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June 17, 2010

Ms. Cheryl Henlin
City of New Bedford
Department of Environmental Stewardship
133 William Street
New Bedford, Massachusetts 02740

Subject: LTMMIP Wetland Sediment Monitoring – Spring 2010
Keith Middle School, New Bedford, Massachusetts

Dear Ms. Henlin:

This letter provides the results of annual wetland sediment monitoring for the Keith Middle School (KMS) located at 225 Hathaway Boulevard in New Bedford, Massachusetts (see Figure 1). The sampling was conducted consistent with the Long-Term Monitoring and Maintenance Implementation Plan (LTMMIP; dated October 20, 2006) prepared by BETA Group, Incorporated (BETA) and modified as described herein.

A TRC field scientist conducted the LTMMIP wetland sediment sampling on May 17, 2010. For the annual sediment monitoring, the LTMMIP calls for the collection of four randomly selected wetland sediment samples from locations abutting the cap slope consistent with the sediment sampling protocol in Appendix G of the LTMMIP. Following LTMMIP sediment monitoring in May 2008, the City began Immediate Response Action (IRA) assessment and mitigation activities to address the detection of polychlorinated biphenyl (PCB) impacts in shallow wetland sediments located adjacent to the KMS in excess of a concentration indicating a condition that could pose an Imminent Hazard (IH) under the Massachusetts Contingency Plan described in 310 CMR 40.0321(2)(b). The Massachusetts Department of Environmental Protection (MassDEP) tracks the IRA under Release Tracking Number (RTN) 4-21300.

As described in the most recent IRA Status Report submitted by TRC on behalf of the City on March 10, 2010, the City, in coordination with the MassDEP and United States Environmental Protection Agency (EPA), implemented extensive environmental sampling to assess potential PCB sediment impacts. TRC also initiated an Ecological Risk Assessment (ERA) for the KMS wetland. Response actions performed include the City's installation of a perimeter fence to mitigate exposure to potential PCB impacted sediments within the northern portion of the wetland (i.e., north of the utility easement between the KMS campus and Summit Street). As a result of the comprehensive assessment activities

conducted by the City within the entire wetland throughout 2009, the EPA did not require the City to conduct the additional annual monitoring necessitated by the LTMMIP for that year.

For the May 2010 monitoring event, TRC randomly selected three of the four locations for sampling within the southern portion of the wetland. Due to ongoing IRA-related activities within the northern portion of the wetland, the EPA approved modifying the 2010 annual LTMMIP sediment monitoring approach to only the portion of the wetland south of the utility easement between the KMS campus and Summit Street, outside the limits of the IRA mitigation fence. TRC used the 15 numbered wetland flag locations documented along the wetland/embankment edge on the December 11, 2006 As-Built Plan of Land prepared on behalf of BETA by Land Planning, Incorporated (Land Planning), of Hanson Massachusetts from the BETA-prepared December 2006 *Final Completion and Inspection Report* as approximate sampling station location identifiers for the random sample selection process (BETA, 2006b).

Also with the concurrence of EPA, TRC collected one of the four sediment samples from a biased sample location at the bottom of the slope beneath the KMS Site cap slope failure along the southern portion of the wetland. The biased sample was collected to check on the potential for impacts to sediment associated with the 2007 slope failure¹. All samples were collected using hand tools and were collected from a depth of 0 to 6 inches below the top of the sediment surface. Samples were analyzed for PCB Aroclors via SW-846 Method 8082 by Northeast Analytical, Incorporated (NEA) of Schenectady, New York. The sampling locations, surveyed by Land Planning on June 1, 2001, are illustrated on Figure 2 and in the photograph log presented in Attachment 1. The samples were designated as follows (with approximate wetland flag or biased sample locations shown in parentheses):

- SED-KMS-1 (Wetland Flag W-12)
- SED-KMS-2 (Wetland Flag W-10)
- SED-KMS-3 (Wetland Flag W-6)
- SED-KMS-4 (Biased sample from toe of slope below slope failure – collected in duplicate)

TRC received the preliminary results of analysis on May 25, 2010. The full data package was received on June 1, 2010 and subsequently underwent a data usability assessment by TRC's project chemist. Three (3) out of four (4) samples were non-detect (see Table 1) for

¹ In the spring of 2007, a slope failure occurred on the steep slope above the wetland near the southwestern corner of the Site. The area measured approximately 7 feet by 8 feet where the topsoil has slumped to the bottom of the slope. The black separation fabric that demarcates the underlying impacted fill from the clean imported fill was not exposed; however, a small (approximately 3 to 4 inch) piece of the orange warning layer was visible in the top left quadrant of the damaged area (when viewed from the wetland). TRC oversaw final repair of the failed slope on October 30, 2008. The repair consisted of lining the damaged area with an 8-ounce non-woven geotextile fabric and covering the fabric with stone (rip-rap) up to local grade to restore the protective cap thickness and allow flow of storm water through the slope in this area without pressure buildup. The rip-rap is intended to allow free drainage of water and be more resistant to the erosive force of storm water overland run off.

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PCB Aroclors. Sediment sample SED-KMS-1 contained total PCB Aroclors at a concentration of 0.371 milligrams per kilogram (mg/kg), which is below the 1 mg/kg total PCB level previously approved for the wetland (and other site-related remedial activities) by the EPA as part of the Risk-Based Wetland Cleanup Request (BETA, 2005). Pursuant to the EPA approved LTMMIP, further assessment is not required.

If you have any questions concerning this report, please do not hesitate to contact me at 978-656-3565 or via e-mail at dsullivan@trcsolutions.com.

Sincerely,



David M. Sullivan, LSP, CHMM
Senior Project Manager

Attachments

TABLE

Table 1
Summary of Analytical Results for Sediment Samples
May 17, 2010
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: SED-KMS-1 SED-KMS-2 SED-KMS-3 SED-KMS-4										
		Sample Depth (ft.): 0-0.5 0-0.5 0-0.5 0-0.5 0-0.5										
		Sample Date: 5/17/2010 5/17/2010 5/17/2010 5/17/2010 5/17/2010										
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1*	TSCA			0-0.5	0-0.5	
										5/17/2010	5/17/2010	Field Dup
PCBs												
(mg/kg)	Aroclor 1016	2	2	3	3	2	1	0.153 U	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Aroclor 1221	2	2	3	3	2	1	0.153 U	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Aroclor 1232	2	2	3	3	2	1	0.153 U	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Aroclor 1242	2	2	3	3	2	1	0.153 U	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Aroclor 1248	2	2	3	3	2	1	0.153 U	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Aroclor 1254	2	2	3	3	2	1	0.371 J	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Aroclor 1260	2	2	3	3	2	1	0.153 U	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ
	Total PCBs	2	2	3	3	2	1	0.371 J	0.266 UJ	0.253 UJ	0.300 UJ	0.336 UJ

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

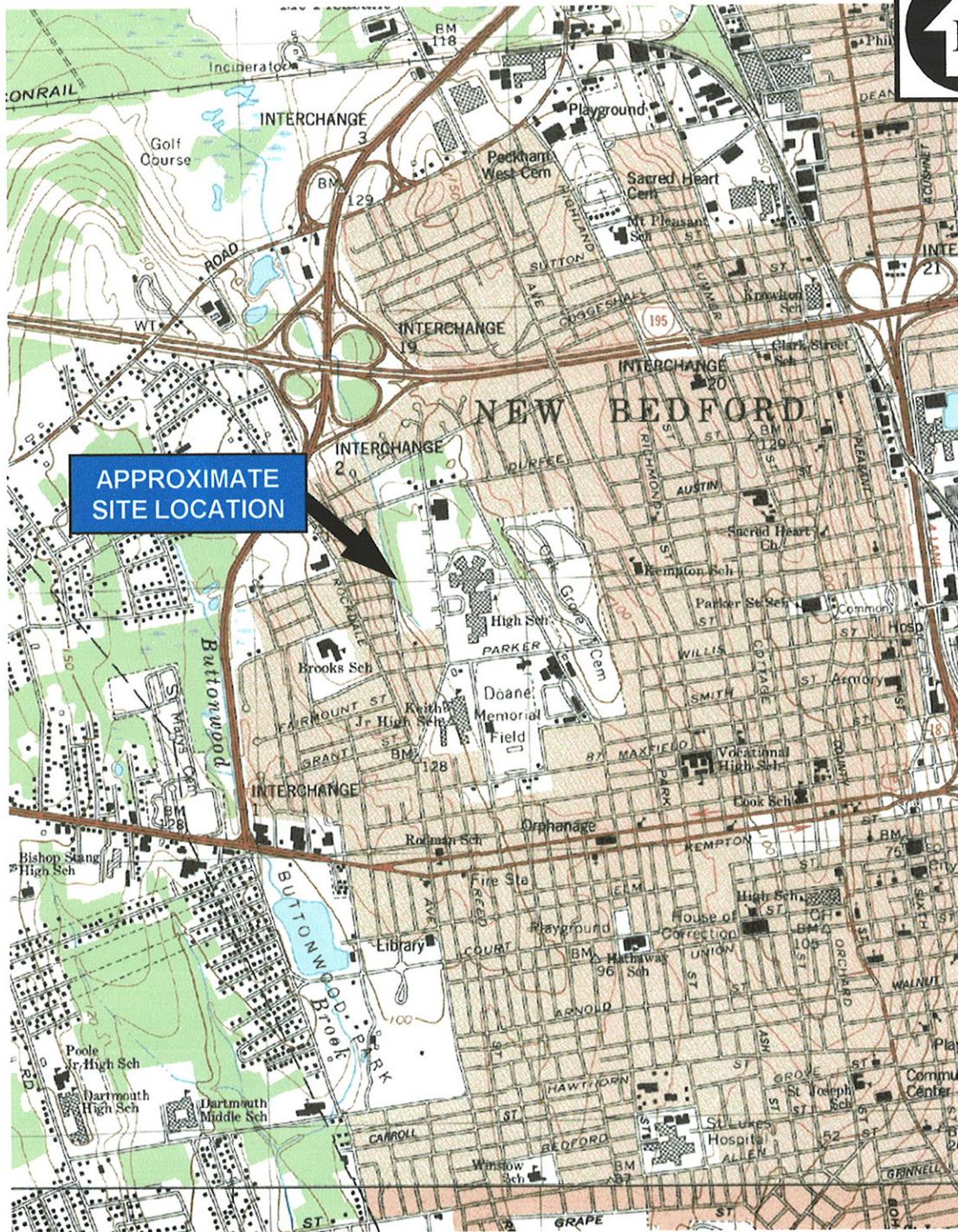
PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

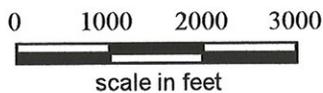
TSCA - Toxic Substances Control Act criteria.

* - For reference purposes only.

FIGURES



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 15' USGS
 TOPOGRAPHIC QUADRANGLES: NEW BEDFORD NORTH, MA, 1979;
 NEW BEDFORD SOUTH, MA 1977



KEITH MIDDLE SCHOOL WETLAND
 PCB CONTAMINATED SEDIMENTS
 NEW BEDFORD, MASSACHUSETTS

SITE LOCATION MAP



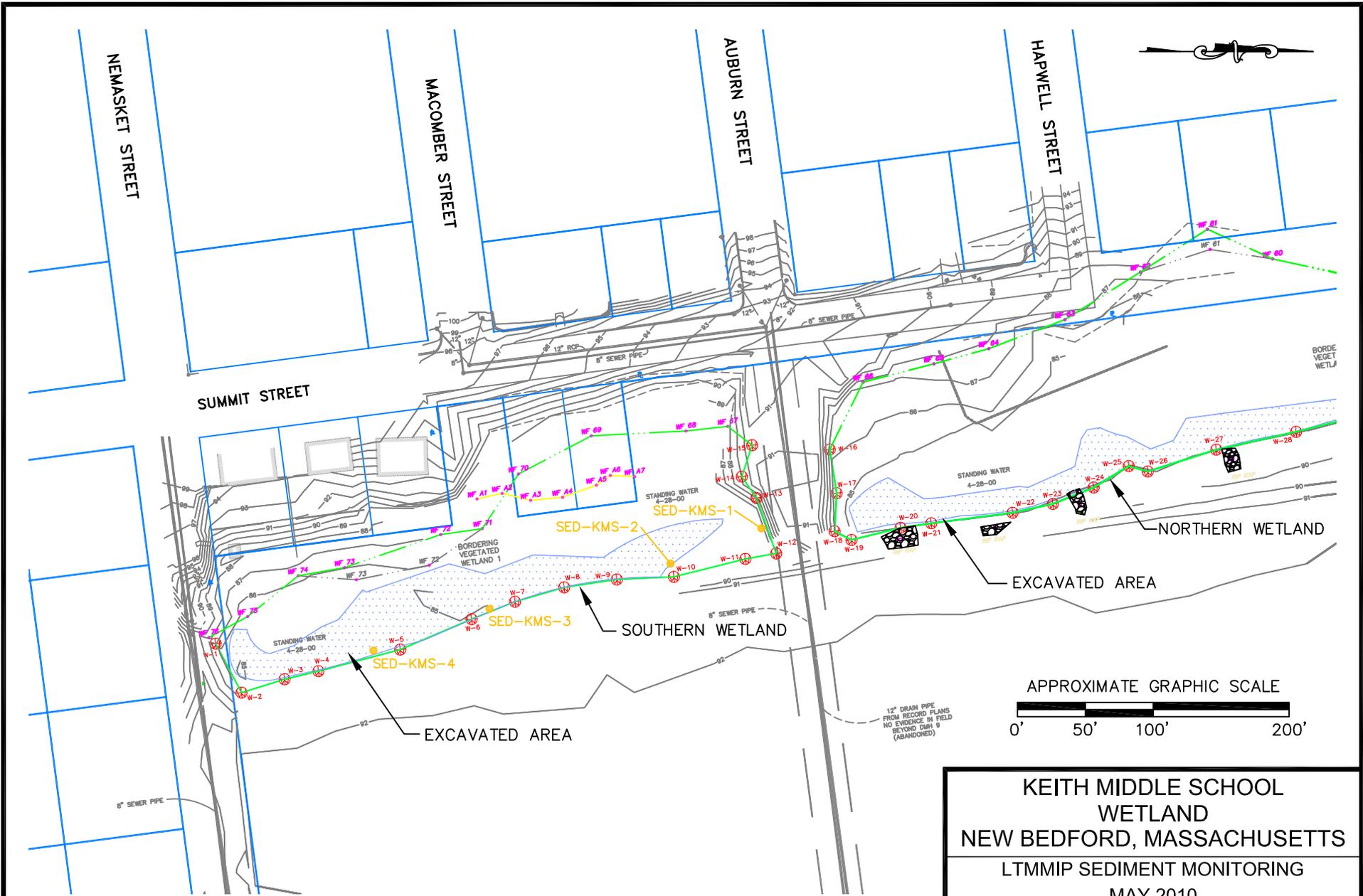
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**FIGURE
 1**

Drawn: HWB
 Checked: DS

SCALE: AS SHOWN
 Date: JULY 2008

FILE: T:\E_CAD\115058\KMS LTMMIP SED MON.dwg



NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

- LEGEND:
- SED-KMS-4 ● SEDIMENT SAMPLE (JUNE 2010)
 - W-11 ⊕ WETLAND BOUNDARY/FLAG
 - — — PROPERTY BOUNDARY

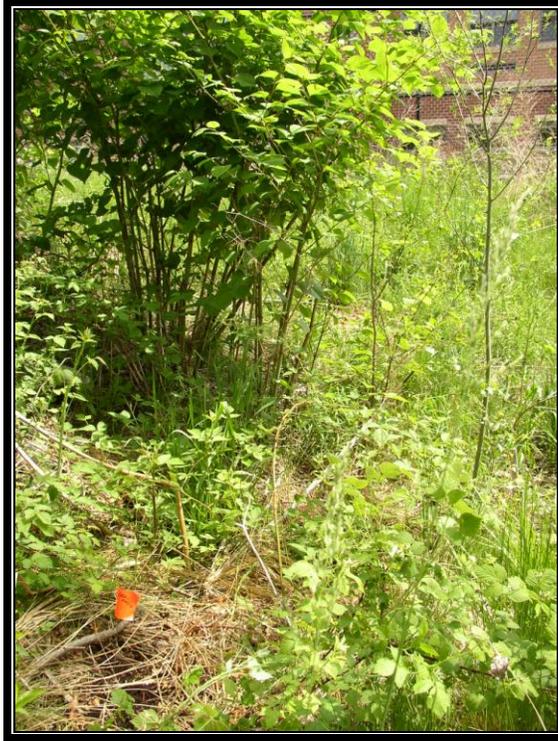


<p>KEITH MIDDLE SCHOOL WETLAND NEW BEDFORD, MASSACHUSETTS</p>		<p>FIGURE 2</p>
<p>LTMMIP SEDIMENT MONITORING MAY 2010</p>		
<p>Wannancit Mills 650 Suffolk Street Lowell, MA 01854 (978) 970-5600</p>		
<p>DRAWN BY: HWB CHECKED BY: JBS</p>	<p>DATE: JUNE 2010</p>	

Attachment 1

Site Photographs

SITE PHOTOGRAPHS
LTMMP Wetland Sediment Monitoring – May 17, 2010
Keith Middle School
New Bedford, Massachusetts

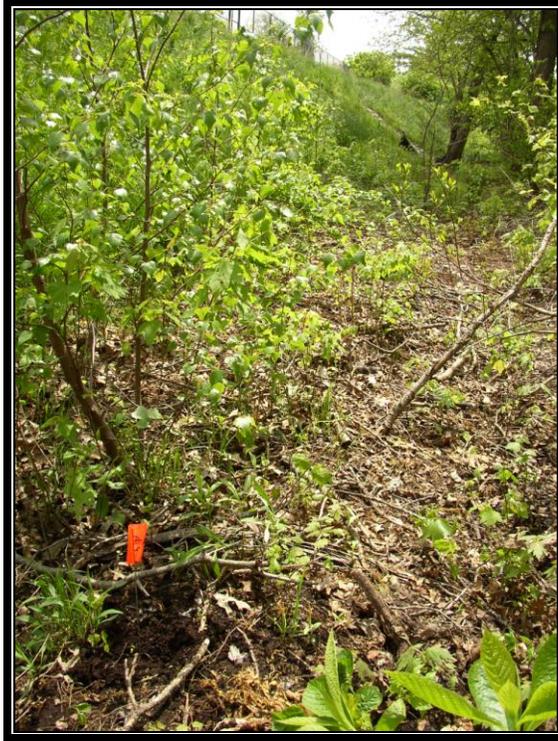


1) Sediment sample location SED-KMS-1 (view is east toward the KMS campus).



2) Sediment sample location SED-KMS-2 (view is north toward the land bridge).

SITE PHOTOGRAPHS
LTMMP Wetland Sediment Monitoring – May 17, 2010
Keith Middle School
New Bedford, Massachusetts



3) Sediment sample location SED-KMS-3 (facing south toward 2007 slope failure).



4) Sediment sample location SED-KMS-4 (viewed down the cap slope to the west).