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October 29, 2015

## Letter Report

Mr. Kevin Kotelly  
U.S. Army Corps of Engineers, New England District  
Policy Analysis/Technical Support Branch, Regulatory Division  
696 Virginia Road  
Concord, MA 01742-2751

147505

Subject: USACOE General Permit #NAE 2008-3065  
Fall 2015 Wetland Inspection Report  
0 Brook Street, Holliston, MA

Dear Mr. Kotelly,

On behalf of Browning-Ferris Industries, Inc. (BFI), Brown and Caldwell (BC) is submitting this letter report documenting the Fall 2015 Semi-Annual Inspection of the above referenced wetlands in accordance with the USACOE General Permit #NAE 2008-3065, special condition #2. This letter report has also been submitted to the Holliston Conservation Commission and to the Massachusetts Department of Environmental Protection in Worcester, Massachusetts (Central Region).

## Investigation Methodology

On September 16, 2015, BC and Wetland Preservation Inc. (WPI) conducted a site inspection at the above referenced wetlands. The inspection included the vernal pool, bordering vegetated wetlands, intermittent stream, culverts, laydown area, and access way.

## Summary of Findings

Fall 2015 is the end of the fourth growing season since the wetland plantings were completed on June 6, 2012.

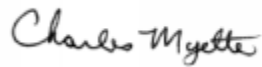
During the Fall 2015 wetland inspection, WPI and BC observed that all restored upland and wetland areas were stable with both planted and natural vegetation healthy and viable. Vegetation in the bordering wetlands and restored stream was in good health with the exception of some planted shrubs in the BVW that continue to be browsed by deer. The water level in the vernal pool was six inches below the natural control point, and water quality was clear. Soil conditions were stable and continue to vegetate. WPI observed green frogs and water striders in the vernal pool. In addition, the culverts remain clear, and the laydown areas and access ways are stable and vegetating well. These findings and accompanying photographs are summarized in WPI's inspection report dated October 22, 2015 and included in Attachment A.

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As indicated in WPI's report, "at this time the wetland areas and buffer zone areas restored are stable and vegetated with herbaceous and shrub species planted, as well as other indigenous species from seed sources from the surrounding habitat and soils. It is WPI's opinion that the wetland areas monitored for the past three years meet the General Performance Standards as described in CMR 10.55 (4)." WPI will continue to monitor the restored wetland area for one more year to ensure compliance with the U.S. Army Corps of Engineers permit. Pending final inspection in 2016, if the conditions remain favorable, BC will prepare the US Army Corps of Engineers closure plan and file a Permanent Solution with the Massachusetts Department of Environmental Protection to close out the Site.

If you have any questions please feel free to contact us at (978) 794-0336.

Sincerely,  
**Brown and Caldwell**



Charles F. Myette, LSP  
Vice President

cc: Mr. Joseph Montello, Republic  
Mr. Thomas A. Mackie, Mackie Shea O'Brien, PC  
Gail Magenau Hire, Mackie Shea O'Brien, PC

Attachments (1)

- Attachment A: WPI Site Inspection Report, October 22, 2015



October 22, 2015

Mr. Donald Podsen  
Brown & Caldwell  
1 Technology Drive  
Andover, MA 01810

Re: Wetland Replication Areas  
0 Brook Street  
Holliston, MA  
Wetland Mitigation  
DEP #185-0712; NHESP File No. 08-25195

Dear Mr. Podsen:

In accordance with the United States Army Corp of Engineers / Massachusetts General Permit, NAE- 2008 - 3065 dated September 6, 2011, Special Condition 2, Wetlands Preservation, Inc. ("WPI") is submitting this report detailing the status of the vernal pool/wetland mitigation completed at the above referenced project. The site conditions recorded during the inspection included the following data: natural conditions, vegetation, vigor and viability of plantings, general stability of the site, signs of wildlife, and general observations.

The soil remediation was completed in the fall of 2011 as per the approved permits for the project. The intermittent stream and Bordering Vegetated Wetlands ("BVW") downstream of the vernal pool were restored to original grades in the fall of 2011. The intermittent stream was sown with a wetland seed mix and covered with erosion control matting. Planting of the vernal pool was initiated on May 10, 2012 with the installation of the shrub species. The planting was completed on June 6, 2012 with the installation of the aquatic species. Modifications to the planting were necessary due to the hydrology present in the vernal pool. Water levels were within the Mean High Water range as documented prior to the soil remediation effort. The water levels are controlled by the elevation of the outlet located at the southern end of the pool, which drains south to the restored BVW area. These modifications were eventually approved by the Holliston Conservation Commission in the summer of 2012.

A visual survey was conducted on September 16, 2015 of the vernal pool, intermittent stream, and BVW. Observations were made of the general flora and fauna. The shrub species planted in the vernal pool have new growth and include sand bar willow (*Salix exigua*), and buttonbush (*Cephalanthus occidentalis*). The aquatic species planted include white water lily (*Nymphaea odorata*), pond weed (*Potamogeton Nodas*), wild celery (*Vallisneria americana*), hard-stem bulrush (*Schoenoplectus acutus*), and pickerelweed (*Pontederia cordata*). The herbaceous species continue to propagate covering the majority of shallow water areas. The existing indigenous plant species including tree, shrub and herbaceous vegetation around the perimeter, and on hummocks within the vernal pool, were vigorous. The cattails (*Typha latifolia*) observed at the inlet into the vernal pool include a half dozen or so plants. The plants were removed by hand during the inspection. Soil conditions were stable and continue to vegetate. Visual water quality in the vernal pool was clear, with the

bottom observed in shallow water areas. Water levels at the time of the inspection were six inches below the natural control point. WPI observed green frogs and water striders in the vernal pool.

The majority of the shrub species planted along the intermittent stream and BVW have new growth, with the exception of several shrubs in the BVW that continue to be browsed by deer. The shrubs that have survived include red-osier dogwood (*Cornus sericea*), sweet gale (*Myrica gale*), arrow-wood (*Viburnum dentatum*), winterberry (*Ilex verticillata*) and wild raisin (*Viburnum cassinoides*). Herbaceous vegetation is growing in the intermittent stream and BVW. These areas were dry at the time of the inspection. The tree line in the upland along the southern edge of the BVW restored (Gossel's property) is healthy (see the trees in the background of the photograph of BVW Area 4). The bittersweet present prior to the remediation work continues to climb into the canopy of all the trees.

In summary, the vernal pool, intermittent stream, and the BVW restored continue to progress. The culverts, which were cleaned during the Release Abatement Measure, remain clear of sediment and vegetation. The laydown area and access way are all stable and vegetating well. At this time the wetland areas and buffer zone areas restored are stable and vegetated with herbaceous and shrub species planted, as well as other indigenous species from seed sources from the surrounding habitat and soils. It is WPI's opinion that the wetland areas monitored for the past four years meet the General Performance Standards as described in CMR 10.55 (4). Monitoring will continue through the next growing season to ensure compliance with the Army Corp of Engineers Permit.

Should you have any questions or require additional information regarding this report, please contact the undersigned.

Cordially,



Geoffrey C. Andrews  
Senior Wetland Scientist

cc: Job File

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Brook Street Holliston, MA  
Vernal Pool /Wetland Restoration  
Photographed September 16, 2015



View northwest of vernal pool



View west of the north end of the vernal pool



View southwest of the vernal pool



View south of the vernal pool



View west of the restored buffer zone



View west of Culvert #3

Brook Street Holliston, MA  
Vernal Pool /Wetland Restoration  
Photographed September 16, 2015



View east of BVW Area 4



View north of intermittent stream



View east of intermittent stream



View north of BVW Area 3 toward vernal pool



View along east side of the vernal pool



View upstream of Culvert #2

Brook Street Holliston, MA  
Vernal Pool /Wetland Restoration  
Photographed September 16, 2015



View downstream of Culvert #2



View west of Culvert #3



View of restored construction entrance



View south of BVW Area 1



View downstream of Culvert #1

Brook Street Holliston, MA  
Vernal Pool /Wetland Restoration  
Photographed September 16, 2015



View northeast of vernal pool from Culvert #1



View toward southeast side of vernal pool



View south of the rail trail