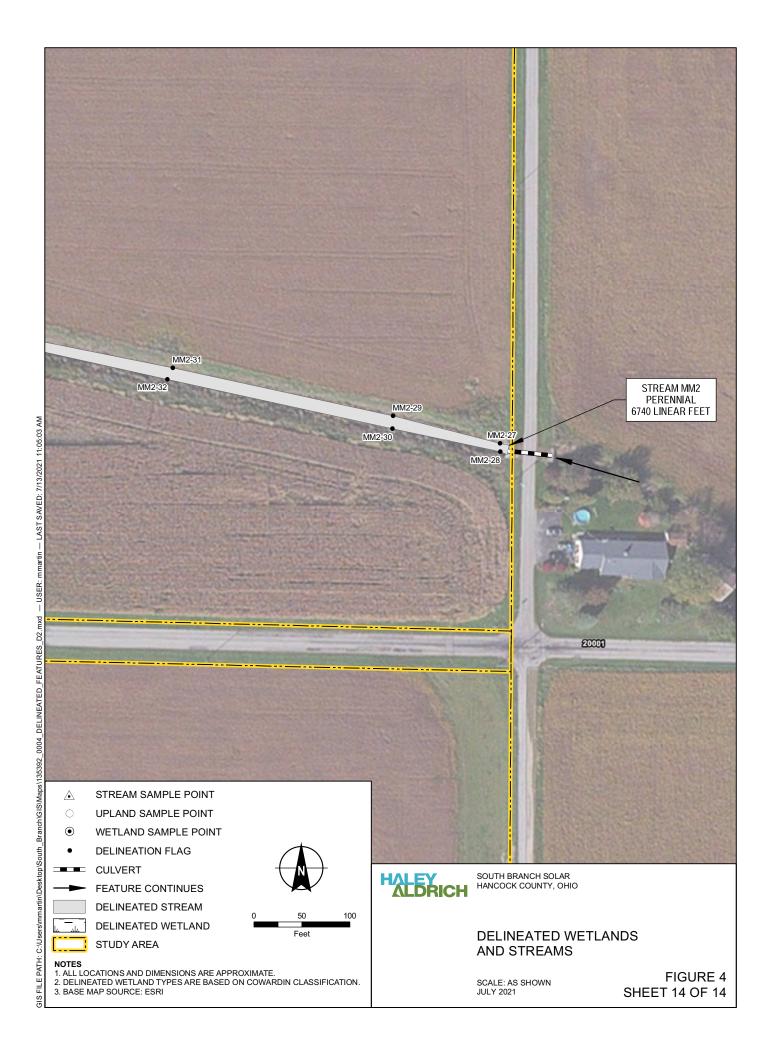
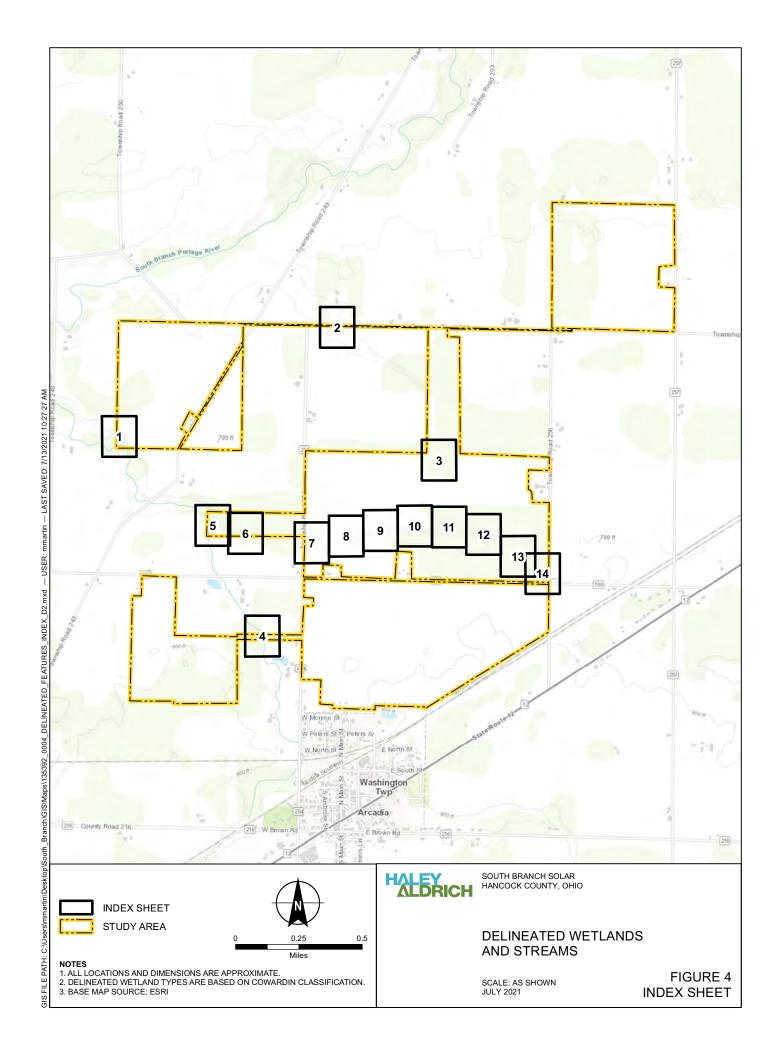
APPENDIX O WETLAND AND STREAM DELINEATION REPORT Part 2 of 3





APPENDIX A

Photo Log

Date Photographs Taken: 19 to 23 April 2021



Photo 1: View looking west within Wetland MMA (PFO) near flag MMA-48.



Photo 2: View looking north within Wetland MMA (PEM) near sample point MMA-42.

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Date Photographs Taken: 19 to 23 April 2021



Photo 3: View looking southwest within Wetland MMB (PFO) near sample point MMB-WSP1.



Photo 4: View looking south at Stream MM1 (Perennial) near sample point MM1-3.

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Date Photographs Taken: 19 to 23 April 2021



Photo 5: View looking southeast at Stream MM2 (Perennial) near flag MM2-2.



Photo 6: View looking south at Stream MM3 (Perennial) near flag MM3-4.

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Date Photographs Taken: 19 to 23 April 2021



Photo 7: View looking southeast at Stream MM4 (Perennial) near flag MM4-3.



Photo 8: View looking southeast at Stream MM5 near sample point MM5-SSP1.

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APPENDIX B Wetland Determination Data and Stream Inventory Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: South Branch Solar	City/County: Hancock	County	Sampling Date: 4-20-21
Applicant/Owner: Leeward		State: OH	Sampling Point: MMA-WSP1
Investigator(s): M. Martin, K. Lindenschmidt	Section, Township, Ran	nge: Washington	
Landform (hillside, terrace, etc.): depression	Local relief (co	oncave, convex, none):	concave
Slope (%):0 Lat: 41.130177	Long: -83.505469		Datum: WGS84
Soil Map Unit Name: PmA-Pewamo silty clay loam, 0 to 1 percent s	lopes	NWI classifi	ication: PEM
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes x	No (If no, expl	lain in Remarks.)
Are Vegetation x , Soil , or Hydrology significantly d	listurbed? Are "Normal C	ircumstances" present?	Yes x No
Are Vegetation, Soil, or Hydrologynaturally prob		olain any answers in Ren	narks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point lo	cations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled Are within a Wetland?		No
Remarks:			
VEGETATION – Use scientific names of plants.			
Absolute Tree Stratum (Plot size: 30ft rad.) % Cover	Dominant Indicator Species? Status	Dominance Test worl	kehoat:
1	Openios: Claud	Number of Dominant S	
2.		Are OBL, FACW, or FA	•
3		Total Number of Domin	•
4		Across All Strata:	(B)
5	Total Cover	Percent of Dominant S Are OBL, FACW, or FA	•
Sapling/Shrub Stratum (Plot size: 15 ft rad.)	10141 3013.	7110 002,	
1.		Prevalence Index wo	rksheet:
2		Total % Cover of:	
3		OBL species	x 1 =
4		FACW speciesFAC species	x 2 = x 3 =
] 5	Total Cover	FACU species	
Herb Stratum (Plot size: 5ft rad.)		UPL species	x 5 =
1.		Column Totals:	(A) (B)
2		Prevalence Index =	: B/A =
3		Undrambatia Variateti	an Indiantoro
5.		Hydrophytic Vegetati	Hydrophytic Vegetation
6.		2 - Dominance Tes	
7.		3 - Prevalence Ind	
8.			Adaptations ¹ (Provide supporting
9			s or on a separate sheet)
10	Total Cours		ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 15ft rad.)	Total Cover	'Indicators of hydric so be present, unless dist	oil and wetland hydrology must turbed or problematic.
1		Hydrophytic	
2		Vegetation	
	=Total Cover	Present? Yes_	No X
Remarks: (Include photo numbers here or on a separate sheet.) Sample point located in the edge of active agricultural field. Unvegi	etated at time of site visit.		

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SOIL Sampling Point: MMA-WSP1

Profile Desc	cription: (Describe	to the depti	n needed to doc	ument t	he indica	tor or o	confirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/2	100					Loamy/Clayey		
8-18	2.5Y 4/1	90	10YR 4/6	10	С	PL	Loamy/Clayey	Prominent redox concentration	ions
				,					
¹ Type: C=C	oncentration, D=Dep	letion. RM=F	Reduced Matrix. I	MS=Mas	ked Sand	Grains	. ² Location	n: PL=Pore Lining, M=Matrix.	
Hydric Soil			· · · · · · · · · · · · · · · · · · ·					rs for Problematic Hydric Soils	3.
Histosol	(A1)		Sandy Gle	eyed Mat	rix (S4)		Coa	st Prairie Redox (A16)	
Histic Ep	oipedon (A2)		Sandy Re	dox (S5)			Iron-	Manganese Masses (F12)	
Black Hi	stic (A3)		Stripped N				Red	Parent Material (F21)	
Hydroge	en Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)	
Stratified	d Layers (A5)		Loamy Mu	icky Mine	eral (F1)		Othe	er (Explain in Remarks)	
2 cm Mu	ıck (A10)		Loamy Glo	eyed Ma	trix (F2)				
X Depleted	d Below Dark Surface	(A11)	X Depleted I	Matrix (F	3)				
I 	ark Surface (A12)		Redox Da	rk Surfac	ce (F6)		³ Indicato	rs of hydrophytic vegetation and	
Sandy M	Mucky Mineral (S1)		Depleted I	Dark Sur	face (F7)		wetla	and hydrology must be present,	
5 cm Mu	icky Peat or Peat (S3	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.	
Restrictive	Layer (if observed):								
Туре:									
Depth (in	nches):						Hydric Soil Presen	t? Yes_X_ No)
Errata. (http:	://www.nrcs.usda.gov	/Internet/FS	E_DOCUMENTS	S/nrcs142	2p2_0512	293.doc>	()		
HYDROLC	OGY								
Wetland Hy	drology Indicators:								
Primary Indi	cators (minimum of c	ne is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two red	quired)
Surface	Water (A1)		Water-Sta	ined Lea	aves (B9)		_x_Surf	ace Soil Cracks (B6)	
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)			nage Patterns (B10)	
Saturation			True Aqua		, ,			Season Water Table (C2)	
	larks (B1)		Hydrogen		` '			fish Burrows (C8)	
_	nt Deposits (B2)		Oxidized F			_		ration Visible on Aerial Imagery ((C9)
	posits (B3)		Presence		`	,		ted or Stressed Plants (D1)	
	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)	
	oosits (B5)	(0.7)	Thin Muck				FAC	-Neutral Test (D5)	
	on Visible on Aerial I				` '				
	Vegetated Concave	Suпасе (В	B)Other (Exp	olain in F	kernarks)		T		
Field Obser				D " "					
Surface Wat			No x		nches): _				
Water Table Saturation P			No x		nches): _		Wetland Hydrole	gy Procent? Voc V No	_
	resent? Ye pillary fringe)	<u> </u>	No <u>x</u>	Depth (i	niches).		Wetland Hydrolo	gy Present? Yes X No	'—
`	corded Data (stream	gauge mor	nitoring well aeria	al photos	previous	s inspec	tions), if available:		
2000100110	Jonada Data (Sticalii	gaago, moi		priotos	, provious	opou	ono,, ii availabio.		
Remarks:									

US Army Corps of Engineers

Midwest Region – Version 2.0

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Sunset Ridge Solar		City/Cour	nty: <u>Hancoc</u>	Sampling Date: 4-20-21	
Applicant/Owner: Leeward				State: OH	Sampling Point: MMA-WSP2
Investigator(s): M. Martin, K. Lindenschmidt		Section, T	 Гownship, Ra	ange: Washington	
Landform (hillside, terrace, etc.): depression		!	Local relief (d	concave, convex, none):	concave
Slope (%): 0 Lat: 41.129978		Long: -	83.505504		Datum: WGS84
Soil Map Unit Name: PmA-Pewamo silty clay loam, 0 to	1 percent s	slopes		NWI classif	ication: PFO
Are climatic / hydrologic conditions on the site typical fo	r this time c	of year?	Yes x	No (If no, exp	olain in Remarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly o	disturbed? F	Are "Normal (Circumstances" present?	Yes x No
Are Vegetation , Soil , or Hydrology n	aturally prol	blematic? (If needed, ex	kplain any answers in Rer	marks.)
SUMMARY OF FINDINGS – Attach site ma			ng point lo	ocations, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes			e Sampled Ar n a Wetland		No
Remarks: VEGETATION – Use scientific names of plan	nte				
VEGETATION COO COLORIANO MARIOC C. P.C.	Absolute	Dominant	Indicator	1	
<u>Tree Stratum</u> (Plot size: <u>30ft rad.</u>)	% Cover	Species?	Status	Dominance Test wor	ksheet:
Carya laciniosa	20	Yes	FACW	Number of Dominant S Are OBL, FACW, or F	•
3.				Total Number of Domi	•
4				Across All Strata:	4 (B)
5	20	=Total Cover		Percent of Dominant S Are OBL, FACW, or FA	
Sapling/Shrub Stratum (Plot size: 15 ft rad.)	40	V- v	= 1 O \ 1 \ /	5 Committee de com	
Fraxinus pennsylvanica 2.	40	Yes	FACW	Prevalence Index wo Total % Cover of:	
3.				OBL species 80	
4.				FACW species 60	
5.				FAC species 0	x 3 = 0
	40	=Total Cover		FACU species 0	
Herb Stratum (Plot size: 5ft rad.)	20	W		UPL species 20	
Rubus occidentalis Carex lacustris	80	Yes Yes	UPL OBL	Column Totals: 16 Prevalence Index =	`'`'
2. Carex lacustris 3.	00	163	— ODL	FIEVAICHICE HIGGS	= B/A - 1.00
4.				Hydrophytic Vegetati	ion Indicators:
5.					Hydrophytic Vegetation
6.				X 2 - Dominance Te	
7.				X 3 - Prevalence Ind	
8.					Adaptations ¹ (Provide supporting s or on a separate sheet)
9. 10.					ophytic Vegetation ¹ (Explain)
10	100	=Total Cover		l 	oil and wetland hydrology must
Woody Vine Stratum (Plot size: 15ft rad.)				be present, unless dis	
1.				Hydrophytic	
2.				Vegetation	
		=Total Cover		Present? Yes_	X No x
Remarks: (Include photo numbers here or on a separa Evidence of past logging (old stumps, downed timber).	,				

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SOIL Sampling Point: MMA-WSP2

Depth	Matrix		Redo	x Featur				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10YR 4/1	85	10YR 3/6	15	С	M	Loamy/Clayey	Prominent redox concentration
							-	
					<u> </u>			
								-
		etion, RM	I=Reduced Matrix, N	/IS=Masl	ked Sand	d Grains.		n: PL=Pore Lining, M=Matrix.
ydric Soil In			Condu Olo	1 1 1 1 1 1	-i (C4)			ors for Problematic Hydric Soils ³ :
Histosol (A			Sandy Gle		rix (54)			ast Prairie Redox (A16)
Black Histi	pedon (A2)		Sandy Red		2)			n-Manganese Masses (F12)
	Sulfide (A4)		Stripped M Dark Surfa))			d Parent Material (F21) y Shallow Dark Surface (F22)
	_ayers (A5)		Loamy Mu	` '	oral (E1)			er (Explain in Remarks)
2 cm Muck			Loamy Gle	-			0"	er (Explain in Nemarks)
	Below Dark Surface	(Δ11)	X Depleted N	-				
	k Surface (A12)	(/ (1 1)	Redox Dar				³ Indicat	ors of hydrophytic vegetation and
	cky Mineral (S1)		Depleted D		` ')		land hydrology must be present,
	ky Peat or Peat (S3	.)	? Redox Dep		` '	,		ess disturbed or problematic.
estrictive La	ayer (if observed):		<u> </u>		. ,			<u>·</u>
	., (
Type:								
Type: Depth (inc	:hes):		_				Hydric Soil Prese	nt? Yes_X No_
Depth (inc Remarks: This data form	is revised from Mic		gional Supplement \				NRCS Field Indicate	ors of Hydric Soils, Version 7.0, 2015
Depth (inc Remarks: his data form rrata. (http://\	n is revised from Mic www.nrcs.usda.gov						NRCS Field Indicate	
Depth (inc lemarks: his data form rrata. (http://\	n is revised from Mic www.nrcs.usda.gov						NRCS Field Indicate	
Depth (inc demarks: his data form rrata. (http://v	n is revised from Mic www.nrcs.usda.gov						NRCS Field Indicate	
Depth (inc demarks: this data form frrata. (http://w YDROLOG Vetland Hydr trimary Indica	a is revised from Mic www.nrcs.usda.gov GY rology Indicators: ators (minimum of o	/Internet/F		s/nrcs142			NRCS Field Indicate	ors of Hydric Soils, Version 7.0, 2015
Depth (inc demarks: his data form rrata. (http://w YDROLOG Vetland Hydr rimary Indica Surface W	a is revised from Mic www.nrcs.usda.gov GY rology Indicators: ators (minimum of o /ater (A1)	/Internet/F	uired; check all that a	apply)	ves (B9)	293.docx)	NRCS Field Indicate Second	ors of Hydric Soils, Version 7.0, 2015 ary Indicators (minimum of two required face Soil Cracks (B6)
Depth (inc lemarks: his data form rrata. (http://v YDROLOG Vetland Hydr rimary Indica Surface W	a is revised from Mic www.nrcs.usda.gov GY rology Indicators: ators (minimum of o /ater (A1) er Table (A2)	/Internet/F	uired; check all that a X Water-Stai	apply) ined Lea	2p2_0512 aves (B9) 3)	293.docx)	NRCS Field Indicate Second Sur	ary Indicators (minimum of two required face Soil Cracks (B6) inage Patterns (B10)
Depth (inc emarks: his data form rrata. (http://v YDROLOG /etland Hydr rimary Indica Surface W K High Wate K Saturation	a is revised from Mic www.nrcs.usda.gov GY rology Indicators: ators (minimum of o /ater (A1) er Table (A2) (A3)	/Internet/F	uired; check all that a X Water-Stai Aquatic Fa	apply) ined Lea auna (B1 atic Plant	aves (B9) 3) s (B14)	293.docx)	NRCS Field Indicate Second Sur Dra	ary Indicators (minimum of two requires face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)
Depth (inc demarks: his data form rrata. (http://o YDROLOG Vetland Hydr rimary Indica Surface W X High Wate X Saturation Water Mar	an is revised from Mic www.nrcs.usda.gov GY rology Indicators: ators (minimum of or /ater (A1) per Table (A2) a (A3) rks (B1)	/Internet/F	uired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 tic Plant Sulfide (2p2_0512 vves (B9) 3) s (B14) Odor (C1	293.docx)	NRCS Field Indicate Second Sur Dra Dry Cra	ary Indicators (minimum of two requires face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)
Depth (inc Remarks: this data form frrata. (http://www.communical.) YDROLOG Vetland Hydr Vrimary Indical Surface W X High Wate X Saturation Water Mar Sediment	rology Indicators: ators (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2)	/Internet/F	uired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 titic Plant Sulfide (Rhizosph	ves (B9) 3) s (B14) Odor (C1 eres on l	293.docx)	Second Sur Dra Dry Cra ots (C3) Sat	ary Indicators (minimum of two requires face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
Depth (inc Remarks: his data form frrata. (http://www.nrata. (http://w	rology Indicators: ators (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3)	/Internet/F	uired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence	apply) ined Lea auna (B1 stic Plant Sulfide (Rhizosph of Reduc	2p2_0512 ves (B9) 3) s (B14) Odor (C1 eres on lead Iron of	293.docx)) Living Ro	Second Sur Dra Dry Cra ots (C3) Sat	ary Indicators (minimum of two requireface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1)
Depth (inc Remarks: his data form frrata. (http://www.nrata. (http://w	rology Indicators: ators (minimum of orater (A1) ar Table (A2) ar (A3) arks (B1) beposits (B2) sits (B3) or Crust (B4)	/Internet/F	ired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence of Recent Iro	apply) ined Lea auna (B1 stic Plant Sulfide (Rhizosph of Reduc	eves (B9) 3) s (B14) Odor (C1 eres on lead Iron of the ced Iro	293.docx)) Living Ro	Second Sur Dra Dry Cra ots (C3) Sat Stu (C6) Geo	ary Indicators (minimum of two requireface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) comorphic Position (D2)
Depth (inc lemarks: his data form rrata. (http://v YDROLOG Vetland Hydr rimary Indica Surface W X High Wate X Saturation Water Mar Sediment Drift Depos	rology Indicators: ators (minimum of or/ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	/Internet/F	uired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc	aves (B9) 3) s (B14) Odor (C1 eres on led Iron (cet Iron in Title (C7)	293.docx)) Living Ro	Second Sur Dra Dry Cra ots (C3) Sat Stu (C6) Geo	ary Indicators (minimum of two requireface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1)
Depth (inc lemarks: his data form rrata. (http://o YDROLOG Vetland Hydr rimary Indica Surface W X High Wate X Saturation Water Mar Sediment Drift Depoi Algal Mat o Iron Depos Inundation	rology Indicators: ators (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial In	ne is requ	ired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduce in Reduce is Surface Well Dat	aves (B9) 3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9)) Living Ro (C4) illed Soils	Second Sur Dra Dry Cra ots (C3) Sat Stu (C6) Geo	ary Indicators (minimum of two requireface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) comorphic Position (D2)
Depth (inc Remarks: This data form Frrata. (http://v YDROLOG Vetland Hydr Primary Indica Surface W X High Water X Saturation Water Mar Sediment Drift Depoi Algal Mate Iron Depos Inundation Sparsely V	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial Invegetated Concave	ne is requ	ired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduce in Reduce is Surface Well Dat	aves (B9) 3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9)) Living Ro (C4) illed Soils	Second Sur Dra Dry Cra ots (C3) Sat Stu (C6) Geo	ary Indicators (minimum of two requireface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) comorphic Position (D2)
Depth (inc Remarks: This data form Frrata. (http://v YDROLOG Vetland Hydr Primary Indica Surface W X High Water X Saturation Water Mar Sediment Drift Depo Algal Mate Iron Depos Inundation Sparsely V	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial Invegetated Concave ations:	ne is requesting magery (B	ired; check all that a X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence of Recent Iro Thin Muck G7) Gauge or Vote (Exp. 1988) Other (Exp. 1988)	apply) ined Lea auna (B1 dic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	aves (B9) 3) s (B14) Odor (C1 eres on led Iron of the ced Iron) Living Ro (C4) illed Soils	Second Sur Dra Dry Cra ots (C3) Sat Stu (C6) Geo	ary Indicators (minimum of two requireface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) comorphic Position (D2)
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US Army Corps of Engineers Midwest Region – Version 2.0

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: South Branch Solar		City/Cour	City/County: Hancock County Sampling Date:				
Applicant/Owner: Leeward				State: OH	Sampling Point: MMA-USP1		
Investigator(s): M. Martin, K. Lindenschmidt		Section, T	ownship, Ra	ange: Washington			
Landform (hillside, terrace, etc.): terrace		I	Local relief (c	concave, convex, none):	convex		
Slope (%): 1 Lat: 41.130060		Long: -{	83.505370		Datum: WGS84		
Soil Map Unit Name: PmA-Pewamo silty clay loam, 0 to	o 1 percent s	slopes		NWI classi	fication: NA		
Are climatic / hydrologic conditions on the site typical for	or this time o	of year?	Yes x	No (If no, exp	plain in Remarks.)		
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed? A	Are "Normal (Circumstances" present?	? Yes x No		
Are Vegetation, Soil, or Hydrologyr			If needed, ex	xplain any answers in Re	marks.)		
SUMMARY OF FINDINGS – Attach site ma			ıg point lo	cations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes No	o_ X_	Is the	Sampled Ar	rea			
Hydric Soil Present? Yes No	o X	withir	n a Wetland?	? Yes	No X		
Wetland Hydrology Present? Yes No	о <u>Х</u>						
Remarks: VEGETATION – Use scientific names of pla	 ints.						
	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30ft rad.)	% Cover	Species?	Status	Dominance Test wor			
Carya laciniosa Ouercus rubra	<u>40</u> 15	Yes Yes	FACU FACU	Number of Dominant	•		
Quercus rubra Ulmus rubra	10	No Yes	FACU FAC	Are OBL, FACW, or F	· · · · · · · · · · · · · · · · · · ·		
4.	10	INO	170	Total Number of Dom Across All Strata:	inant Species 7 (B)		
5.	-			Percent of Dominant	·		
	65 =	=Total Cover		Are OBL, FACW, or F	•		
Sapling/Shrub Stratum (Plot size: 15 ft rad.))						
Cornus racemosa	40	Yes	FAC	Prevalence Index wo	orksheet:		
2. Ulmus rubra	10	No	FAC	Total % Cover of			
3. Rosa multiflora	15	Yes	FACU) x1= 0		
4. Ostrya virginiana	5	No	FACU		$\frac{0}{2}$ $\times 2 = \frac{80}{100}$		
5	70	=Total Cover		FACUL species 6			
<u>Herb Stratum</u> (Plot size: 5ft rad.)	70 =	= Fotal Cover	1	FACU species 4: UPL species 3:			
1. Galium aparine	10	Yes	FACU	Column Totals: 17			
2. Phlox subulata	10	Yes	UPL	Prevalence Index			
Rubus occidentalis	20	Yes	UPL	110101011111111111111111111111111111111	5.5.		
4.				Hydrophytic Vegetat	tion Indicators:		
5.					r Hydrophytic Vegetation		
6.				2 - Dominance Te	est is >50%		
7.				3 - Prevalence Inc	dex is ≤3.0 ¹		
8.				l —	Adaptations ¹ (Provide supporting		
9					ks or on a separate sheet)		
10				Problematic Hydr	rophytic Vegetation ¹ (Explain)		
		=Total Cover			soil and wetland hydrology must		
Woody Vine Stratum (Plot size: 15ft rad.)	1		1	be present, unless dis	sturbed or problematic.		
1				Hydrophytic			
2		=Total Cover		Vegetation Present? Yes	No X		
		- Tutai Guvoi		Flesent: 100			
Remarks: (Include photo numbers here or on a separ	ate sneet.)						

US Army Corps of Engineers

SOIL Sampling Point: MMA-USP1

Depth	•	•	Theeded to doc			101 01 0	confirm the absence	of indicators.)	
,, , ,	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-14	7.5YR 3/1	100					Loamy/Clayey		
14-20	7.5YR 4/1	85	7.5YR 5/8	15	С	M	Loamy/Clayey	Prominent redox concentrations	
	ncentration, D=Depl	etion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	Grains		: PL=Pore Lining, M=Matrix.	
Hydric Soil In								rs for Problematic Hydric Soils ³ :	
Histosol (A	,		Sandy Gle		rix (S4)			st Prairie Redox (A16)	
	pedon (A2)		Sandy Re					Manganese Masses (F12)	
Black Hist	` '		Stripped N	`	6)			Parent Material (F21)	
Hydrogen	Sulfide (A4)		Dark Surfa	ace (S7)				Shallow Dark Surface (F22)	
	Layers (A5)		Loamy Μι	icky Mine	eral (F1)		Othe	r (Explain in Remarks)	
2 cm Mucl	k (A10)		Loamy Gl	eyed Mat	rix (F2)				
Depleted I	Below Dark Surface	(A11)	Depleted	Matrix (F	3)				
Thick Dark	k Surface (A12)		Redox Da	rk Surfac	e (F6)		³ Indicato	rs of hydrophytic vegetation and	
Sandy Mu	ıcky Mineral (S1)		Depleted	Dark Sur	face (F7)		wetla	and hydrology must be present,	
5 cm Mucl	ky Peat or Peat (S3)	Redox De	pression	s (F8)		unless disturbed or problematic.		
Errata. (http://v	n is revised from Mic www.nrcs.usda.gov	-	• •					s of Hydric Soils, Version 7.0, 2015	
HYDROLOG	GY								
_	rology Indicators:								
Primary Indica	rology Indicators: ators (minimum of o	ne is require						ry Indicators (minimum of two required)	
Primary Indica Surface W	rology Indicators: ators (minimum of o Vater (A1)	ne is require	Water-Sta	ined Lea	, ,		Surf	ace Soil Cracks (B6)	
Primary Indica Surface W High Wate	rology Indicators: ators (minimum of o Vater (A1) er Table (A2)	ne is require	Water-Sta	ained Lea auna (B1	3) ` ´		Surfa Drai	ace Soil Cracks (B6) nage Patterns (B10)	
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US Army Corps of Engineers

Midwest Region – Version 2.0

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: South Branch Solar		City/Cou	ınty: <u>Hancoc</u>	k County	Sampling Date:	4/21/21
Applicant/Owner: Leeward				State: OH	Sampling Point:	MMB-WSP1
Investigator(s): M. Martin, K. Lindenschmidt		Section, 7	 Гownship, Ra	ange: Washington		
Landform (hillside, terrace, etc.): depression			Local relief (d	concave, convex, none):	concave	
Slope (%): 3 Lat: 41.131257		Long: -	-83.530296		Datum: WGS84	
Soil Map Unit Name: Gwg5C2 - Glynwood clay loam, g	ground morai	ne, 6-12 perc	ent slopes, e	roded NWI classi	fication: PFO	
Are climatic / hydrologic conditions on the site typical for			Yes x	No (If no, ex	•	
Are Vegetation, Soil, or Hydrologys)
Are Vegetation, Soil, or Hydrologyr						
SUMMARY OF FINDINGS – Attach site ma						tures, etc.
Hydrophytic Vegetation Present? Yes X No	<u> </u>	Is the	e Sampled A	rea		
	o <u> </u>		n a Wetland1		No	
Wetland Hydrology Present? Yes X No	ر 					
Remarks:						
VEGETATION – Use scientific names of pla		Dominant	Indicator			
Tree Stratum (Plot size: 30ft rad.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
Fraxinus pennsylvanica	60	Yes	FACW	Number of Dominant	Species That	
2. Acer negundo	10	No	FAC	Are OBL, FACW, or f	•	6 (A)
3. Ulmus rubra	5	No	FAC	Total Number of Dom	ninant Species	
4.				Across All Strata:	•	6 (B)
5.				Percent of Dominant	Species That	
		=Total Cover		Are OBL, FACW, or F	FAC: 100	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft rad.)	,					
1. Ulmus rubra	15	Yes	FAC	Prevalence Index w		
2. Acer negundo	10	Yes	FAC	Total % Cover o		
Fraxinus pennsylvanica Cornus amomum	<u>10</u> 5	Yes No	FACW FACW	· —		0 310
5.		INU	IACVV			35
O	40 =	=Total Cover		· —		0
Herb Stratum (Plot size: 5ft rad.)		• • • •				0
1. Lysimachia nummularia	50	Yes	FACW			45 (B)
Persicaria pensylvanica	10	No	FACW	Prevalence Index	= B/A = 2.23	
3. Mentha arvensis	20	Yes	FACW			
4. Barbarea vulgaris	5	No	FAC	Hydrophytic Vegeta	tion Indicators:	_
5					r Hydrophytic Vegeta	ation
6				X 2 - Dominance To		
7				X 3 - Prevalence In		
8				l 	l Adaptations ¹ (Provi ks or on a separate s	
9.					•	,
10	85 =	-Total Cover		l 	rophytic Vegetation ¹	, , ,
Woody Vine Stratum (Plot size: 15ft rad.)		=Total Cover		¹ Indicators of hydric s be present, unless dis		
1.	1				sturbed or problema	IC.
2.				Hydrophytic Vegetation		
	;	Total Cover		_	X No	
Remarks: (Include photo numbers here or on a separ						-
Tremarks. (moduo proto namboro nero di dii a copa.	ato snoot.,					

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SOIL Sampling Point: MMB-WSP1

Samuel and A	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	
4-14	10YR 3/2	95	7.5YR 5/6	5	C	_PL_	Loamy/Clayey	Prominent redox concentrations
14-20	10YR 4/2	70	7.5YR 5/6	30	С	М	Loamy/Clayey	Prominent redox concentrations
Type: C=Cc	ncentration, D=Depl	etion PM	I=Reduced Matrix N	 M-2N	kad Sand	d Grains	² l ocation	n: PL=Pore Lining, M=Matrix.
Hydric Soil I		Cuon, ruv	Troduced Matrix, II	no mas	itea Garit	d Grains.		rs for Problematic Hydric Soils ³ :
Histosol (Sandy Gle	ved Mat	rix (S4)			st Prairie Redox (A16)
	ipedon (A2)		Sandy Red		(-)			Manganese Masses (F12)
Black His			Stripped M		3)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa		,			Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	` '	eral (F1)			er (Explain in Remarks)
2 cm Mud	• • •		Loamy Gle	-				
	Below Dark Surface	(A11)	Depleted N	-				
	rk Surface (A12)	,	X Redox Dar				³ Indicato	rs of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted [Oark Sur	face (F7))		and hydrology must be present,
	cky Peat or Peat (S3	5)	? Redox Dep					ss disturbed or problematic.
Restrictive L	.ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Presen	t? Yes X No
	J	/Internet/I	FSE_DOCUMENTS	/nrcs142				rs of Hydric Soils, Version 7.0, 2015
		/Internet/I	FSE_DOCUMENTS	/nrcs142				5 of Frydric Colle, Voldon Fr.S., 2010
YDROLO		/Internet/I	FSE_DOCUMENTS	/nrcs142				5 of Frydric Coiles, Volsion F.S., 2010
Netland Hyd	GY Irology Indicators:)	
Wetland Hyd Primary Indic	GY Irology Indicators: ators (minimum of o		uired; check all that	apply)	2p2_0512	293.docx)) Seconda	ry Indicators (minimum of two require
Wetland Hyd Primary Indic X Surface V	GY Irology Indicators: ators (minimum of o Water (A1)		uired; check all that	apply) ined Lea	ves (B9)	293.docx)	Seconda	ary Indicators (minimum of two require ace Soil Cracks (B6)
Wetland Hyd Primary Indic X Surface V X High Wat	GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2)		uired; check all that X Water-Sta Aquatic Fa	apply) ined Lea iuna (B1	oves (B9)	293.docx)	SecondaSurfa	ary Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10)
Wetland Hyde Primary Indic X Surface V X High Wat Saturation	GY Irology Indicators: eators (minimum of o Water (A1) ter Table (A2) n (A3)		uired; check all that a X Water-Sta Aquatic Fa True Aqua	apply) ined Lea iuna (B1 tic Plant	oves (B9) 3) s (B14)	293.docx	Seconda Surfa Drain Dry-	ary Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Vetland Hyd Primary Indic X Surface V X High Wat Saturation Water Ma	GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1)		ired; check all that X Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea iuna (B1 tic Plant Sulfide (2p2_0512 vves (B9) 3) s (B14) Odor (C1	293.docx	Seconda Surfa Draii Dry- Cray	ary Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8)
Primary Indic X Surface V X High Wat Saturation Water Ma	GY Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)		x Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F	apply) ined Lea iuna (B1 tic Plant Sulfide (ves (B9) 3) s (B14) Odor (C1 eres on l	293.docx)	SecondaSurfaDrainDryCrayoots (C3)Satu	ary Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indic X Surface V X High Wat Saturation Water Ma Sediment Drift Depo	GY Arology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)		x Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F	apply) ined Lea iuna (B1 tic Plant Sulfide (thizosph of Reduc	2p2_0512 ves (B9) 3) s (B14) Odor (C1 eres on I) Living Ro	SecondaSurfaDrainCraycraysatuStun	ary Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C9) atted or Stressed Plants (D1)
Primary Indic X Surface V X High Wat Saturation Water Ma Sediment Drift Depo	GY Irology Indicators: eators (minimum of o Water (A1) ter Table (A2) n (A3) earks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		ired; check all that a X Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized Fa Presence Recent Iro	apply) ined Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc	eves (B9) 3) s (B14) Odor (C1 eres on lection in Titorian) Living Ro	Seconda	ary Indicators (minimum of two require ace Soil Cracks (B6) mage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) gration Visible on Aerial Imagery (C9) atted or Stressed Plants (D1) morphic Position (D2)
Wetland Hyd Primary Indic X Surface V X High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	GY Irology Indicators: eators (minimum of o Nater (A1) ter Table (A2) n (A3) erks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	ne is requ	x Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck	apply) ined Lea tuna (B1 tic Plant Sulfide (thizosph of Reduc n Reduc Surface	aves (B9) 3) s (B14) Odor (C1 eres on I ced Iron (tion in Ti) Living Ro	Seconda	ary Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C9) atted or Stressed Plants (D1)
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Wetland Hyd Primary Indic X Surface V X High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Water Water Table I Saturation Pr includes cap	GY Irology Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It	magery (B Surface (s X s X	x Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck T) Gauge or N B8) Other (Exp	apply) ined Lea iuna (B1 tic Plant Sulfide (thizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	eves (B9) 3) s (B14) Ddor (C1 eres on led Iron (C7) a (D9) etemarks) nches): _ nches): _ nches): _) Living Ro (C4) illed Soils	Seconda Surfa Drain Dry- Cray Stun Stun S(C6) X Geo X FAC	ary Indicators (minimum of two required ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) oration Visible on Aerial Imagery (C9) otted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

US Army Corps of Engineers

Midwest Region – Version 2.0

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: South Branch Solar		City/Cou	City/County: Hancock County Sampling Date:				
Applicant/Owner: Leeward			<u>.</u>	State: OH	Sampling Point: MMB-USP		
Investigator(s): M. Martin, K. Lindenschmidt		Section, 7	 Γownship, Rε	ange: Washington			
Landform (hillside, terrace, etc.): SLOPE			Local relief (concave, convex, none):	CONVEX		
Slope (%): 6 Lat: 41.131239		Long: -	-83.530064		Datum: WGS84		
Soil Map Unit Name: Gwg5C2 - Glynwood clay loam, g	ground morai	ine, 6-12 perc	ent slopes, e	eroded NWI classi	fication: NA		
Are climatic / hydrologic conditions on the site typical f		•	Yes x	•	plain in Remarks.)		
Are Vegetation, Soil, or Hydrology	significantly	disturbed? /	Are "Normal (Circumstances" present?	? Yes x No		
Are Vegetation, Soil, or Hydrology							
SUMMARY OF FINDINGS – Attach site ma							
Hydrophytic Vegetation Present? Yes No	o X	Is the	e Sampled A	rea			
	o X	withir	n a Wetland'	? Yes	No X		
Wetland Hydrology Present? Yes No	o <u>X</u>						
Remarks:							
VEGETATION – Use scientific names of pla							
Tree Stratum (Plot size: 30ft rad.)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test wo	rkahaat:		
<u>Tree Stratum</u> (Plot size: <u>30ft rad.</u>) 1. Gleditsia triacanthos	% Cover 30	Species? Yes	Status FACU				
Ulmus rubra	20	Yes	FAC	Number of Dominant Are OBL, FACW, or F	•		
3. Prunus serotina	10	No	FACU	Total Number of Dom	(,		
4.				Across All Strata:	10 (B)		
5.				Percent of Dominant			
	60	=Total Cover		Are OBL, FACW, or F	•		
Sapling/Shrub Stratum (Plot size: 15 ft rad.)						
1. Ulmus rubra	20	Yes	FAC	Prevalence Index wo	orksheet:		
2. Ostrya virginiana	10	Yes	FACU	Total % Cover of	f: Multiply by:		
3. Lonicera maackii	10	Yes	UPL		0 x 1 = 0		
4.					0 x 2 = 0		
5				· —	<u>10</u> x 3 = <u>210</u>		
	40	=Total Cover			70 x 4 = 280		
Herb Stratum (Plot size: 5ft rad.)	20	Voo	FACIL	· —	x = 100 $x = 100$		
Rubus flagellaris Barbarea vulgaris	20	Yes Yes	FACU		$\frac{60}{= B/A} = \frac{590}{3.69}$ (B)		
Barbarea vuigaris Erythronium americanum	10	Yes	FAC UPL	Prevalence Index	= B/A = 3.09		
4.	10	169	UFL	Hydrophytic Vegetat	tion Indicators:		
5.					r Hydrophytic Vegetation		
6.				2 - Dominance Te	, , , ,		
7.				3 - Prevalence Inc			
8.				l —	Adaptations ¹ (Provide supporting		
9.				data in Remark	ks or on a separate sheet)		
10				Problematic Hydr	rophytic Vegetation ¹ (Explain)		
	50 :	=Total Cover		¹ Indicators of hydric s	soil and wetland hydrology must		
Woody Vine Stratum (Plot size: 15ft rad.)				sturbed or problematic.		
1. Vitis vulpina	5	Yes	FAC	Hydrophytic			
2. Toxicodendron radicans	5	Yes	FAC	Vegetation			
	10 :	=Total Cover		Present? Yes	No _X		
Remarks: (Include photo numbers here or on a separate	rate sheet.)						

US Army Corps of Engineers

SOIL Sampling Point: MMB-USP1

Profile Des	cription: (Describe	o the depth	needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 3/2	100					Loamy/Clayey		
6-20	7.5YR 4/4	90	7.5YR 5/3	10	С	М	Loamy/Clayey	Faint redox concentration	ons
				· ——					
		— –							
							_		
¹ Type: C=C	oncentration, D=Depl	etion, RM=F	Reduced Matrix, I	MS=Masl	ked Sand	l Grains	s. ² Location	n: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric So	ils³:
Histosol	(A1)		Sandy Gle	eyed Mat	rix (S4)		Coa	st Prairie Redox (A16)	
Histic E	oipedon (A2)		Sandy Re	, ,				-Manganese Masses (F12)	
	stic (A3)		Stripped N	`	6)			Parent Material (F21)	
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)	
	d Layers (A5)		Loamy Mu	-			Othe	er (Explain in Remarks)	
I —	ıck (A10)		Loamy Gl						
I — ·	d Below Dark Surface	(A11)	Depleted I	`	,		3, ,,		
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation an	
ı —	flucky Mineral (S1)		Depleted I					and hydrology must be present	,
_	icky Peat or Peat (S3)	Redox De	pression	s (FO)	Г	unie	ss disturbed or problematic.	
	Layer (if observed):								
Type:	1 1-		_				Under Oak Brown	10 V	NI. V
Depth (i	ncnes):		_				Hydric Soil Preser	t? Yes	No X
Remarks:							ND00 51 111 11 1		
	rm is revised from Mic ://www.nrcs.usda.gov	-						rs of Hydric Soils, Version 7.0,	2015
Litata. (IIII)	.//www.nics.usua.gov	internet/i or	L_DOCOMENTO	J/111C3 142	.ρ2_0012	.90.u0c/	^)		
HYDROLO)GV								
_	drology Indicators:								
	cators (minimum of o	ne is require			(50)			ary Indicators (minimum of two	required)
	Water (A1)		Water-Sta		` '			ace Soil Cracks (B6)	
	ater Table (A2)		Aquatic Fa					nage Patterns (B10)	
Saturation	larks (B1)		True Aqua Hydrogen		, ,			Season Water Table (C2) rfish Burrows (C8)	
_	nt Deposits (B2)		Oxidized F		•			rration Visible on Aerial Imager	v (C9)
	posits (B3)		Presence			_		ited or Stressed Plants (D1)	, (00)
I —	at or Crust (B4)		Recent Iro			,		morphic Position (D2)	
	oosits (B5)		Thin Muck				• •	-Neutral Test (D5)	
	on Visible on Aerial Ir	nagery (B7)	Gauge or		, ,			,	
	Vegetated Concave								
Field Obser	vations:								
Surface Wa	ter Present? Ye	3	No X	Depth (ii	nches):				
Water Table			No X	Depth (ii	_				
Saturation P	resent? Ye	3	No X	Depth (ii	_		Wetland Hydrolo	gy Present? Yes	No X
(includes ca	pillary fringe)								
Describe Re	corded Data (stream	gauge, mon	itoring well, aeria	al photos	, previou:	sinspec	ctions), if available:		
Remarks:									

US Army Corps of Engineers

Midwest Region – Version 2.0

Background Information

Name: Michael Martin
Date: 4-20-21
Affiliation: Haley & Aldrich Inc
Address: 200 Town Centre Drive, Rochester, NY 14623
Phone Number: 585-321-4265
e-mail address: mmartin (a) haleyaldrich, com
Name of Wetland: MMA
Vegetation Communit(ies):
HGM Class(es):
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
See delineation report map.
,
Lat/Long or UTM Coordinate .41, 129978 N 83,505564
USGS Quad Name Sloomdale
County Hancock
Township Washington
Section and Subsection
Hydrologic Unit Code 64106016
Site Visit 4-20-21
National Wetland Inventory Map
Ohio Welland Inventory Map Woods on Hydric Soil (Fig 3- Wotland Ret
Soil Survey Hancock County Soil Survey
Delineation report/map Figure 4 of Wetland Delineation Rpt

Wetland Size (acres, hectares): Sketch: Include north arrow, relation Scc Wetland		aters, vegetation zon		
	ship with other surface w	aters, vegetation zon		
Sce Wetland	Delineation	Report	Figure 4	
Comments, Narrative Discussion, Jus	stification of Category Cha	anges:		
Wetland has poo			, ,	
Area was logge				
rutting is pr	resent, PI	portions a	are small a	1895
in the edge	o, dajacent	as siela	5	

Category:

Final score: 44

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	/	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	/	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	/	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	/	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

	MMA		
	Question	Circle one	
	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
_	has had critical habitat proposed (65 FR 41812 July 6, 2000). Threatened or Endangered Species. Is the wetland known to contain	YES (NO
	an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
	Significant Breeding or Concentration Area. Does the wetland	YES	NO \
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	
	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES /	NO
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
_		Go to Question 7	3
	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8
	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	(NO)
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	Wetland is a Category 3 wetland.	Go to Question 8
	years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	(NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	NO
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	Go to Question 10 YES	NO
30	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES	NO
		Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES (NO
	characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricto
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwelli
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsi
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicate
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflore
	Parnassia glauca	Schechzeria palustris		Lythrum alatun
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceur
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutan
	Salix candida	Vaccinium oxycoccos		Spartina pectinate
	Salix myricoides	Woodwardia virginica		Solidago riddelli
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Metric 1. Wetland Area (size). Select fors size class and sasign score. 25 to 55 acres (10 to 50 acres (1	Site: M✓	A	Rater(s): M. Mart	1	Date: 4-20-21
25 o Sea ceres (10 to 450 Arases (20 Aras) (6 pts) 25 to 450 acres (10 to 450 Arases (40 to 450 Aras) (5 pts) 10 to 458 acres (40 to 450 Aras) (5 pts) 25 to 450 acres (10 to 450 Aras) (5 pts) 25 to 450 acres (10 to 450 Aras) (5 pts) 26 to 450 acres (10 to 450 Aras) (5 pts) 27 to 450 acres (10 to 450 Aras) (5 pts) 28 to 450 acres (10 to 450 Aras) (5 pts) 29 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 21 to 450 acres (10 to 450 Aras) (5 pts) 22 to 450 acres (10 to 450 Aras) (5 pts) 23 to 450 acres (10 to 450 Aras) (5 pts) 24 to 450 acres (10 to 450 Aras) (5 pts) 25 to 450 acres (10 to 450 Aras) (5 pts) 26 to 450 acres (10 to 450 Aras) (5 pts) 27 to 450 acres (10 to 450 Aras) (5 pts) 28 to 450 acres (10 to 450 Aras) (5 pts) 29 to 450 acres (10 to 450 Aras) (5 pts) 29 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 pts) 20 to 450 acres (10 to 450 Aras) (5 to	22	Metric 1. Wetland A	rea (size).		
25 to <50 acres (10.1 to <20.2h) (5 pts) 21 to <50 acres (10.1 to <30.2h) (5 pts) 21 to <50 acres (10.1 to <30.2h) (5 pts) 21 to <50 acres (10.1 to <40.1h) (2 pts) 21 to <50 acres (10.1 to <40.1h) (2 pts) 21 to <50 acres (10.1 to <40.1h) (2 pts) 21 to <50 acres (10.1 to <50.2h) (10.1h) (10.1h) 21 to <50 acres (10.1 to <50.2h) (10.1h) (10.1h) 21 to <50 acres (10.1 to <50.2h) (10.1h) (10.1h) 21 to <50 acres (10.1 to <50.2h) (10.1h) (10.1h) 21 to <50 acres (10.1 to <50.2h) (1	max 6 pts. subtotal				
To <10 acres (1.2 to <4na) (3 pts)					
D.3 to <3 acres (0.12 to <1.2ha) (2pts)		10 to <25 acres (4 to <10.1	ha) (4 pts)		
Metric 2. Upland buffers and surrounding land use. Calculate average buffer width. Select only one and assign score. Do not double check.		0.3 to <3 acres (0.12 to <1.	2ha) (2pts)		
Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. WIDE. Buffers average 50m (164ft) or more around welland perimeter (7) MCROW. Buffers average 10m to <25m (32t to <32t) account welland perimeter (1) NARROW. Buffers average 10m to <25m (32t to <32t) account welland perimeter (1) 2b. International Park (14 Park			, , , , ,		
WIDE. Buffers average 50m (164ft) or more around veiland perimeter (7) More around veiland perimeter (8) NARROW. Buffers average 25m to -55m (32t to 164ft) around wetland perimeter (1) VERY NARROW. Buffers average 10m to -25m (32t to 164ft) around wetland perimeter (1) VERY NARROW. Buffers average 10m to -25m (32t to 164ft) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (7) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (7) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (2) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around wetland perimeter (1) VERY NARROW. Buffers average -10m (-32t) around set average. Between stream/standard and other human use (1) VERY NARROW. Buffers average -10m (-32t) around set average -10m	57	_		ing land use.	
MEDIUM. Buffers average 10m to <50m (82 to <164ft) around weltand perimeter (4)	max 14 pts. subtotal				
VERY NARROW. Buffers average <10n (<22th) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairle, savannath, wildlife area, etc. (7) LOW. Old field (-10 years), shrub land, young second growth forest. (6) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HiGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. Metric 3. Hydrology. High pH groundwater (5) Other groundwater (6) Perennial surface water (lake or stream) (5) Associatification to receive the provided of the part of the part floodplain (1) Part of inparian or upland condition in undallor/staturation. Score one or did check. Semi- to permanently inundated (2) Seasonally inundated (2) Seasonally inundated (2) Seasonally inundated (2) Seasonally inundated (2) Recovering (3) Recovering (3) Recovering (3) Recovering (2) Recovering (2) Recovering (2) Recovering (3) Recent or no recovery (1) Wetric 4. Habitat Alteration and Development. Substrate disturbance. Score one or double check and average. None or none apparent (12) Peccovering (3) Recent or no recovery (1) Very good (6) Good (5) Recent or no recovery (1) Recovering (3) Recent					
2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2d growth or close froset, praints, sawanah, wildlie area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) HIGH. Urban, industrial, open pasture, park, conservation titilage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Percepitation (1) Seasonal/Intermittent surface water (3) Perrenial surface water (lake or stream) (5) 3c. Maximum water depth. Select only one and assign score. 2o / (72 / 50 / 10) 2o / 40 (7 / 17 / 16) (1) Recovered (7) Recovered (7) Recovered (7) Recovered (7) Recovering (3) Recent or no recovery (1) 4a. Substrate disturbance. Score one or double check and average. None or none apparent (9) Recovering (2) Recovering (2) Recovering (3) Recovering (3) Recovering (2) Recovering (3) Recovering (4) Recovering (5) Recovering (5) Recovering (6) Recovering (6) Recovering (6) Recovering (6) Recovering (6) Recoverin					
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Metric 3. Hydrology. Sources of Water. Score all that apply. High ph groundwater (5) High ph groundwater (5) High ph groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Part of wetland/under (a) Part of inparian or upland corridor (1) Part o					w field. (3)
High pH groundwater (5) Other groundwater (3) Perecipitation (1) Seasonal/Intermittent surface water (3) Perent of wetland/upland (e.g., forest), complex (1) Part of riparian or upland corridor (1) Part of riparian upland corridor (1) Part of riparian or upland corridor (1) Part of riparian or upland corridor (1) Part of riparian upland corridor (1) Part	18 25			onstruction. (1)	
Other groundwater (3) Precipitation (1) Seasonal/Internittent surface water (3) Part of wetland/upland (e.g., forest), complex (1) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select only one and assign score. >0.7 (27.6in) (3)	max 30 pts. subtotal		apply. 3b.		
Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbi check. Semi- to permanently inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) Recovered (7) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Metric 4. Habitat Alteration and Development. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recovered (3) Recovering (2) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) Active the page of the page					
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O.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1)			ly one and assign score.		
Moderately good (6) Score one or double check and average.		0.4 to 0.7m (15.7 to 27.6in)	(2)		
Recovered (7) Recovering (3) Recent or no recovery (1) Gilling/grading Gilke Gilling/grading Gilke			c regime. Score one or double check		led in upper Social (12iii) (1)
Recovering (3) Recent or no recovery (1) Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recovering (4) Recovering (5) Recovering (6) Recovering (7) Recovering (8) Recovering (9) Recovering (9) Recovering (1) Recoveri				noint source (none	tormwater)
weir stomwater input other other		Recovering (3)	tile	filling/grading	
Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovered (6) Recovered (7) Recovered (8) Recent or no recovery (1) Act. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovered (6) Recovered (7) Recovered (8) Recovered (9) Recov		Recent or no recovery (1)			
### Assubstrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)			stormwater input	other	
None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovered (6) Recovering (3) Recent or no recovery (1) Selective cutting woody debris removal toxic pollutants Indicate the process of the proces	8 33	Metric 4. Habitat Al	teration and Develo	pment.	
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Recovered (6) Recovering (3) Recent or no recovery (1) Reconstruction Recovering (3) Recent or no recovery (1) Subtotal this page Recovered (6) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Selective cutting Woody debris removal Toxic pollutants Shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment					
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selective cutting woody debris removal toxic pollutants dredging farming nutrient enrichment					ic bed removal
subtotal this page toxic pollutants nutrient enrichment	23]	selective cutting	dredging	
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Site:	MMA		Rater(s): M, W	Tartin Date: 4-20-	21
Oito.	11111		111111111111111111111111111111111111111		. (
-	33 subtotal first pa		(otlanda		
\bigcirc	33	Metric 5. Special W	etialius.		
max 10 pts.	subtotal	Check all that apply and score as ind	icated.		
		Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5 Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fe Significant migratory songle	wetland-unrestricted hyd wetland-restricted hydrol Dak Openings) (10) deral threatened or enda	ngered species (10)	
		Category 1 Wetland. See		• , ,	
11	44	Metric 6. Plant com	ımunities, inte	erspersion, microtopography.	
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	s. Vegetation (Community Cover Scale	_
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area	1
		Aquatic bed Emergent	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a	
		Shrub		significant part but is of low quality	
		Forest	2	Present and either comprises significant part of wetland's	_
		Mudflats		vegetation and is of moderate quality or comprises a small	I
		Open water		part and is of high quality	
		Other6b. horizontal (plan view) Interspersi	_ 3	Present and comprises significant part, or more, of wetland's	S
		Select only one.	on.	vegetation and is of high quality	
		High (5)	Narrative De	scription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predominance of nonnative or	
		Moderate (3)		disturbance tolerant native species	_
		Moderately low (2)	mod	Native spp are dominant component of the vegetation,	
		Low (1) None (0)		although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to	
		6c. Coverage of invasive plants. Re	fer	moderately high, but generally w/o presence of rare	
		to Table 1 ORAM long form for list. A		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species, with nonnative spp	
		Extensive >75% cover (-5)		and/or disturbance tolerant native spp absent or virtually	
		Moderate 25-75% cover (-3)	absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp	
		Nearly absent <5% cover (0)	the presented of fare, threatened, of endangered spp	—
		Absent (1)	Mudflat and	Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)	
		Vegetated hummucks/tuss Coarse woody debris >15c		Moderate 1 to <4ha (2.47 to 9.88 acres) High 4ha (9.88 acres) or more	
		2 Standing dead >25cm (10in		riigii 4ila (5.00 acies) di filole	
		2 Amphibian breeding pools		aphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if more common	
			2	of marginal quality Present in moderate amounts, but not of highest	
			, -	quality or in small amounts of highest quality	
	_		3	Present in moderate or greater amounts	
,	1			and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

circle answer or insert Result score Narrative Rating Question 1 Critical Habitat YES NO/ If yes, Category 3. Question 2. Threatened or Endangered NQ/ If yes, Category 3. YES **Species** Question 3. High Quality Natural Wetland YES NO/ If yes, Category 3. Question 4. Significant bird habitat YES NO/ If yes, Category 3. Question 5. Category 1 Wetlands If yes, Category 1. YES NO Question 6. Bogs YES NO) If yes, Category 3. Question 7. Fens YES NO) If yes, Category 3. Question 8a. Old Growth Forest YES NO If yes, Category 3. Question 8b. Mature Forested Wetland YES NO / If yes, evaluate for Category 3; may also be 1 or 2. Question 9b. Lake Erie Wetlands -YES NO. If yes, evaluate for Restricted Category 3; may also be 1 or 2. Question 9d. Lake Erie Wetlands -YES NO) If yes, Category 3 Unrestricted with native plants Question 9e. Lake Erie Wetlands -YES NO If yes, evaluate for Unrestricted with invasive plants Category 3; may also be 1 or 2. NO) If yes, Category 3 Question 10. Oak Openings YES Question 11. Relict Wet Prairies YES NO) If yes, evaluate for Category 3; may also be 1 or 2. Quantitative Metric 1. Size Rating Metric 2. Buffers and surrounding land use 8 Metric 3. Hydrology Metric 4. Habitat Metric 5. Special Wetland Communities Metric 6. Plant communities, interspersion, microtopography TOTAL SCORE Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

MMA			
Choices	Circle one	2	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	(NO)	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Michael Martin
Date: (1-21-)
Affiliation: Halex + Aldrich Inc
Address: 200 Town Centre Drive, Rochester, NY 14623
Phone Number: 585-321-4265
e-mail address: mmartin@haleyadrich.com
Name of Wetland: MMR
Vegetation Communit(ies):
HGM Class(es):
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.
See delineation report map,
Lat/Long or UTM Coordinate 41 31 257 -83,530 296
USGS Quad Name Bloomdale
County Hancock
Township Washington
Section and Subsection 3
Hydrologic Unit Code 04100010
Site Visit (1-21-21
National Wetland Inventory Map
Onio Wetland Inventory Map
Soil Survey Hancale County Soil Survey
Delineation report/map Figure 4 of Wetland Delineation Rpt

Name of Wetland: MMB	
Wetland Size (acres, hectares): () a c c S Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	-
See Wetland Delineation Report Figure !.	
Comments, Narrative Discussion, Justification of Category Changes: Wetland adjacent to South Branch Portage (R Receives water from drain tiles in adjacent agricultural fields.	iver.
Final score: 4(Category: 9)

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	/	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.		
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	/	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	/	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	/	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	/	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

		_		
	MMB			
#	Question		Circle one	
1	a United States Geological Survey been designated by the U.S. Fish habitat" for any threatened or end Note: as of January 1, 2001, of the threatened species which can be	and Wildlife Service as "critical angered plant or animal species? e federally listed endangered or found in Ohio, the Indiana Bat has CFR 17.95(a)) and the piping plover	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2		cies. Is the wetland known to contain ccurrences of federal or state-listed r animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetla Natural Heritage Database as a hi	igh quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO) Go to Question 4
4	Significant Breeding or Concen- contain documented regionally sig waterfowl, neotropical songbird, or	nificant breeding or nonbreeding	YES Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	in size and hydrologically isolate vegetation that is dominated (great by Phalaris arundinacea, Lythrum	land less than 0.5 hectares (1 acre) ad and either 1) comprised of ster than eighty per cent areal cover) salicaria, or Phragmites australis, or vated on mined lands that has little or	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accusingificant inflows or outflows, 2) is particularly <i>Sphagnum</i> spp., 3) the cover, 4) at least one species from cover of invasive species (see Tat	supports acidophilic mosses, e acidophilic mosses have >30% m Table 1 is present, and 5) the	YES Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
Z	is saturated during most of the yea flowing, mineral rich, ground water	with a circumneutral ph (5.5-9.0) s listed in Table 1 and the cover of	YES Wetland is a Category 3 wetland Go to Question 8a	NQ Go to Question 8a
8a	overstory canopy trees of great ag projected maximum attainable age of human-caused understory distury years; an all-aged structure and m	nited to, the following characteristics: e (exceeding at least 50% of a e for a species); little or no evidence rbance during the past 80 to 100 ultilayered canopies; aggregations of nopy gaps; and significant numbers	YES Wetland is a Category 3 wetland. Go to Question 8b	(NO) Go to Question 8b

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in

Case No(s). 21-0669-EL-BGN

Summary: Application Appendix O – Wetland and Stream Delineation Report Part 2 of 3 electronically filed by Ms. Megan Zemke on behalf of Borchers, Dylan F