

REVISIONS

NO.	DATE	DESCRIPTION
1.	2/11/10	PRELIMINARY LAYOUT
2.	4/09/10	PRELIMINARY ASSESSMENT
3.	4/15/10	FIELD LOCATION
4.	7/07/10	ADD. FED. RESOURCE
5.	8/24/10	FINAL BULKHEAD ALIGNMENT
6.	6/8/12	HIGH TIDE LINE

THESE DRAWINGS PREPARED BY APEX FOR THIS PROJECT ARE INSTRUMENTS OF APEX'S SERVICE FOR USE SOLELY WITH RESPECT TO THIS PROJECT, AND APEX SHALL BE DEEMED THE AUTHOR OF THE DRAWING AND SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS WITH RESPECT THERETO, INCLUDING COPYRIGHT. THE DOCUMENTS SHALL NOT BE USED ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THIS PROJECT BY OTHERS, EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO APEX.

- PAVED CAP
- APPROXIMATE URBAN FILL
- ISOLATED WETLAND
- INTER-TIDAL
- SUB-TIDAL
- INTER-TIDAL SALT MARSH
- APEX TEST PIT
- PROPOSED FACILITY PARCEL



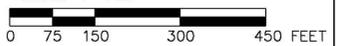
PREPARED FOR:

COMMONWEALTH
OF
MASSACHUSETTS

DRAWING TITLE:

NEW BEDFORD MARINE
COMMERCE TERMINAL
FEDERAL RESOURCE
AREA ASSESSMENT

Scale: 1"=150'



Date	3/24/10	Drawing No. FIG-5
Proj. Mgr.		
Design		
Check	CM	
Drawn	GCD	
Job. No.	6615	
Last Rev.	6/29/12	

July 2, 2012

Fort Hill Infrastructure
Attn: Ken Fields
One Walnut Street
Boston, Massachusetts 02108

Re: Wetland Site Investigation –
Map 25A Parcels 48/49 & Map 31, Parcel 288
New Bedford, Massachusetts

Dear Mr. Fields,

A Professional Wetland Scientist (PWS) from Lucas Environmental, LLC conducted a site investigation of the properties identified as Map 25A Parcels 48/49 & Map 31, Parcel 288 in New Bedford, Massachusetts on June 28, 2012. The purpose of the site investigation was to determine if federally regulated wetland resources were present within the properties. The wetland investigation was performed in accordance with the U.S. Army Corp of Engineers (USACE) Wetland Delineation Manual (1987) and the Northcentral and Northeast Regional Supplement v 2.0 (2012). Wetland resource areas regulated under the Massachusetts Protection Act (310 CMR 10.00) were not identified or delineated. The following data sources were examined prior to the site investigation:

- USGS Topographic Quadrangle
- MassGIS MassDEP Wetland Datalayers
- Plan titled “New Bedford Marine Commerce Terminal Federal Resource Area Assessment”, prepared by Apex Companies, LLC, dated 3/24/10 last revised 6/8/12.

As part of the site investigation, LE was asked to locate and evaluate two areas that were identified, by others, as “isolated wetlands”. The first area is identified along the northern limit of Map 31 Parcel 288. As a result of the investigation, LE determined that the area identified along the northern edge of Map 31 Parcel 288 does not meet the definition of wetland. The second isolated wetland is located just north of an existing paved area on Map 25A Parcel 49. LE delineated an isolated wetland on Parcel 49. Two separate areas of salt marsh were also delineated along the coastline of the harbor on Parcel 48.

Existing Conditions

Collectively the properties are located along the western coastline of New Bedford Harbor, north of Gifford Street (See Figure 1 – USGS Map and Figure 2 – Aerial Map). The properties are currently undeveloped but show evidence of previous land use and development. Representative photographs of the site and surrounding areas have been included in this report.

The undeveloped portions of Parcel 288, 48 and 49 are vegetated with a mix of early successional open field/scrubland species such as quaking aspen (*Populus tremuloides*), Autumn olive (*Elaeagnus umbellata*), red cedar (*Juniperus virginiana*), black cherry (*Prunus serotina*), multiflora rose (*Rosa multiflora*), pitch pine (*Pinus rigida*), common reed (*Phragmites australis*), common ragweed (*Ambrosia artemisiifolia*), goldenrod (*Solidago* spp.), perennial pea (*Lathyrus latifolius*), black swallow-wort (*Cynanchum louiseae*), thistle (*Cirsium arvense*), and common milkweed (*Asclepis syriaca*).

As stated above, the area identified as an isolated wetland along the northern limit of Parcel 288 was investigated to determine if it meets the federal definition of a wetland. Jurisdictional wetlands are defined by the 1987 Corps of Engineers Wetlands Delineation Manual as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”. The USACE Wetland Delineation Manual goes on to identify wetlands based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. Hydrophytic vegetation is present when the plant community is dominated (>50%) by species that can tolerate prolonged inundation or soil saturation during the growing season.

LE established a data plot at the center of the area and completed a Wetland Determination Field Form to document vegetation, soils and hydrology. The area lacks a predominance of hydrophytic vegetation and is dominated by species suited for upland conditions such as autumn olive, ragweed, Norway maple (*Acer platanoides*) and multiflora rose. There was no evidence of wetland hydrology in or near the area. The soil within this area lacked indicators of hydric soil, however they consist of urban fill which any lack morphological development. Since the soils are unreliable to indicate hydric conditions, vegetation and hydrology was used to make the final determination.

Wetland resource areas are described below.

Wetland Resource Area Description

One isolated vegetated wetland, LE-2, was delineated on Parcel 49. Two separate salt marshes, SM-1 and SM-1, were delineated along the coastline, mostly within Parcel 48. Wetland Determination Field Forms were completed and are included with this report.

LE2 – is an isolated wetland located north of the existing paved area on Parcel 49. The wetland was delineated using survey flagging numbered sequentially from LE2-1 to LE2-12. The wetland area is a shallow depressional feature which has been highly disturbed and altered by previous land uses. Soils consist of disturbed urban fill with varying degrees of morphological development. The wetland is vegetated by a monoculture of common reed. The delineation of this wetland feature is limited to the areas where common reed and evidence of hydrology is present. There is a clear break in vegetation between the wetland and the upland field species staghorn sumac, oriental bittersweet, pitch pine, red cedar, multiflora rose, common milkweed, thistle, black swallow-wort, and goldenrod.

Salt Marsh 1 and 2 are two separate salt marshes located along the shoreline. Salt Marsh 1 was delineated using survey flagging numbered sequentially from SM 1-1 to SM 1-19 and Salt Marsh 2 was delineated sequentially SM 2-1 to SM 2-12. Both salt marsh areas are vegetated with salt marsh cord grass (*Spartina alterniflora*) and traces of glasswort (*Salicornia virginiana*).

If you have any questions please do not hesitate to contact me at 617.405.4053.

Sincerely,
LUCAS ENVIRONMENTAL, LLC



Thomas E. Liddy, PWS
Senior Wetland Scientist
Land Development & Permitting

Enclosures

Figure 1 – USGS Map

Figure 2 – Aerial Map

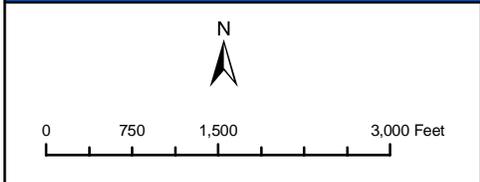
Photographic Documentation

Wetland Determination Field Forms

Figures



Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery 30cm (2008/2009)

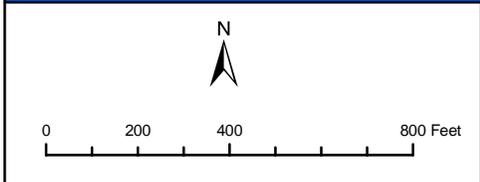


USGS Map
 Wetland Report
 Land North of Gifford Street
 New Bedford, MA

FIGURE 1
LUCAS ENVIRONMENTAL, LLC
 LAND DEVELOPMENT & PERMITTING



Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery 30cm (2008/2009)



Aerial Map
Wetland Report
Land North of Gifford Street
New Bedford, MA

FIGURE 2
LUCAS ENVIRONMENTAL, LLC
 LAND DEVELOPMENT & PERMITTING

Photographic Documentation



Photograph 1: View of Salt Marsh 1 looking north during high tide.



Photograph 2: View of Salt Marsh 2 north of parking lot looking south during high tide.



Photograph 3: Isolated Vegetated Wetland LE-2 on Parcel 49.



Photograph 4: Isolated Vegetated Wetland LE-2 on Parcel 49 looking north.



Photograph 5: View of first area near northern edge of Parcel 288. Area dominated by upland species common ragweed, multiflora rose, Norway maple, and autumn olive.



Photograph 6: View of first area near northern edge of Parcel 288.

Wetland Determination Field Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: New Bedford Harbor City/County: New Bedford Sampling Date: 6/28/2012

Applicant/Owner: New Bedford State: MA Sampling Point: Parcel 288

Investigator(s): Thomas Liddy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave

Slope (%): 3 Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks)

Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances present? Yes No

Are Vegetation , Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<p>Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> If yes, optional Wetland Site ID: _____
Remarks: (explain alternative procedures here or in separate report) Soils in location consists of urban fill and lack normal morphological development and properties. Identification of wetlands rely primarily on vegetation and hydrology. Vegetation encountered is typical of an early successional upland open field/scrubland.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Stunted or Stressed Plants (D1)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> Microtopographic Relief (D4)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																

<p>Field Observations:</p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) (include capillary fringe)	<p align="center">Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No evidence of surface hydrology present in area.

VEGETATION – Use scientific names of plants

Sampling Point: ID 288

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size:30 ft)																				
1. Hornbeam (Carpinus carolinia)	10%	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (C)																
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
= Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;"><u>Total % Cover of:</u></td> <td style="text-align:center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species</td> <td style="text-align:right">x 1 =</td> </tr> <tr> <td>FACW species</td> <td style="text-align:right">x 2 =</td> </tr> <tr> <td>FAC species</td> <td style="text-align:right">x 3 =</td> </tr> <tr> <td>FACU species</td> <td style="text-align:right">x 4 =</td> </tr> <tr> <td>UPL species</td> <td style="text-align:right">x 5 =</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:right">(A) (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A =</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species	x 1 =	FACW species	x 2 =	FAC species	x 3 =	FACU species	x 4 =	UPL species	x 5 =	Column Totals:	(A) (B)	Prevalence Index = B/A =	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species	x 1 =																			
FACW species	x 2 =																			
FAC species	x 3 =																			
FACU species	x 4 =																			
UPL species	x 5 =																			
Column Totals:	(A) (B)																			
Prevalence Index = B/A =																				
Sapling/Shrub Stratum (Plot size:15 ft)																				
1. Autumn Olive(Elaeagnus umbellata)	85%	Yes	UPL	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.01 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. Multiflora Rose (Rosa multiflora)	20%	Yes	FACU																	
3 .Norway Maple (Acer platanoides)	10%	No																		
4.																				
5.																				
6.																				
7.																				
8.																				
= Total Cover																				
Herb Stratum (Plot size:5 ft)																				
1. Common ragweed (Ambrosia artemisiifolia)	95%	Yes	FACU	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
2. Common Reed (Phragmites australis)	5%	No	FACU																	
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
= Total Cover																				
Woody Vine Stratum (Plot size:15 ft)																				
1. Oriental Bittersweet (Celastrus orbiculatus)	5 stems	Yes	FACU	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
2.																				
3.																				
4.																				
= Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		

0-10"	10 YR 4/3	100	None			fsl	
10"	R						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grain. ²Location: PL=Pore Lining M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR, R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):	Hydric Soil Present?	Yes	No
Type: Till		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Depth (inches): 10"		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:
Soils consist of urban fill - no evidence of hydric soil indicators (redoximorphic features, staining, accumulaton of organic matter) present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: New Bedford Harbor City/County: New Bedford Sampling Date: 6/28/2012

Applicant/Owner: New Bedford State: MA Sampling Point: Wetland LE 2

Investigator(s): Thomas Liddy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave

Slope (%): 3 Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI Classification: PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks)

Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances present? Yes No

Are Vegetation , Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<p>Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> If yes, optional Wetland Site ID: _____
Remarks: (explain alternative procedures here or in separate report) Plot located in upland near wetland flag LE 2-7. Area highly disturbed due to previous land uses.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <table style="width:100%;"> <tr><td><input checked="" type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Stunted or Stressed Plants (D1)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> Microtopographic Relief (D4)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																

<p>Field Observations:</p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) (include capillary fringe)	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants

Sampling Point: 2 - WET

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size:30 ft)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (C)																
1. Red maple (<i>Acer rubrum</i>)	20%	Yes	FAC																	
2.																				
3.																				
4.																				
5.																				
6.																				
= Total Cover																				
Sapling/Shrub Stratum (Plot size:15 ft)				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;"><u>Total % Cover of:</u></td> <td style="text-align:center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species</td> <td style="text-align:right;">x 1 =</td> </tr> <tr> <td>FACW species</td> <td style="text-align:right;">x 2 =</td> </tr> <tr> <td>FAC species</td> <td style="text-align:right;">x 3 =</td> </tr> <tr> <td>FACU species</td> <td style="text-align:right;">x 4 =</td> </tr> <tr> <td>UPL species</td> <td style="text-align:right;">x 5 =</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:right;">(A) (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A =</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species	x 1 =	FACW species	x 2 =	FAC species	x 3 =	FACU species	x 4 =	UPL species	x 5 =	Column Totals:	(A) (B)	Prevalence Index = B/A =	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species	x 1 =																			
FACW species	x 2 =																			
FAC species	x 3 =																			
FACU species	x 4 =																			
UPL species	x 5 =																			
Column Totals:	(A) (B)																			
Prevalence Index = B/A =																				
1. Bayberry (<i>Morella pensylvanica</i>)	10%	Yes	FAC																	
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
= Total Cover																				
Herb Stratum (Plot size:5 ft)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.01 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. Common Reed (<i>Phragmites australis</i>)	100%	Yes	FACW																	
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
= Total Cover																				
Woody Vine Stratum (Plot size:15 ft)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
1. None																				
2.																				
3.																				
4.																				
= Total Cover																				
= Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Remarks: (Include photo numbers here or on a separate sheet.) Area infested with Black Swallowwort. Delineation based on monoculture of <i>Phragmites</i> and loss of upland herbaceous vegetation.																				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10 YR 4/2	100					sl	
2-12	10YR 5/2	100	10YR 5/8	10	c	m	sl	No redox present

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grain. ²Location: PL=Pore Lining M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) **(LRR, R, MLRA 149B)**

- Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- Loamy Mucky Mineral (F1) **(LRR K, L)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) **(LRR K, L, R)**
- 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- Dark Surface (S7) **(LRR K, L)**
- Polyvalue Below Surface (S8) **(LRR K, L)**
- Thin Dark Surface (S9) **(LRR K, L)**
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: Till

Depth (inches): 12"

Hydric Soil Present? Yes No

Remarks:

Soils consist of urban fill and are highly disturbed and lack morphological developed. Soils considered hydric where redoximorphic features are developing above restrictive layer.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: New Bedford Harbor City/County: New Bedford Sampling Date: 6/28/2012

Applicant/Owner: New Bedford State: MA Sampling Point: Wetland LE 2

Investigator(s): Thomas Liddy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave

Slope (%): 3 Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks)

Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances present? Yes No

Are Vegetation , Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<p>Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> If yes, optional Wetland Site ID: _____
Remarks: (explain alternative procedures here or in separate report) Plot located in upland near wetland flag LE 1-7. Area highly disturbed due to previous land uses. Upland vegetation and lack of wetland hydrology appear to be reliable indicators of the upland/wetland boundary.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<p>Secondary Indicators (minimum of two required)</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Stunted or Stressed Plants (D1)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> Microtopographic Relief (D4)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Stunted or Stressed Plants (D1)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> Microtopographic Relief (D4)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
<p>Field Observations:</p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) (include capillary fringe)	<p>Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
<p>Remarks: No indicators of hydrology present.</p>																																

VEGETATION – Use scientific names of plants

Sampling Point: 2 - UPL

	Absolute <u>% Cover</u>	Dominant <u>Species?</u>	Indicator <u>Status</u>																	
<u>Tree Stratum</u> (Plot size:30 ft)																				
1. None				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (C)																
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
= Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;"><u>Total % Cover of:</u></td> <td style="text-align:center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species</td> <td style="text-align:right;">x 1 =</td> </tr> <tr> <td>FACW species</td> <td style="text-align:right;">x 2 =</td> </tr> <tr> <td>FAC species</td> <td style="text-align:right;">x 3 =</td> </tr> <tr> <td>FACU species</td> <td style="text-align:right;">x 4 =</td> </tr> <tr> <td>UPL species</td> <td style="text-align:right;">x 5 =</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:right;">(A) (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A =</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species	x 1 =	FACW species	x 2 =	FAC species	x 3 =	FACU species	x 4 =	UPL species	x 5 =	Column Totals:	(A) (B)	Prevalence Index = B/A =	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species	x 1 =																			
FACW species	x 2 =																			
FAC species	x 3 =																			
FACU species	x 4 =																			
UPL species	x 5 =																			
Column Totals:	(A) (B)																			
Prevalence Index = B/A =																				
<u>Sapling/Shrub Stratum</u> (Plot size:15 ft)																				
1. Autumn Olive (<i>Elaeagnus umbellata</i>)	85%	Yes	FACU																	
2. Norway Maple (<i>Acer platanoides</i>)	10%	No																		
3. Pussy Willow (<i>Salix discolor</i>)	10%	No	FACW																	
4.																				
5.																				
6.																				
7.																				
8.																				
= Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.01 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
<u>Herb Stratum</u> (Plot size:5 ft)																				
1. Common Ragweed (<i>Ambrosia artemisiifolia</i>)	95%	Yes	FACU																	
2. Common Reed (<i>Phragmites australis</i>)	5%	No	OBL																	
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
= Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
<u>Woody Vine Stratum</u> (Plot size:15 ft)																				
1. None																				
2.																				
3.																				
4.																				
= Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: 2 - UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-3"	10 YR 4/3	100				fsl	
3-10"	101YR 5/3	100				fsl	No redox present

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grain. ²Location: PL=Pore Lining M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR, R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):	
Type: Till	
Depth (inches): 10"	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks:
Soils consist of urban fill and are highly disturbed so do not give a reliable indicator of hydric soils. Soils considered hydric where redoximorphic features are developing above restrictive layer. No redoximorphic features were observed in the plot.