowing/herbicide in RW 23 light plane peripheral areas.
	2A	Phragmites mowing and follow up herbicide treatment.
	3	None
	4	None
	5	EBT habitat area maintenance per Conservation and Management Plan.
3	1	Monthly mowing of infield and safety areas, and annual mowing of peripheral areas.
	2	Herbicide treatment in RW 5 approach. Rough mowing at RW 14-32 ends.
	2A	Phragmites mowing and follow up herbicide treatment.
	3	Selective cutting (cut-and-chip) RW 14 areas.
	4	Selective cutting (drop-and-top) RW 32 area.
	5	EBT habitat area maintenance per Conservation and Management Plan.
4	1	Monthly mowing of infield and safety areas, and annual mowing of peripheral areas.
	2	Herbicide in RW 23 approach.
	2A	Phragmites mowing and follow up herbicide treatment.
	3	None
	4	None
	5	EBT habitat area maintenance per Conservation and Management Plan.
5	1	Monthly mowing of infield and safety areas, and annual mowing of peripheral areas.
	2	Rough mowing in the RW 5 end light plane area. Herbicide treatment at the RW 5 end.



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	2A	Phragmites mowing and follow up herbicide treatment.
	3	None
	4	Selective cutting (drop-and-lop) at the RW 5 end.
	5	EBT habitat area maintenance per Conservation and Management Plan.

Description of Maintenance Areas

Maintenance Area 1: Maintenance Area 1 encompasses the runway safety areas and the primary surfaces of the runway, as well as developed areas on the Airport. Maintenance Area 1 has been maintained through mowing for many years. This area includes mowing on a frequent basis throughout the growing season in the safety areas immediately adjacent to the runways and taxiways, but not between June 1 and June 25 for Eastern box turtle protection per the CMP.

Maintenance Area 1 also includes annual mowing in the grasslands outside the immediate runway safety areas, further from the active portions of the airfield. Under annual mowing, mechanized equipment will be used to "mow" all vegetation less than 3" in diameter, using a large rotary tow-behind mower, or side arm mower. Annual mowing will not take place between April 16 and September 30 for Eastern box turtle protection, also per the CMP.

Maintenance Area 2: Rough-cut mowing areas in Runway 5-23 and Runway 14-32 approach and transition surfaces are to be maintained as a short-shrub zone; these areas are shown as green on the YOP drawing set. These areas are at or near the height of the runway and are within the approach surfaces of the runways, thus requiring frequent maintenance to restrict growth of all woody vegetation. These areas have either rough terrain, wet soils, and/or difficult access, which restricts conversion to a turf cover. Rough mowing will be done with a flail mower or Brontosaurus type of machinery which can mow shrubs and small saplings and occasional immature trees (typically < 5" diameter). Construction mat support may be necessary to avoid disturbing wetland soils. Herbicide use is also permitted in Maintenance Area 2. The hack-and-squirt and cut-and-dab methods can be utilized in this area.

Additionally, Maintenance Area 2 includes a one-time event of stump grinding within the light plane area at the Runway 5 end where large stumps remain from previous removals and are preventing the area from being mowable.

Maintenance Area 2A: Maintenance Area 2A includes Phragmites mowing at the Runway 5 end of the airport. Since the Phragmites will grow up to 15 feet, the invasive plant will grow to obscure the approach lighting system, and active management is needed throughout the growing



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season. Due to expansive areas of Phragmites that emerged in the existing VMA near the RW 5 end, EWB acquired a special low pressure tracked mowing machine that routinely mows this area. Within the light lane, cutting is proposed in June/July to cut the vegetation to allowable heights. A second cutting and/or herbicide treatment is planned for this area in August. After mowing Phragmites, the cutting/mowing equipment should be cleaned before working in other areas to avoid spreading the species to new areas of the Airport. Herbicide treatment is proposed to occur in late August or September before the first frost to best impact the root systems. For areas where a combination of mowing/cutting and herbicide treatment is proposed, no mowing should occur within 2 weeks of herbicide treatment to ensure that the treated portion of the plant is not removed before the herbicide is fully absorbed by the roots.

Maintenance Area 3: Maintenance Area 3 includes selective cutting (cut-and-chip) and herbicide treatment areas within the approach and transition surfaces of Runway 5-23, and in one area at the Runway 32 end. This area is shown as pink on the YOP drawing set. Herbicide treatments include hack-and-squirt or cut stump treatment (cut-and-dab). Maintenance Area 3 includes uplands and wetlands.

Maintenance Area 4: Chain saw hand work will be used for selective cutting (drop-and-lop) in Maintenance Area 4. Logs will be left in place in 4 to 8 foot sections, with slash height less than 3 feet above ground. Most of the Maintenance Area 4 sites are wetlands. Maintenance Area 4 is shown in red on the YOP drawing set.

Maintenance Area 5: Maintenance Area 5 includes the habitat enhancement areas for the Eastern Box Turtle (EBT), as defined by the Conservation and Management Plan and associated CMP permit. No mowing or vegetation maintenance shall take place in the turtle nesting areas between April 16 and September 30.



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We hope that the above information has been of help to the Conservation Commission in its understanding of the project and projected future actions of the airport for vegetation maintenance. Should you have any questions, please feel free to contact this office.

Regards,

Stantec Consulting Services, Inc.

Erica Kidd, M.S.

Environmental Scientist

Phone: (207) 887-3517

erica.kidd@stantec.com

Attachments: YOP Year 1 Plan, YOP 5-Year Plan

- c. New Bedford Regional Airport Commission
- Stantec Consulting Services, Inc. (file)
- MassDOT – Aeronautics (Nate Rawding)
- ASG (Rich Lasdin)