JM Fiske Environmental

May 12, 2014

Amanda Atwell
Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, Massachusetts 01754

Subject: New Bedford Regional Airport – Phase 4
Reconstruction, Mark and Grove Runway 5-23
Re: Silt Fencing Issue

Dear Ms. Atwell:

This letter is to report an issue that arose during the installation of silt fence in the startup phase of the New Bedford Regional Airport Phase 4 project. The contract is being performed by ETL Corporation. This report is provided to document impacts resulting from the installation of silt fence through a small section of mitigation area and to provide a restoration and monitoring protocol to re-establish the mitigation area.
On April 23, ETL Corporation's subcontractor, RAMCO was installing silt fence along the north side of the 5 end of the runway. The silt fence contractor (ET&L/RAMCO) installed the silt fence below the existing fence and disturbed the buffer planting along the West Ditch mitigation, outside of the wetland area. This area is a short slope leading from the access road to the relocated ditch and is supposed to provide a buffer between the ditch and the access road. The trenching or the silt fence removed some of the upper row of a two row shrub planting in the area. The lower row adjacent to the wetland remained intact and undisturbed.

The following linear feet of mitigation area and buffer were impacted.

Area Description	**Linear Feet**	**Square Feet**	**Current Condition**
Buffer to wetland northeast of west ditch	390 FT	1170 SF	Silt fence / hay bales up adjacent to wetland area to be temporarily mulched
Disturbed Stream Bank mitigation with plants removed	225 FT	675 SF	Double row of silt fence with Hay bales on upper fence adjacent to ILS road
Disturbed stream bank, plants removed, no silt fence installed.	167 FT	501 SF	Single row silt fence with hay bales
Area disturbed at corner of acess road when new silt fence installed	13 FT	26 SF	Single row of silt fence with hay bales

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Upon discovery, JM Fiske Environmental assessed the impacts and reviewed the remedial actions plan with Epsilon Associates.

Joe Rogers (WS, JM Fiske Environmental) reviewed the plant impacts he assessed with Amanda Atwell of Epsilon Associates. 55 shrubs were impacted. The plants were graded in three categories:

- Previously dead
- Affected - meaning affected by event disturbance including bark scraped or partially compromised root ball,
- Removed - meaning the plant had been pulled out of ground, however the plants appeared largely in good shape despite being excavated. Many still had their root balls in the shape of the pot that they were delivered in. Most of the removed plants were just starting to bud out and none were in full leaf out.

Remedial Actions

In the disturbed area where silt fence had not been installed, uprooted shrubs were placed back in the trench and the excavated fill was pulled back into the trench using hand tools and the bucket of an excavator. Hay was distributed over the exposed soil and the shrubs were set in place. In the section where silt fencing was already installed, shrubs were also reset and soil regraded and laced around them. The new lower silt fence will be left in place with mulch until the bank is re-vegetated.

Remedial Actions were completed on April 25th. The next step will be to establish a long term restoration plan for the affected area. JM Fiske Environmental is proposing the following:

1. Remove sediment from stream and adjacent mitigation areas by hand. To be over seen by Wetland Specialist. - COMPLETED
2. Remove the older silt fence in the affected area and reinstall a new fence in that location. This older fencing is mostly beyond repair and is often located along the top of the slope closer to the road.
3. Leave the new sections of silt fence in place until the slope can be planted and stabilized.
4. Install new fencing along the top of the slope if needed.
5. Wetland Seed Application
    - To Be completed by May 20th, 2014
    - On day of seeding application hand rake hay mulch to edge of silt fence
    - Remove any large stones on slope and smooth any mounded areas

- Apply 2 LB of NE Erosion Control/Restoration Mix for Detention Basins and Moist Sites. If necessary, mix seed with sand or an inert filler to ensure adequate distribution.

  APPLICATION RATE: 35 lbs/acre | 1250 sq ft/lb

  SPECIES: Virginia Wild Rye, (Elymus virginicus), Creeping Red Fescue, (Festuca rubra), Little Bluestem,(Schizachyrium scoparium), Big Bluestem, (Andropogon gerardii), Fox Sedge, (Carex vulpinoidea), Switch Grass, (Panicum virgatum), Rough Bentgrass, (Agrostis scabra), New England Aster, (Aster novae-angliae), Boneset, (Eupatorium perfoliatum), Grass Leaved Goldenrod, (Euthamia graminifolia), Green Bulrush, (Scirpus atrovirens), Blue Vervain, (Verbena hastata), Soft Rush, (Juncus effusus), Wool Grass, (Scirpus cyperinus).

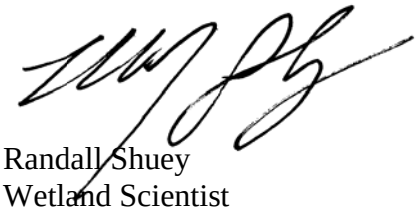
- Re-spread hay mulch over area.

6. During monitoring, if any of the 50 shrubs identified as being impacted die, ET&L Corp will replace them in kind.
7. When silt fence and hay bales are removed any disturbance caused by the removal will be smoothed, seeded and mulched.
8. Monitoring of area will be done as part of weekly inspection. A separate monthly report will be generated during the construction period to document health of shrubs and development of herbaceous vegetation. An end of season or end of construction final report shall be generated.

To avoid this from happening again, the JM Fiske Environmental is working closely with ET&L Corporation and Airport Solutions Group to ensure silt fencing is placed according to plan and modified based on site conditions. Any modification will be approved by the Wetland Scientist and Resident Engineer.

Please feel free to contact us with any questions or comments,

Sincerely,
JM Fiske Environmental



Randall Shuey
Wetland Scientist

Pictures of before and after conditions from Thursday April 24th are shown below.

Example of trench between old silt fencing and stream (left), and example of partially installed new silt fencing along with old fencing (right).

Process of re-establishing shrub vegetation and stabilizing slopes with hay mulch.

Photo – View of silt fence hay bale combination along ILS road.

Photo (right): Mulching are between old silt fence and new silt fence adjacent to wetland.

Photo (right) Removal of sediment delta in stream with hand tools.

Photo (below) Area after sediment removal. Eroded channel filled. Silt fence inspected for proper anchoring. Area was re-mulched after photo taken.