Appendix G: USACE Wetland Determination Forms



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 250 Carter Str	eet	City/	County: Manchester/Ha	rtford County Samp	oling Date: 2023-09-19				
Applicant/Owner: Solli Engin			State: Connecticut Sampling Point: Transect 1 - Upland						
Investigator(s): Alexander V									
Landform (hillslope, terrace, etc									
Subregion (LRR or MLRA): R									
Soil Map Unit Name: 46B									
Are climatic / hydrologic conditi									
Are Vegetation, Soil				Circumstances" presen					
Are Vegetation, Soil				xplain any answers in R					
SUMMARY OF FINDING			•						
Hydrophytic Vegetation Prese	ent? Yes_	No	Is the Sampled Area within a Wetland?	Yes N	lo 🗸				
Hydric Soil Present? Wetland Hydrology Present?	Yes _ Ves	No V		·					
Remarks: (Explain alternative			If yes, optional Wetland	Site ID:					
HYDROLOGY									
Wetland Hydrology Indicate	ors:		:	Secondary Indicators (r	minimum of two required)				
Primary Indicators (minimum		check all that apply)		Surface Soil Cracks					
Surface Water (A1)	or one to required,	Water-Stained Leav		Drainage Patterns	, ,				
High Water Table (A2)		Aquatic Fauna (B13		Moss Trim Lines (E					
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water					
Water Marks (B1)		Hydrogen Sulfide O		Crayfish Burrows (0					
Sediment Deposits (B2)		Oxidized Rhizosphe	res on Living Roots (C3)	Saturation Vis ble of	on Aerial Imagery (C9)				
Drift Deposits (B3)		Presence of Reduce	, ,	Stunted or Stresse					
Algal Mat or Crust (B4)		Recent Iron Reducti	` ,						
Iron Deposits (B5)	(D-7)	Thin Muck Surface (<pre> Shallow Aquitard (D3) Microtopographic Relief (D4)</pre>					
Inundation Visible on Aer	• • • •	Other (Explain in Re	emarks)						
Sparsely Vegetated Cond	Save Surface (Bo)			FAC-Neutral Test (<u>D5)</u>				
Surface Water Present?	Yes No	Depth (inches):							
Water Table Present?		Depth (inches):							
Saturation Present?		✓ Depth (inches):		ydrology Present? Y	'es No				
(includes capillary fringe) Describe Recorded Data (stre	 eam gauge, monito	oring well, aerial photos, pr	evious inspections), if avail	lable:					
,			•						
Damada									
Remarks:									

VEGETATION – Use scientific names of plants.

/EGETATION – Use scientific names of plants.				Sampling Point: Transect 1 - Upland			
Tree Stratum (Plot size: 30 ft r)	Absolute	Dominant Species?		Dominance Test worksheet:			
1. Acer saccharum	55	Species:	Status FACU	Number of Dominant Species			
2. Betula lenta	25		FACU	That Are OBL, FACW, or FAC: 1 (A)			
3. Carya ovata	10		FACU	Total Number of Dominant Species Across All Strata: 5 (B)			
				eposico / torodo / tili etrata.			
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 20.00 (A/B)			
5							
6				Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
15 ft r	90	= Total Cov	er	OBL species 0 $x 1 = 0$ FACW species 10 $x 2 = 20$			
Sapling/Shrub Stratum (Plot size: 15 ft r)	10		EA C\\\	FACW species $\frac{10}{0}$ $x = 20$ FAC species $\frac{10}{0}$ $x = 3$			
1. Lindera benzoin	10		FACW	FACU species 105			
2. Berberis thunbergii	5		FACU	UPL species 65 x 5 = 325			
3				Column Totals: 180 (A) 765 (B)			
4	_						
5				Prevalence Index = B/A = 4.25			
6	_			Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
	15	= Total Cov	er	2 - Dominance Test is >50%			
Herb Stratum (Plot size: 5 ft r				3 - Prevalence Index is ≤3.0 ¹			
1. Dennstaedtia punctilobula	65	~	UPL	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 			
2. Parthenocissus quinquefolia	5		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
3. Polystichum acrostichoides	5		FACU				
				¹ Indicators of hydric soil and wetland hydrology must			
4				be present, unless disturbed or problematic.			
5				Definitions of Vegetation Strata:			
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
7				at breast height (DBH), regardless of height.			
8	-	. ———		Sapling/shrub – Woody plants less than 3 in. DBH			
9				and greater than or equal to 3.28 ft (1 m) tall.			
10		·		Herb – All herbaceous (non-woody) plants, regardless			
11	_			of size, and woody plants less than 3.28 ft tall.			
12				Woody vines – All woody vines greater than 3.28 ft in height.			
	75	= Total Cov	er er	neight.			
Woody Vine Stratum (Plot size: 30 ft r)							
	<u> </u>						
Woody Vine Stratum (Plot size: 30 ft r) 1							
1 2		· 		Hydrophytic			
1		· 		Hydrophytic Vegetation			
1 2		· 					

SOIL Sampling Point: Transect 1 - Upland

Profile Desc	ription: (Describe	to the de	oth needed to docum	ent the	indicator	or confirn	n the absence	of indicators.)
Depth	Matrix			Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 16	10YR 3/3	100					Sandy Loam	Ap
16 - 20	7.5YR 4/6	100					Sandy Loam	Bw
	-							
								
					·			
_								
		-			·			
-								
								
					·			
¹ Type: C=Co	oncentration, D=Dep	letion, RM	=Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							for Problematic Hydric Soils ³ :
Histosol			Polyvalue Below	/ Surface	(S8) (LR I	RR,		Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B)	(00) (Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surface Loamy Mucky M					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L)
	Layers (A5)		Loamy Gleyed N			, -)		alue Below Surface (S8) (LRR K, L)
	d Below Dark Surfac	e (A11)	Depleted Matrix		,			Dark Surface (S9) (LRR K, L)
	ark Surface (A12)		Redox Dark Sur					langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark S		- 7)			nont Floodplain Soils (F19) (MLRA 149B)
	Sleyed Matrix (S4)		Redox Depressi	ons (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5) Matrix (S6)							arent Material (F21) Shallow Dark Surface (TF12)
	rface (S7) (LRR R, I	ILRA 149	В)					(Explain in Remarks)
	, , , , ,		•				<u> </u>	,
			etland hydrology must	be pres	ent, unles	s disturbed	or problemation	с.
Restrictive L	_ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:							1	

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 250 Carter Street	et	City/C	County: Manchester/Ha	rtford County Samplin	g Date: 2023-09-19
Applicant/Owner: Solli Engine			,		=
Investigator(s): Alexander Wo					
Landform (hillslope, terrace, etc.)					
Subregion (LRR or MLRA): R 14					
_					
Are climatic / hydrologic condition					
Are Vegetation, Soil					_
Are Vegetation, Soil				φlain any answers in Rem	
SUMMARY OF FINDINGS					
				,,	
Hydrophytic Vegetation Presen		No	Is the Sampled Area within a Wetland?	Yes No _	
Hydric Soil Present?		No			
Wetland Hydrology Present? Remarks: (Explain alternative)			If yes, optional wetland	Site ID:	
HYDROLOGY					
Wetland Hydrology Indicators	S:			Secondary Indicators (min	imum of two required)
Primary Indicators (minimum of		check all that apply)		Surface Soil Cracks (E	
Surface Water (A1)	•	Water-Stained Leave			•
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16	
Saturation (A3)		Marl Deposits (B15)	_	Dry-Season Water Ta	ble (C2)
Water Marks (B1)		Hydrogen Sulfide Od		Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizospher		Saturation Vis ble on A	
Drift Deposits (B3)		Presence of Reduce	· · ·	Stunted or Stressed P	
Algal Mat or Crust (B4) Iron Deposits (B5)		Recent Iron Reduction Thin Muck Surface (0)		Geomorphic Position (
Inundation Visible on Aeria	ıl İmagery (B7)	Other (Explain in Rer		Shallow Aquitard (D3)Microtopographic Reli	
Sparsely Vegetated Conca		Other (Explain in Nei		FAC-Neutral Test (D5	
Field Observations:	(20)				/
Surface Water Present?	Yes No _	Depth (inches): 1			
		✓ Depth (inches):			
		Depth (inches): 12		drology Present? Yes	No
Describe Recorded Data (strea	m gauge, monitor	ring well, aerial photos, pre	evious inspections), if availa	able:	
Remarks:					
Remarks.					

				Sampling Point: Transect 1 - Wetland
Tree Stratum (Plot size: 30 ft r)	Absolute	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	40	Species:	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2 Betula lenta	15		FACU	That Are OBL, FACW, or FAC: 3 (A)
3. Catalpa speciosa			FACU	Total Number of Dominant Species Across All Strata: 4 (B)
4. Ulmus americana			FACW	(E)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)
5				
				Prevalence Index worksheet:
7	0.5	Total Cov		
Sapling/Shrub Stratum (Plot size: 15 ft r)	00	= Total Cov	rei	OBL species $\frac{15}{65}$ $x = \frac{15}{130}$ $x = \frac{15}{130}$
. Lindora hanzoin	40	~	FACW	FAC species 100 x 3 = 300
- Parharis thunbargii			FACU	FACU species 30 x 4 = 120
				UPL species $0 x 5 = 0$
3				Column Totals: <u>210</u> (A) <u>565</u> (B)
4				Prevalence Index = B/A = 2.69
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	45	= Total Cov	er	 ✓ 2 - Dominance Test is >50% _ 3 - Prevalence Index is ≤3.0¹
Herb Stratum (Plot size: 5 ft r)				4 - Morphological Adaptations ¹ (Provide supporting
1. Athyrium angustum	60		FAC	data in Remarks or on a separate sheet)
2. Juncus effusus	15		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Onoclea sensibilis	10		FACW	The disease of the delice of the design of the design of the delice of the design of the design of the design of the delice of the design of the delice of t
4. Osmundastrum cinnamomeum	10	·	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Parthenocissus quinquefolia	5		FACU	Definitions of Vegetation Strata:
6				
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8.				
9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12.	-			Woody vines – All woody vines greater than 3.28 ft in
12.	100	= Total Cov	·or	height.
Woody Vine Stratum (Plot size: 30 ft r)	100	= Total Cov	'ei	
1.				
2				
3				Hydrophytic Vegetation
·				Present? Yes No
4	0	= Total Cov		

SOIL Sampling Point: Transect 1 - Wetland

Depth Matrix Redox Features Color (moist) % Type Loc* Texture Remarks	Profile Desc	ription: (Describe	to the de	pth needed to docun	nent the	indicator	or confirn	n the absence	of indicators.)		
O - 6						s					
6 - 20 7,5YR 4/4 90 2.5YR 3/6 5 C PL / M Sandy Loam Bg (Redox Features: 2.5YR 3/6, 5% / 5YR 4/4, 5%)				Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks		
- 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. - 1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. - 1 Hydric Soil Indicators: - 2	0 - 6	10YR 3/2	100					Sandy Loam	Α		
	6 - 20	7.5YR 4/4	90	2.5YR 3/6	5	С	PL / M	Sandy Loam	Bg (Redox Features: 2.5YR 3/6, 5% / 5YR 4/4, 5%)		
Hydric Soil Indicators: Histosol (A1)			_		-						
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)	-										
Hydric Soil Indicators: Histosol (A1)			<u> </u>								
Hydric Soil Indicators: Histosol (A1)			-								
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)	_										
Hydric Soil Indicators: Histosol (A1)							· 				
Hydric Soil Indicators: Histosol (A1)					-						
Hydric Soil Indicators: Histosol (A1)	-		_								
Hydric Soil Indicators: Histosol (A1)	-										
Hydric Soil Indicators: Histosol (A1)	¹Type: C=C	oncentration D=Der	letion RM	1=Reduced Matrix MS	S=Masked	d Sand Gi	ains	² Location	r: PL=Pore Lining M=Matrix		
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Pepleted Below Dark Surface (A11) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L) Hydric Soil Present? Yes No Hydrogen Sulfide (A4) 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) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Phydric Soil Present? Yes No No Hydric Soil Present? Yes No		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	i–rtoddod Matrix, Me	-Maono	2 04114 01	unio.					
Black Histic (A3)	Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LR	R R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)		
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Redox of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic No Hydric Soil Present? Yes No No				,							
Stratified Layers (A5)									 Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) 		
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Present Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Masses (F12) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)							k, L)				
Thick Dark Surface (A12)			e (A11)			-)					
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):			())					
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No				Depleted Dark S	Surface (F	- 7)		Piedm			
Stripped Matrix (S6) 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: Depth (inches): Hydric Soil Present? Yes No				Redox Depressi	ions (F8)						
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No											
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes _ Vo			MI DA 140	D)					· · · · · · · · · · · · · · · · · · ·		
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Daik Su	nace (57) (LIKIK IK, I	VILIXA 143	D)				Other	(Explain in Remarks)		
Type: Depth (inches):	³ Indicators o	f hydrophytic vegeta	tion and w	etland hydrology mus	t be pres	ent, unles	s disturbed	l or problemation	c.		
Depth (inches): No	Restrictive I	Layer (if observed)	:								
	Type:										
Remarks:	Depth (in	ches):						Hydric Soil	Present? Yes No		
	Remarks:										

250 Carter Street Manchester, CT 06040

United States Army Corps of Engineers Wetland Delineation <u>Site Photos</u>

Federal Wetland Delineation Plot ID W1



Federal Wetland Delineation Plot ID U1

