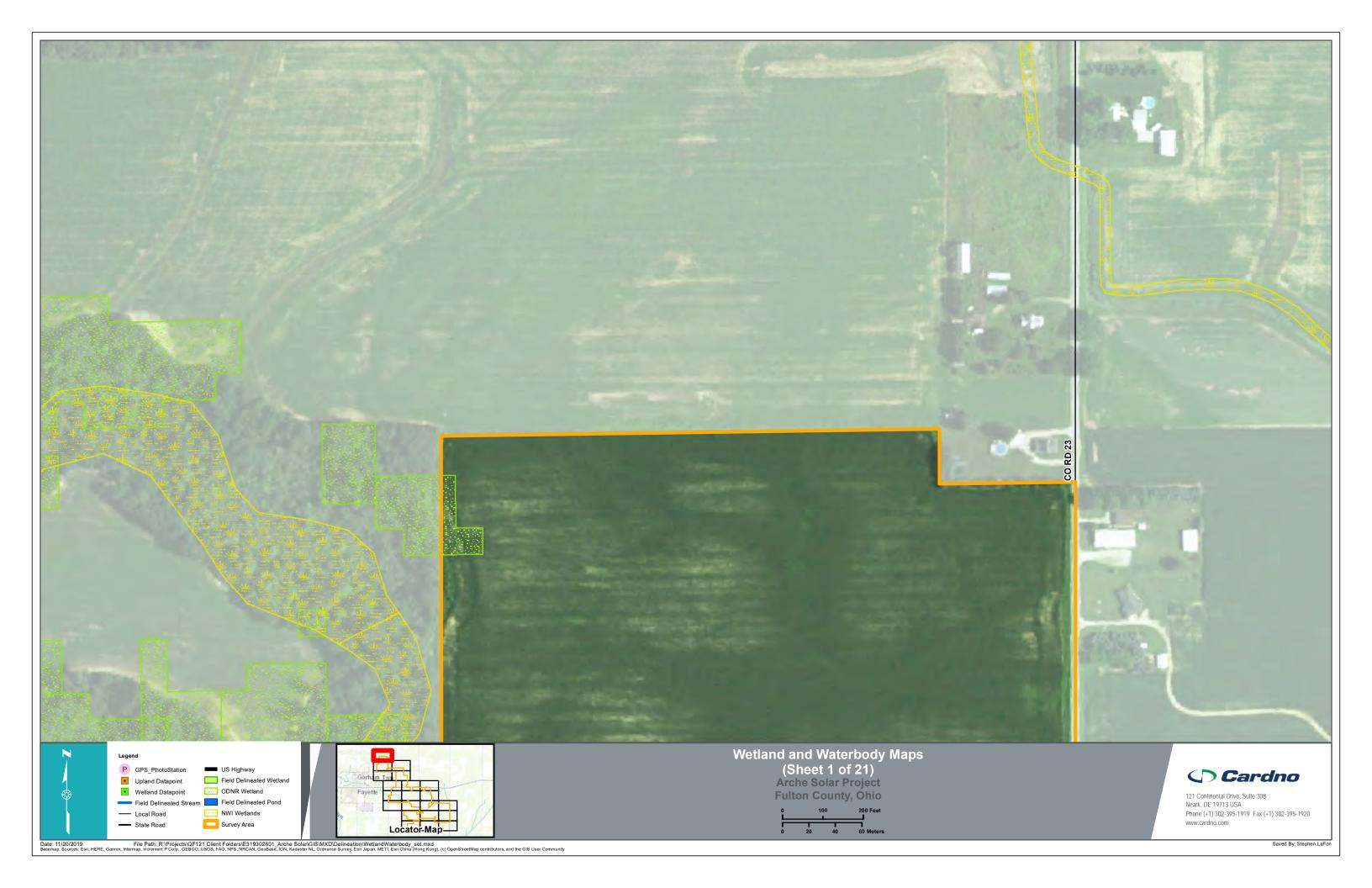
Arche Solar Project

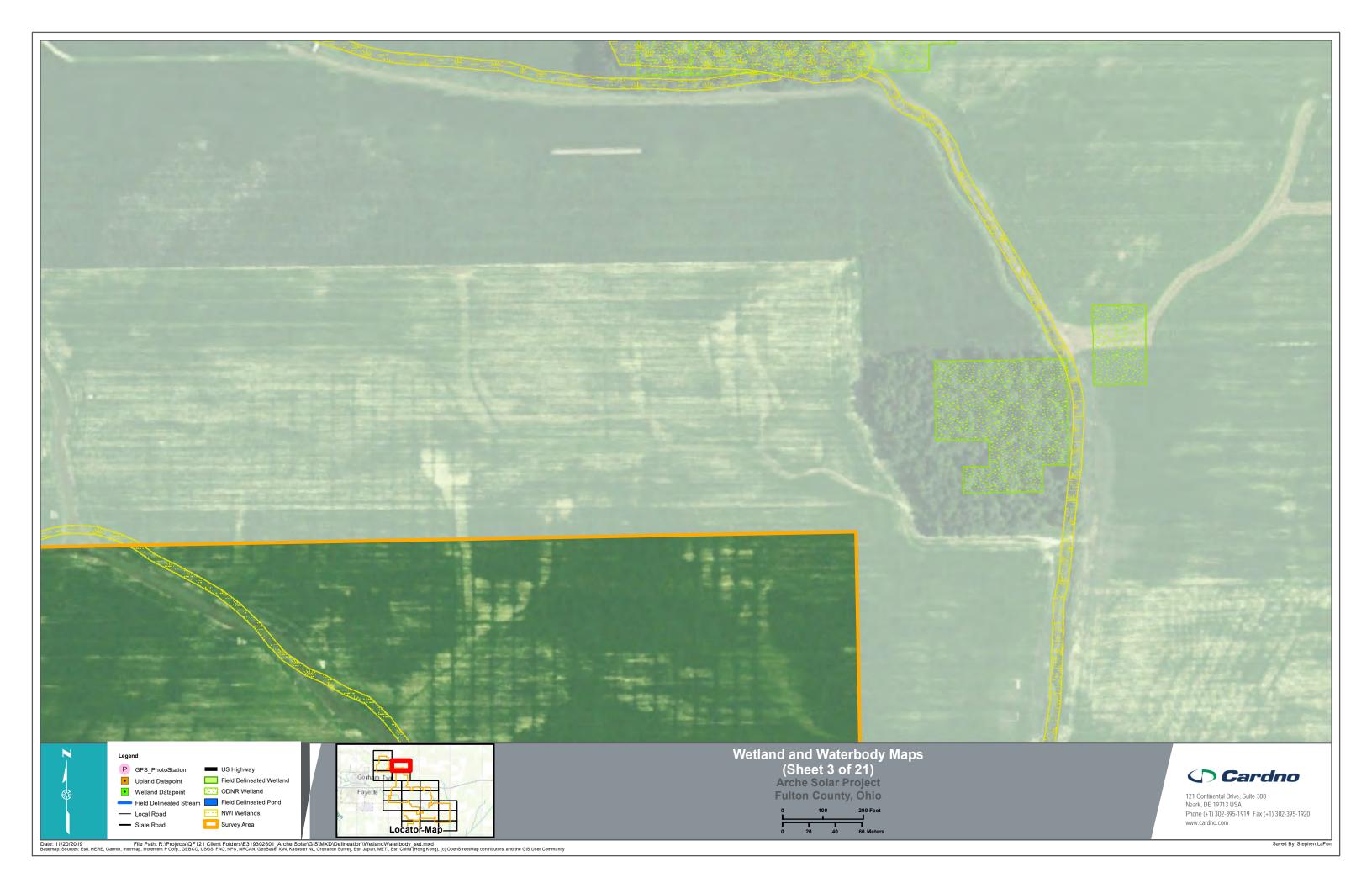
APPENDIX

B

WETLAND AND WATERBODY MAPS











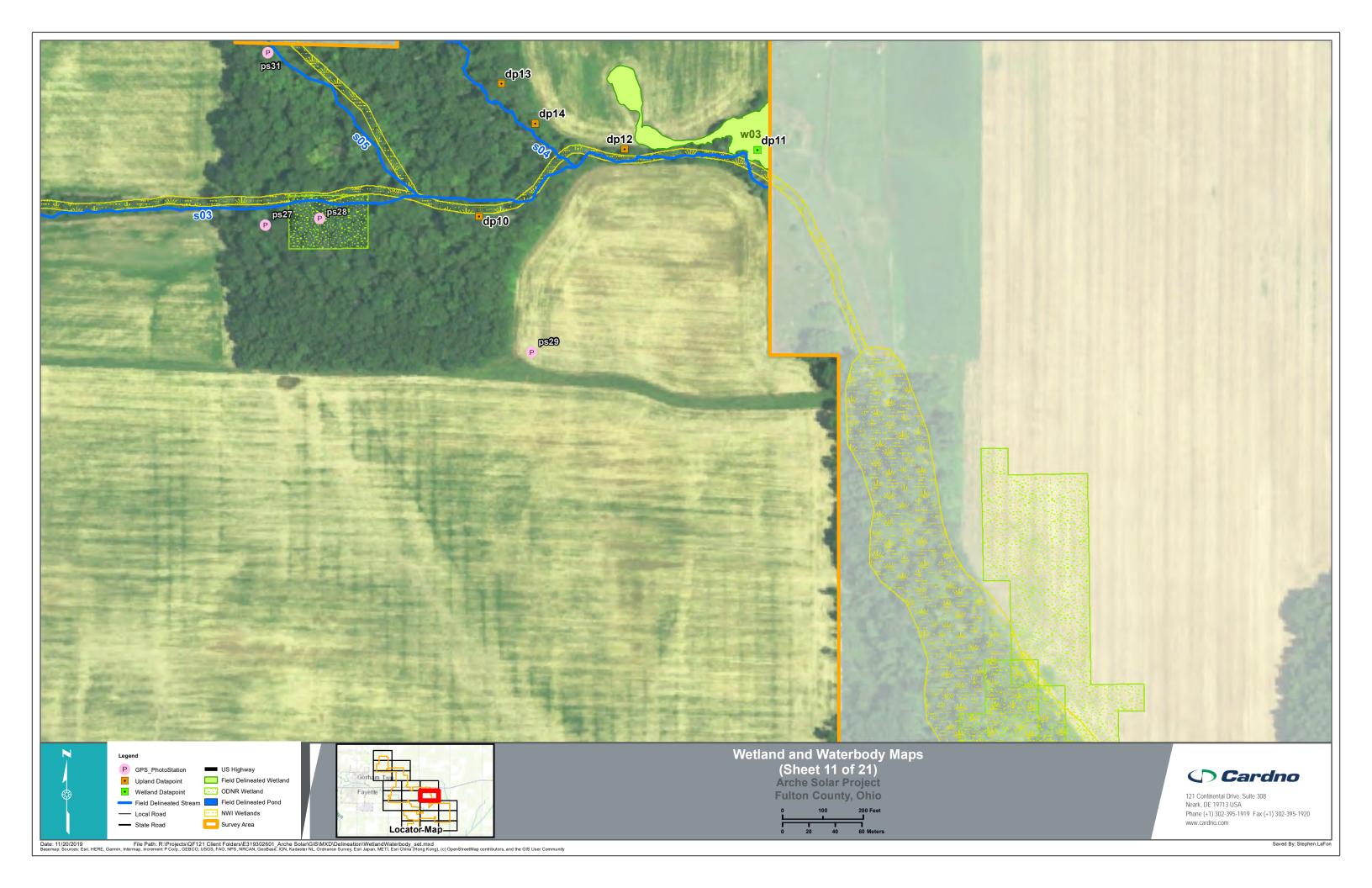


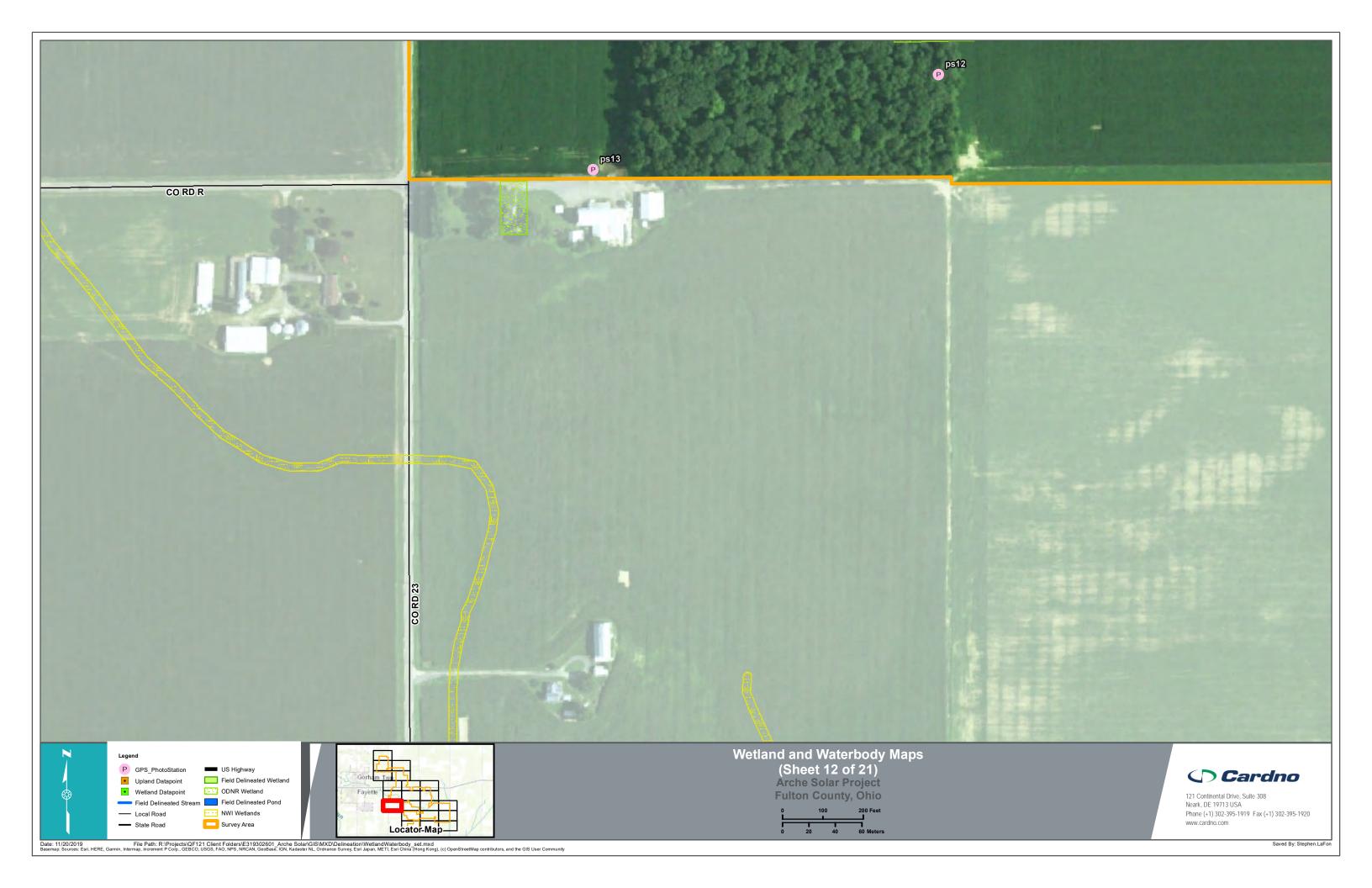


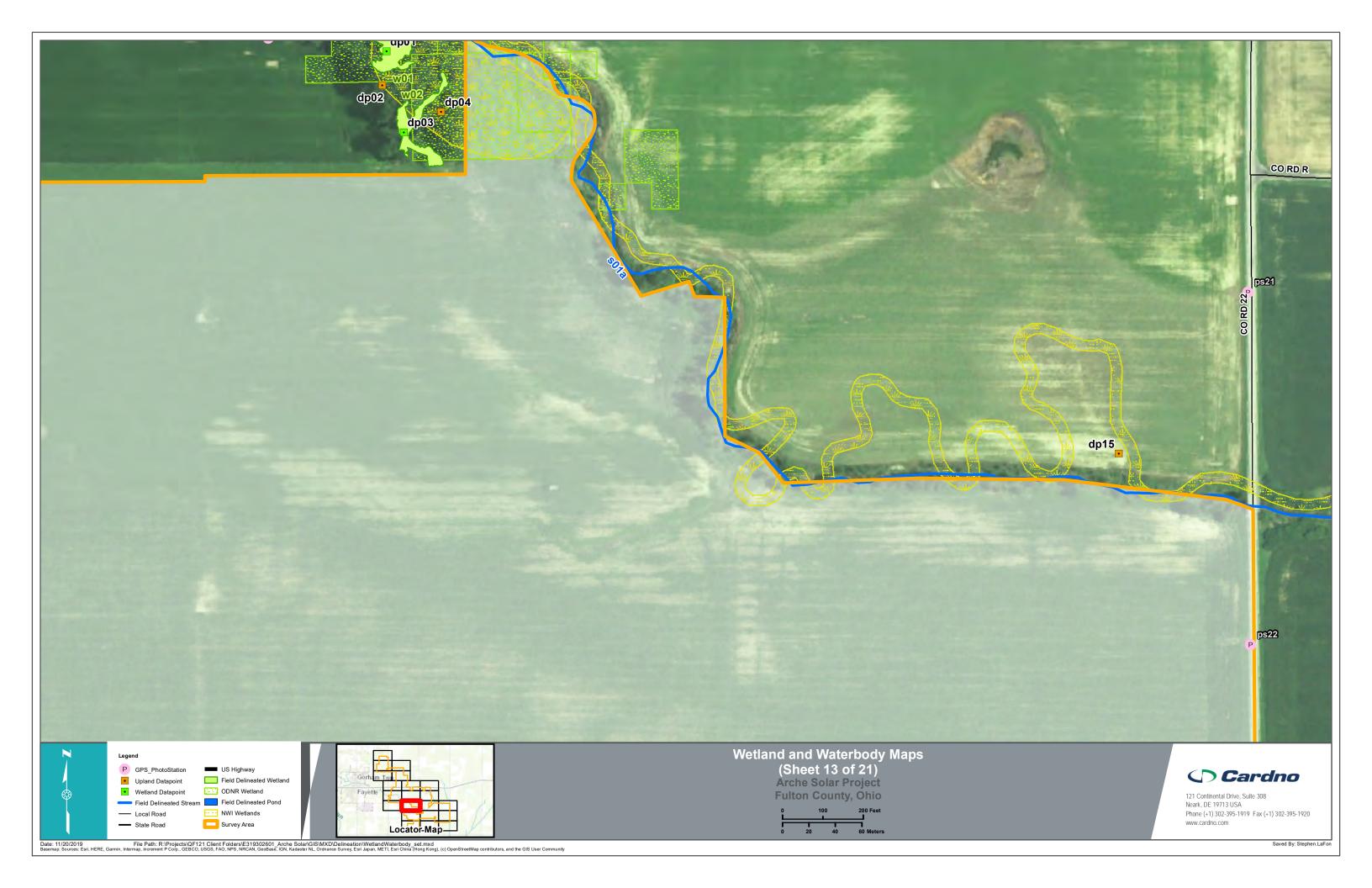


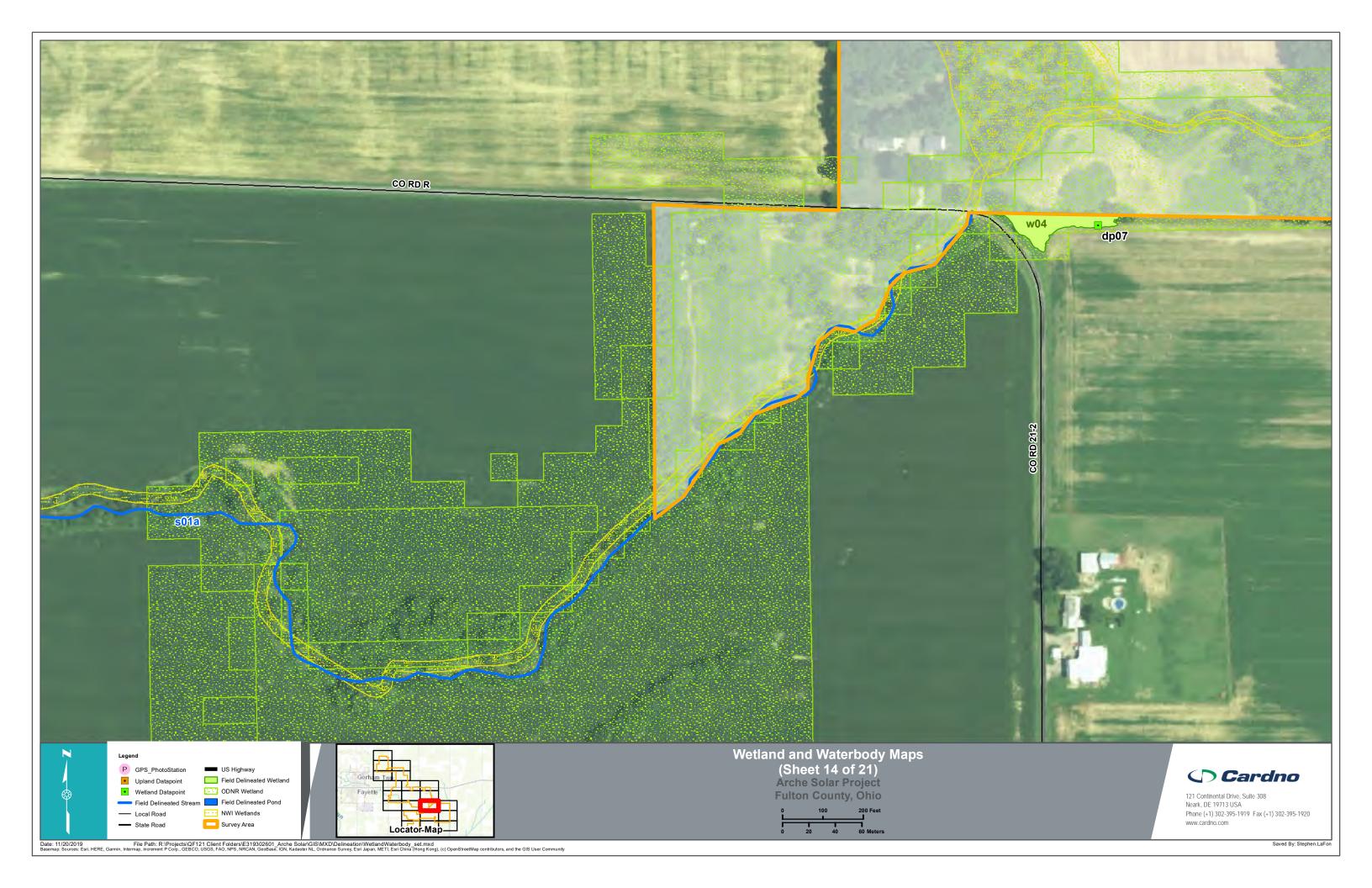






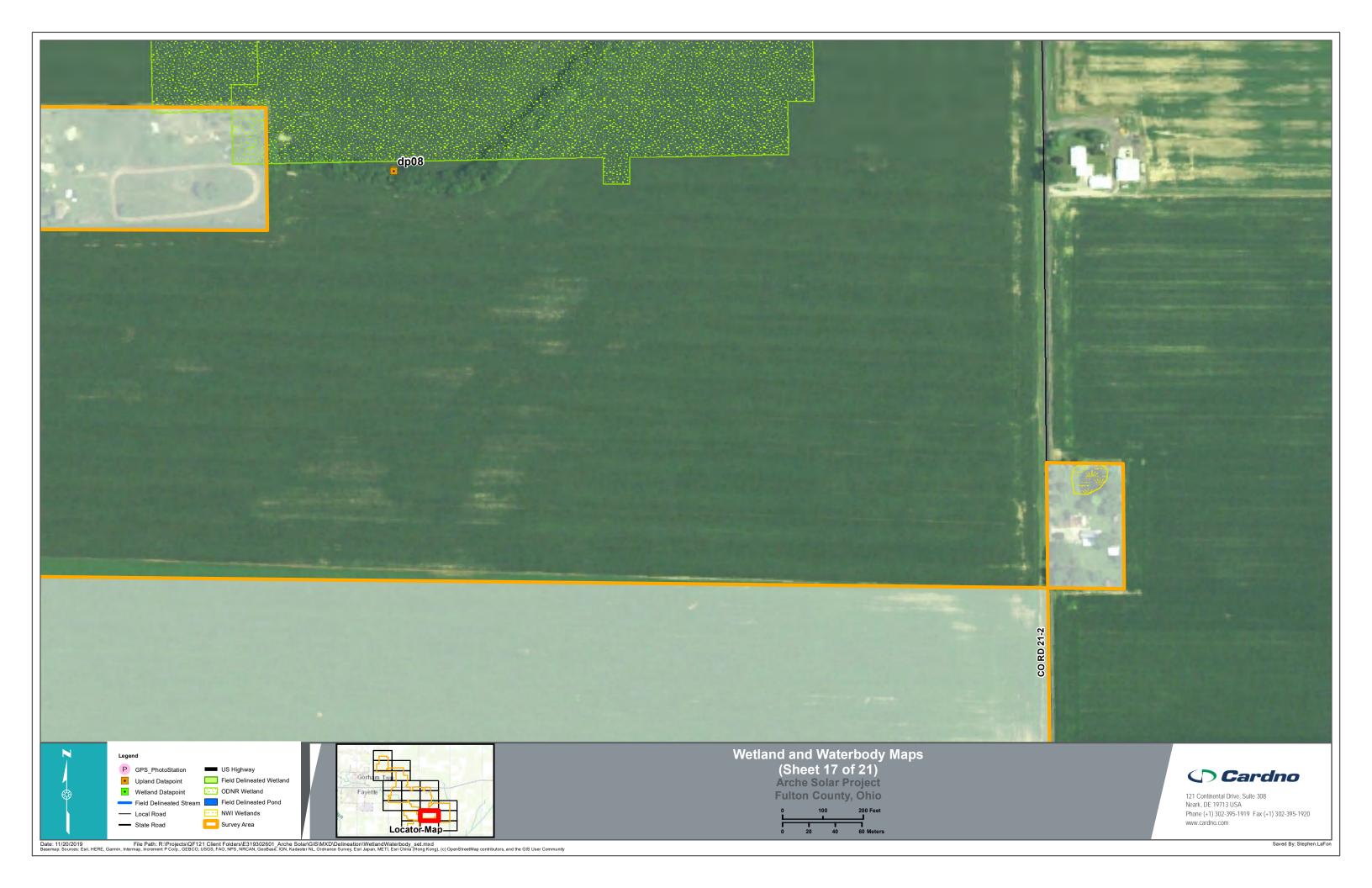


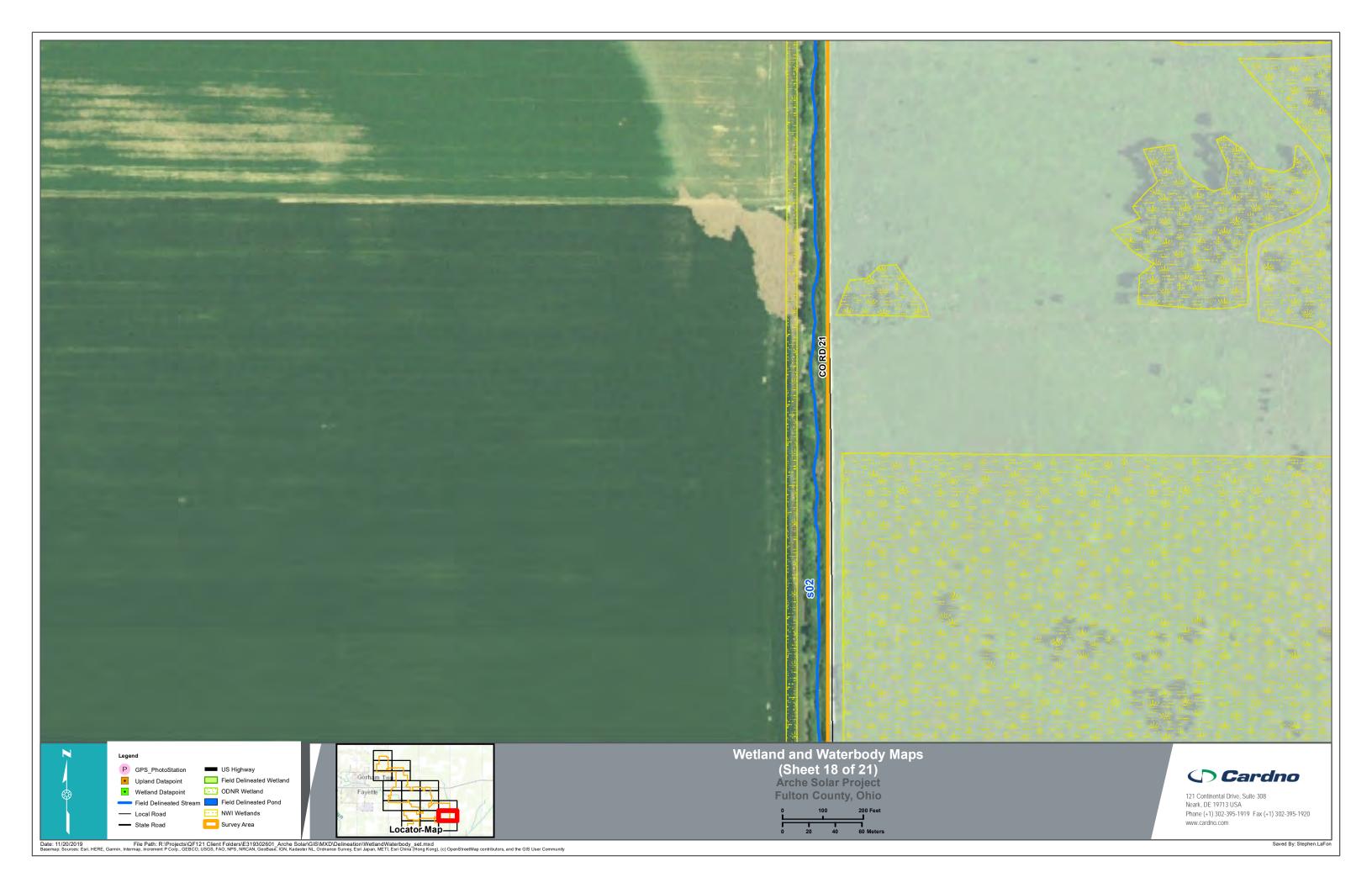




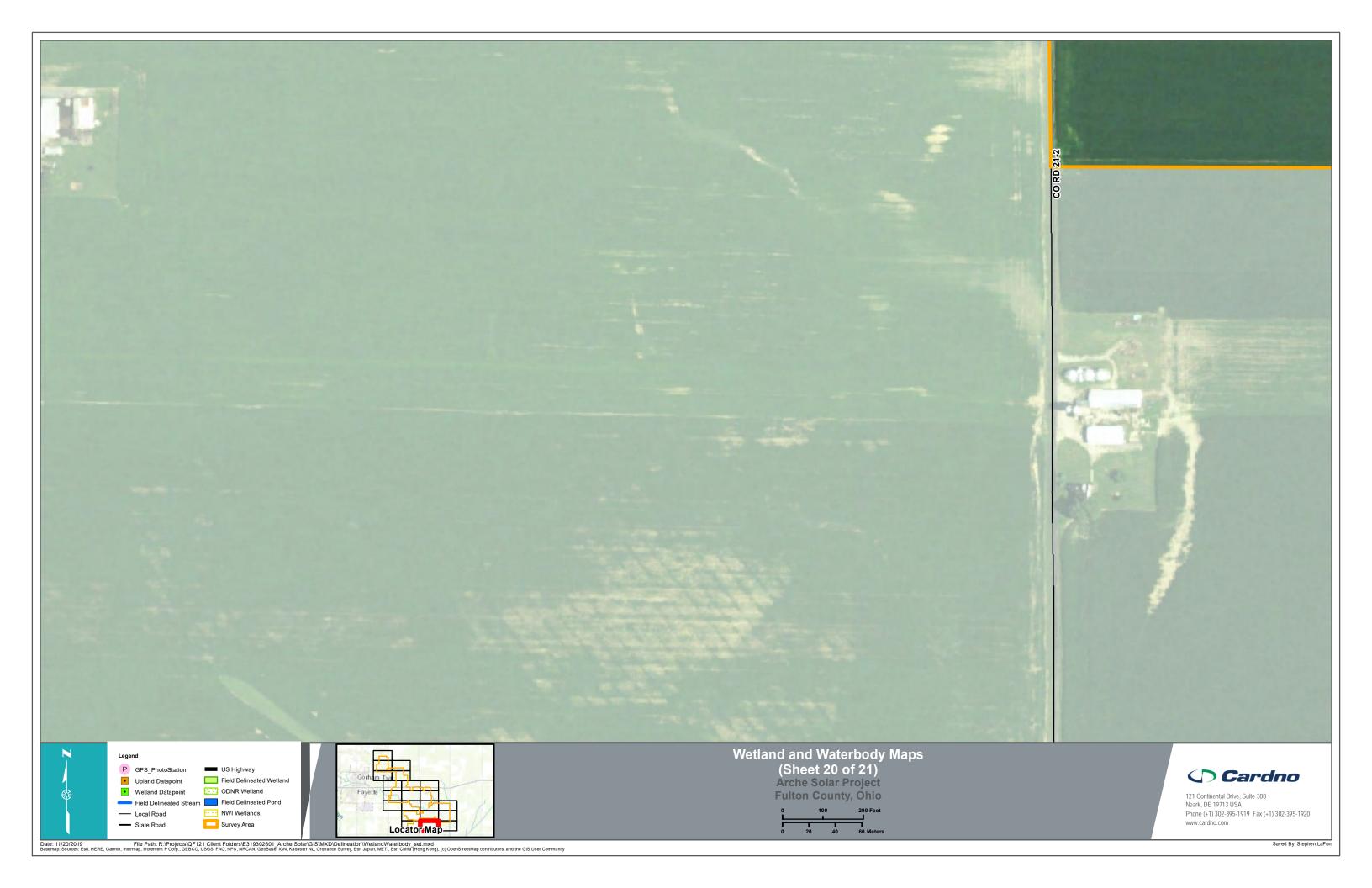


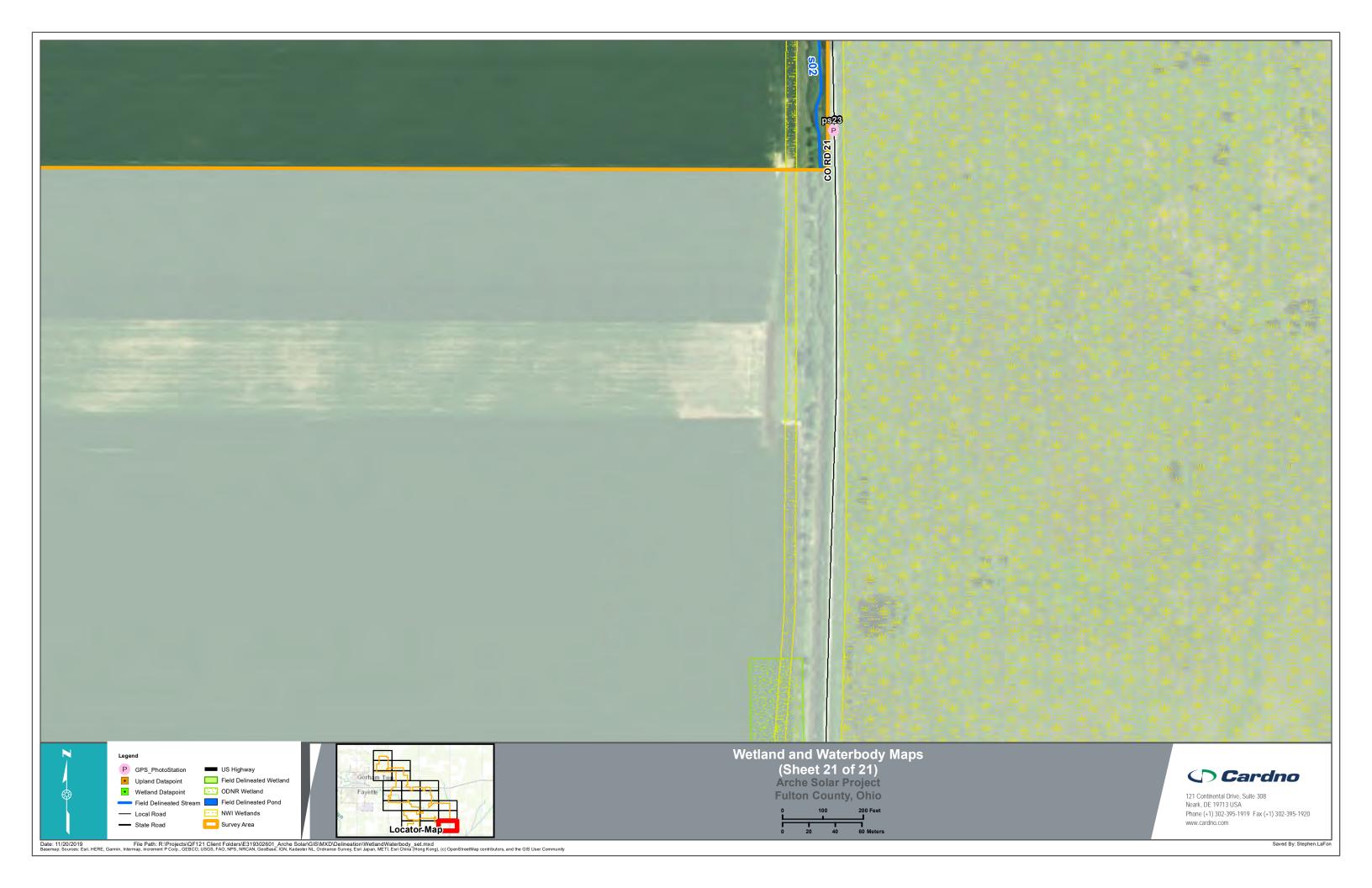












Arche Solar Project

APPENDIX

C

WETLAND DELINEATION AND ASSESSMENT FORMS

Project/Site:	Arche Solar						City/County:	Fayette/Fulton		Sampling Date: 10/21/2019
Applicant/Owner:	7X Energy						State:	: OH	Sampling Point:	dp01
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsh	ip, Range: S21 T9S R1E	
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Loc	cal relief (concave, convex, no	one): concave
Slope (%):	3%	Lat	:	41.66778118	3		Long:	-84	4.29607681	Datum: NAD83 UTM16N
Soil Map Unit Name	e: Sloan silty clay loan	n, frequently	flooded (So)						NWI o	classification: PFO1A
Are climatic / hydro	ologic conditions on the	e site typical	for this time of year	ar?			Yes_	X No	(If no, explain in Rema	arks.)
Are Vegetation	N	, Soil	N	, or Hydrology	N s	significantly dist	urbed?	Are "Norma	al Circumstances" present?	Yes <u>X</u> No
Are Vegetation	N	, Soil	N	, or Hydrology	N r	naturally problen	natic?	(If needed,	explain any answers in Rem	arks.)
SUMMARY OF	FINDINGS Att	ach site	map showing	sampling point lo	cations, tra	insects, imp	ortant featur	es, etc.		
	egetation Present	?		Yes x	No			Sampled Are		
Hydric Soil Pre				Yes x			within	a Wetland?	Yes	sx No
Wetland Hydro	logy Present?			Yes X	No					
Remarks: VFGFTATION	Use scientific	names o	f nlants							
			· piuiitoi			Absolute	Dominant	Indicator		
Tree Stratum (Plot	t size: 30' radius)					% Cover	Species?	Status	Dominance Test worksho	eet:
1.										
2									Number of Dominant Spec	sies
3.									That Are OBL, FACW, or F	FAC: 6 (A)
4										
5									Total Number of Dominant	1
							= Total Cover		Species Across All Strata:	(B)
	tum (Plot size: 15' rac	lius)	-						Percent of Dominant Spec	
1. Morus alba						5%	No	FAC	That Are OBL, FACW, or F	FAC: 100% (A/B)
2. Ulmus america	ana					5%	No	FACW		
3. Ulmus rubra						10%	Yes	FAC	Dlana landar mada b	
4. Acer saccharin	num					10%	Yes	FACW	Prevalence Index workshop	eet:
5.						30%	= Total Cover		Total % Cover of:	Multiply by
						30%	- Total Cover		That Are OBL, FACW, or F	
<u>Herb Stratum</u> (Plot	t size: 5' radius)								OBL species	x1 =
1. Symphyotrichu	· -			-		30%	Yes	FACW		105% x2 = 2.10
2. Lysimachia nui						20%	Yes	FACW		15% x3 = 0.45
3. Cinna arundina	acea					20%	Yes	FACW	FACU species	x4 =
4. Pilea pumila						20%	Yes	FACW	UPL species	x5 =
5.									Column Totals: 1	120% (A) <u>2.55</u> (B)
6										
7									Prevalence Inc	dex = B/A = 2.13
8.										
9										
10									Hydrophytic Vegetation I	ndicators:
11						,				
12										Hydrophytic Vegetation
13.									X 2-Dominance Tes	
14									X 3-Prevalence Inde	
15.										Adaptations ¹ (Provide supporting
16.							·	-		or on a separate sheet) rophytic Vegetation ¹ (Explain)
17.										ophytic vegetation (Explain)
18 19.							·		¹ Indicators of hydric soil an	nd wetland hydrology must
-								-	be present, unless disturbe	
20.						90%	= Total Cover		be present, unless disturbe	au οι ριομι σ πίατιο.
						3 U 70	- rotal COVEI			
Woody Vine Stratus	m (Plot size: 30' radi	us)							Hydrophytic	
1	(1 101 3126. 00 14UI	,							Vegetation	
2										Yes X No
- -							= Total Cover			<u></u>
1										
Remarks: (Include	photo numbers here	or on a sena	rate sheet)						1	
,		5 p ci	,							

	ription: (Describe to th	e depth nee	ded to document the	indicator or co	onfirm the a	bsence o	f indicators.)	
Depth	Matrix		F	Redox Features			_	
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6"	10YR 3/1	90	10YR 3/6	10	С	М	Silt Loam	
6-20"	10YR 3/1	80	10YR 3/6	20	С	М	Sandy Loam	
							· ·	
							· ·	
							 -	
							· ·	
							 .	
1- 0.0						21 1		
Type: C=C ydric Soil I I	oncentration, D=Depletion	on, RM=Redu	iced Matrix, CS=Cove	ered or Coated S	Sand Grains.		ion: PL=Pore Lining t Indicators of Hyd	
Histoso			Sandy Cla	wod Matrix (S4)		ies	-	nese Masses (F12)
	pipedon (A2)		Sandy Re	eyed Matrix (S4)	!			w Dark Surface (F22)
	istic (A3)		Stripped N					ain in Remarks)
	en Sulfide (A4)		Dark Surfa					an in Remarks)
	d Layers (A5)			icky Mineral (F1)			
	uck (A10)			eyed Matrix (F2)	•			
	d Below Dark Surface (A	\11)		Matrix (F3)	,			
	ark Surface (A12)	•	X Redox Da	rk Surface (F6)			³ The hydric soil ir	ndicators have been updated to
Sandy I	Mucky Mineral (S1)		Depleted I	Dark Surface (F	7)		comply with th	e Field Indicators of Hydric Soils
5 cm M	ucky Peat or Peat (S3)		X Redox De	pressions (F8)			in the United S	States, Version 8.0, 2016.
Туре:	ayer (if observed):					Hydric	Soil Present?	Yes X No
Type: Depth (ii						Hydric	Soil Present?	Yes X No
Type: _ Depth (ii						Hydric	Soil Present?	Yes X No
Type: Depth (in	nches):					Hydric	Soil Present?	Yes X No
Type:	nches):					Hydric	Soil Present?	Yes X No
Type:	DGY rology Indicators: ators (minimum of one is	s required: ch				Hydric		Yes X No
Type:	OGY rology Indicators:	s required: ch		ined Leaves (B	9)	Hydric	Secondary Indica	
Type:	DGY rology Indicators: ators (minimum of one is	s required: ch	Water-Sta	ined Leaves (Bauna (B13)	9)	Hydric	Secondary Indica	tors (minimum of two required)
Type:	DGY rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3)	s required: ch	Water-Sta Aquatic Fa True Aqua	auna (B13) atic Plants (B14))	Hydric	Secondary Indica Surface So Drainage P	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2)
Type:	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1)	s required: ch	Water-Sta Aquatic Fa True Aqua Hydrogen	auna (B13) atic Plants (B14) Sulfide Odor (C) ;1)		Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8)
Type:	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	s required: ch	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or) :1) n Living Root		Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Type:	Pody rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	s required: ch	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror) c1) n Living Root n (C4)	s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type:	roches): rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	s required: ch	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror in Reduction in) c1) n Living Root n (C4)	s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type:	Pody rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	s required: ch	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror) c1) n Living Root n (C4)	s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type:	roches): rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror in Reduction in) c1) n Living Root n (C4)	s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type:	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	gery (B7)	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	auna (B13) stic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in st Surface (C7)) c1) n Living Root n (C4) Tilled Soils (s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type:	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave Si	gery (B7)	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	auna (B13) stic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in a Surface (C7) Well Data (D9)) c1) n Living Root n (C4) Tilled Soils (s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type:	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave Si ations:	gery (B7)	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in Surface (C7) Well Data (D9) plain in Remarks) c1) n Living Root n (C4) Tilled Soils (s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type:	pogy rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave So ations: er Present?	gery (B7) urface (B8) 'es_X_No_	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in a Surface (C7) Well Data (D9) blain in Remarks) c1) n Living Root n (C4) Tilled Soils (s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (in	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave So ations: er Present?	gery (B7) urface (B8) 'es_X_No_	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp Depth (inche	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in a Surface (C7) Well Data (D9) blain in Remarks	c1) c1) c1) c1) c1) c1) c1) c1) c2) c3) c3) c3)	s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) trows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (in the content of	pogy rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave Si ations: er Present? Present?	gery (B7) urface (B8) 'es <u>X</u> No 'es <u>No</u>	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp Depth (inche	auna (B13) atic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in a Surface (C7) Well Data (D9) Dain in Remarks es): 6" es): NA	c1) c1) c1) c1) c1) c1) c1) c1) c2) c3) c3) c3)	s (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi X FAC-Neutra	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (ii emarks: IYDROLO Vetland Hyde Primary Indic X Surface High W X Saturati Water N Sedime Drift De Algal M Iron De Inundat Sparsel Field Observ Surface Water Water Table Saturation Pr (includes cap	pogy rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave Si ations: er Present? Present?	gery (B7) urface (B8) es X No es No es X No	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp Depth (inched) Depth (inched)	auna (B13) stic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in a Surface (C7) Well Data (D9) plain in Remarks es): 6" es): NA es): Surface	y c1) n Living Root n (C4) Tilled Soils (G s)	s (C3) C6)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi X FAC-Neutra	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type:	pogy rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Ima y Vegetated Concave Si ations: er Present? Present?	gery (B7) urface (B8) es X No es No es X No	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp Depth (inched) Depth (inched)	auna (B13) stic Plants (B14) Sulfide Odor (C Rhizospheres or of Reduced Iror on Reduction in a Surface (C7) Well Data (D9) plain in Remarks es): 6" es): NA es): Surface	y c1) n Living Root n (C4) Tilled Soils (G s)	s (C3) C6)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi X FAC-Neutra	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)

Project/Site:	Arche Solar					City/County				Sampling Da	
Applicant/Owner:	7X Energy					State	: <u>OH</u>	Sampling Point	: 	dp	002
Investigator(s):	Ben Hess & Maggie	Mason					Section, Townsh	ip, Range: S21 T9S F	R1E		
Landform (hillslope,	, terrace, etc.):	Stream	Terrace				Loc	cal relief (concave, co	nvex, none): co	onvex	
Slope (%):	2%	Lat:	41.667	754942		Long:	-8-	4.29610969		Datum: N	IAD83 UTM16N
Soil Map Unit Name	e: Sloan silty clay loar	n, frequently flooded (So)		_				NWI classific	ation: N	lone
Are climatic / hydrol	logic conditions on the	e site typical for this tir	me of year?			Yes	X No	(If no, explain	– n Remarks.)	_	
Are Vegetation	N	, Soil	N , or Hydrology	N	significantly distu	_		—— al Circumstances" pre	sent?	Yes	X No
Are Vegetation	N		N , or Hydrology	N	naturally problem			explain any answers			
_	FINDINGS At		nowing sampling poi					, ,	,		
								•			
Hydric Soil Pres	getation Present	1	Yes <u>x</u> Yes		No x		Sampled Ar ?a Wetland		Yes	No	X
Wetland Hydrol			Yes		No X	WICHIII	i a wetiana:		163	_ '\0_	
Remarks:											
VEGETATION -	Use scientific	names of plants	 S.								
		·			Absolute	Dominant	Indicator				
Tree Stratum (Plot	size: 30' radius)				% Cover	Species?	Status	Dominance Test v	orksheet:		
1. Juglans nigra					30%	Yes	FACU				
2. Celtis occidenta	alis				30%	Yes	FAC	Number of Domina	nt Species		
3. Gleditsia triacar	nthos				20%	No	FACU	That Are OBL, FAC	W, or FAC:		5 (A)
4. Aesculus glabra	a				30%	Yes	FAC				
5.								Total Number of Do	minant		
-					110%	= Total Cover		Species Across All			6 (B)
											(=)
Sanling/Shrub Strat	tum (Plot size: 15' rad							Percent of Dominal	nt Species		
1.	(1 101 0120. 10 14							That Are OBL, FAC		٥	3% (A/B)
-								That Are Obl., FAC	W, OI FAC.		(A/B)
2											
3.								L			
4								Prevalence Index v	vorksneet:		
5.											
					=	= Total Cover		Total % C			Multiply by:
								That Are OBL, FAC	W, or FAC:		A/B
Herb Stratum (Plot	size: 5' radius)							OBL species		x1 = _	
1. Viola sororia					20%	Yes	FAC	FACW species	30%	x2 =	0.60
2. Lonicera maack	kii				5%	No	UPL	FAC species	150%	x3 =	4.50
3. Geum canadens	ise				50%	Yes	FAC	FACU species	50%	x4 =	2.00
4. Elymus virginicu	us				10%	No	FACW	UPL species	5%	x5 =	0.25
5. Carex blanda					10%	No	FAC	Column Totals:	235%	(A)	7.35 (B)
6. Laportea canad	densis				20%	Yes	FACW				
7. Hydrophyllum v	virginianum				10%	No	FAC	Prevale	ence Index = B	'A =	3.13
8.											
9.											
10.								Hydrophytic Vege	tation Indicato	rs:	
11.						-					
12.								1-Rapid T	est for Hydroph	vtic Vegetat	ion
13.								X 2-Domina		-	
-						-			nce Index is ≤3		
14									ogical Adaptati		e supporting
15.									-		-
16.									emarks or on a		
17								Problema	tic Hydrophytic	vegetation	(⊏xhiaiii)
18								1			
19								¹ Indicators of hydric			y must
								be present, unless	disturbed or pr	oblematic.	
20.					125% :	= Total Cover		<u> </u>			
20								The decidence of the second of			
	(Diatain 00)	\						Hydrophytic			
Woody Vine Stratun	m (Plot size: 30' radi	us)									
	m (Plot size: 30' radi	us)						Vegetation			
Woody Vine Stratun	m (Plot size: 30' radi	us)						Vegetation Present?	Yes_	X No_	
Woody Vine Stratum	<u>m</u> (Plot size: 30' radi	us)				- Total Cover			Yes_	<u>X</u> No_	

SUIL							Samp	ling Point:	dp02
Profile Desc	ription: (Describe to	the depth needed to	o document th	ne indicator or co	nfirm the al	bsence of	f indicators.)		
Depth	Matrix	and dopan modulou a		Redox Features					
(inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Ren	narks
0-8"	10YR 3/3	100	0.0. (0.0.)						
0-6	10113/3	100					Sandy Loam		
	Concentration, D=Deple	etion, RM=Reduced N	//atrix, CS=Co	ered or Coated S	and Grains.		on: PL=Pore Lining,		
-	ndicators ³ :					Test	Indicators of Hydri		
Histoso	ol (A1)	_		leyed Matrix (S4)				ese Masses (F12	
Histic E	Epipedon (A2)	_	Sandy R	edox (S5)				v Dark Surface (F	22)
Black H	Histic (A3)	_	Stripped	Matrix (S6)			Other (Expla	in in Remarks)	
Hydrog	en Sulfide (A4)	_	Dark Sur	face (S7)					
Stratifie	ed Layers (A5)	_	Loamy M	lucky Mineral (F1))				
2 cm N	luck (A10)	<u>-</u>	Loamy G	Bleyed Matrix (F2)					
Deplete	ed Below Dark Surface	e (A11)	Depleted	l Matrix (F3)					
Thick D	Dark Surface (A12)		Redox D	ark Surface (F6)			³ The hydric soil inc	dicators have bee	n updated to
Sandy	Mucky Mineral (S1)	_	Depleted	l Dark Surface (F7	7)		comply with the	Field Indicators	of Hydric Soils
5 cm M	lucky Peat or Peat (S3	3)	Redox D	epressions (F8)			in the United S	tates, Version 8.0	, 2016.
Postrictivo I	_ayer (if observed):								
Type:	-ayer (ii observed).								
	inches):					Lludria	Soil Present?	Yes	No X
Deptii (inches).					пушть	Jon Fresent:	162	NoX_
IVDBOL	00V								
IYDROL									
-	drology Indicators:						I		
	cators (minimum of on	e is required: check a					Secondary Indicate	•	wo required)
Surface	e Water (A1)	-	Water-St	tained Leaves (B9))		Surface Soil	Cracks (B6)	
High W	/ater Table (A2)	_	Aquatic I	Fauna (B13)			Drainage Pa	tterns (B10)	
Saturat	tion (A3)	_	True Aqu	uatic Plants (B14)			Dry-Season	Water Table (C2)	
Water	Marks (B1)	_	Hydroge	n Sulfide Odor (C	1)		Crayfish Bur	rows (C8)	
Sedime	ent Deposits (B2)	<u>-</u>	Oxidized	Rhizospheres on	Living Roots	s (C3)	Saturation V	isible on Aerial Im	nagery (C9)
Drift De	eposits (B3)	_	Presence	e of Reduced Iron	(C4)		Stunted or S	tressed Plants (D	1)
Algal M	lat or Crust (B4)	_	Recent I	ron Reduction in T	illed Soils (0	C6)	Geomorphic	Position (D2)	
	eposits (B5)	-		ck Surface (C7)	,	•	FAC-Neutral		
	tion Visible on Aerial I	magery (B7)		r Well Data (D9)				, ,	
	ly Vegetated Concave	• , , , <u> </u>		xplain in Remarks)				
					,				
ield Obser									
	er Present?	Yes No X	Depth (inc	· ——					
Water Table	Present?	Yes No _X_	Depth (inc	hes): NA					
Saturation P		Yes No X	Depth (inc	hes): NA	Wetland	l Hydrolog	gy Present?	Yes	NoX
	pillary fringe)								
Describe Re	corded Data (stream o	gauge, monitoring wel	II, aerial photos	s, previous inspec	tions), if ava	ilable:			
Remarks:									

Project/Site:	Arche Solar						City/County:	Fayette/Fulton		Sampling Date: 10/21/2019
Applicant/Owner:	7X Energy						State:	OH	Sampling Point:	dp03
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsh	nip, Range: S21 T9S R1E	
Landform (hillslope	e, terrace, etc.):		Stream Terrace				_	Loc	cal relief (concave, convex,	none): concave
Slope (%):	1%	Lat:		41.6672328	32		Long:	-8	4.29590511	Datum: NAD83 UTM16N
Soil Map Unit Name	e: Sloan silty clay loam	n, frequently f	flooded (So)						NW_	VI classification: None
Are climatic / hydro	ologic conditions on the	site typical f	or this time of year	ır?			Yes_	X No	(If no, explain in Rer	marks.)
Are Vegetation	N	, Soil	N	, or Hydrology	N	significantly distu	ırbed?	Are "Norm	al Circumstances" present?	? Yes <u>X</u> No
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally problem	natic?	(If needed,	explain any answers in Re	emarks.)
SUMMARY OF	FINDINGS Att	ach site n	nap showing	sampling point lo	ocations, t	ransects, imp	ortant featur	es, etc.		
	egetation Present?	•		Yes x	N	lo		Sampled Ar		
Hydric Soil Pre				Yes x		lo	within	a Wetland?	Ye	es <u>x</u> No
Wetland Hydro	logy Present?			Yes x	IN	lo				
Remarks:	Use scientific	names of	nlante							
TEGET/KIIGK	000 0010111110		piaritoi			Absolute	Dominant	Indicator		
Tree Stratum (Plot	t size: 30' radius)					% Cover	Species?	Status	Dominance Test works	sheet:
1										
2									Number of Dominant Spe	pecies
3.									That Are OBL, FACW, or	or FAC: 2 (A)
4										
5									Total Number of Domina	
							= Total Cover		Species Across All Strata	ta: 2 (B)
	<u>itum</u> (Plot size: 15' rad	ius)							Percent of Dominant Spe	
1									That Are OBL, FACW, or	or FAC: 100% (A/B)
2										
3									B	all and
4							-		Prevalence Index works	sneet:
5.							= Total Cover		Total % Cover of	of Multiply by
							- Total Cover		That Are OBL, FACW, or	
Herb Stratum (Plo	t size: 5' radius)								OBL species	30% x1 = 0.30
1. Lysimachia nui	· · · · · · · · ·			-		40%	Yes	FACW	FACW species	90% x2 = 1.80
2. Phalaris arundi						40%	Yes	FACW	FAC species	x3 =
3. Boehmeria cyli	indrica					20%	No	OBL	FACU species	x4 =
4. Carex lupulina						10%	No	OBL	UPL species	x5 =
5. Leersia virginio	са					10%	No	FACW	Column Totals:	120% (A) 2.10 (B)
6.										
7.									Prevalence li	Index = B/A = 1.75
8.										
9										
10.									Hydrophytic Vegetation	n Indicators:
11										
12									X 1-Rapid Test for	or Hydrophytic Vegetation
13									X 2-Dominance Te	
14									x 3-Prevalence In	
15										al Adaptations ¹ (Provide supporting
16.										ks or on a separate sheet)
17.							•		—— Problematic Hy	ydrophytic Vegetation ¹ (Explain)
18.							-		¹ Indicators of hydric soil a	and wetland hydrology must
19.							-			
20.						1000/	= Total Cause		be present, unless distur	тьеч ог рговіетанс.
						120%	= Total Cover			
Woody Vina Stratu	ım (Plot size: 30' radiu	ie)							Hydrophytic	
1	<u>ıııı</u> (Fiol Size. 30 fadil	19)							Hydrophytic	
1.						-			Vegetation Present?	Vac Y Na
<u> </u>						<u> </u>	- Total Cavar		FIESEIIL!	Yes X No
							= Total Cover			
Remarks: (Include	photo numbers here o	or on a conce	ata shaat \							
. tomaino. (illoidde	. PHOTO HAMBOIS HOLD	он а воран	J.100t.j							

SOIL						Sampl	ng Point: dp03
Profile Description: (Describe to the	depth needed to	document the in	dicator or c	onfirm the a	absence of	indicators.)	
Depth Matrix		Red	ox Features				
(inches) Color (moist)	% Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20" 10YR 3/1	85 1	10YR 4/6	15	С	М	Silty Clay Loam	
					-		
1- 000 111 000 111					2, ,,		
¹ Type: C=Concentration, D=Depletion Hydric Soil Indicators ³ :	, RM=Reduced M	atrix, CS=Covered	d or Coated	Sand Grains		on: PL=Pore Lining, Indicators of Hydric	
Histosol (A1)		Sandy Gleye	d Matrix (S4)	١	1631	=	ese Masses (F12)
Histic Epipedon (A2)	_	Sandy Redox	-	,			Dark Surface (F22)
Black Histic (A3)	_	Stripped Mat					n in Remarks)
Hydrogen Sulfide (A4)	_	Dark Surface	` '			Other (Explai	ii iii Neiliaiks)
Stratified Layers (A5)	_	Loamy Muck	` '	1)			
2 cm Muck (A10)	_	Loamy Gleye		-			
Depleted Below Dark Surface (A1		Depleted Ma	•	,			
Thick Dark Surface (A12)	· —	X Redox Dark				³ The hydric soil ind	cators have been updated to
Sandy Mucky Mineral (S1)	_	Depleted Dar	, ,			-	Field Indicators of Hydric Soils
5 cm Mucky Peat or Peat (S3)	_	X Redox Depre	-	.,			ates, Version 8.0, 2016.
I vne:							
Type: Depth (inches): Remarks:					Hydric	Soil Present?	Yes X No
Depth (inches):					Hydric	Soil Present?	Yes X No
Depth (inches): Remarks: HYDROLOGY					Hydric	Soil Present?	Yes X No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators:					Hydric		
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is a	required: check al		nd Loovoo (P	0)	Hydric	Secondary Indicato	rs (minimum of two required)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is a Surface Water (A1)	required: check al	Water-Staine	•	9)	Hydric	Secondary Indicato	rs (minimum of two required) Cracks (B6)
Depth (inches): Nemarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is response) Surface Water (A1) High Water Table (A2)	required: check al	Water-Staine Aquatic Faun	na (B13)		Hydric	Secondary Indicato Surface Soil Drainage Pat	rs (minimum of two required) Cracks (B6) terns (B10)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) X Saturation (A3)	required: check al	Water-Staine Aquatic Faun True Aquatic	na (B13) Plants (B14)	Hydric	Secondary Indicato Surface Soil Drainage Pat Dry-Season \	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is a Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)	required: check al	Water-Staine Aquatic Faun True Aquatic Hydrogen Su	na (B13) Plants (B14 Ilfide Odor (C) C1)		Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) X Sediment Deposits (B2)	required: check al	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi	na (B13) Plants (B14 Ifide Odor (C zospheres o) C1) n Living Roo		Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi	rs (minimum of two required) Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is response to the company of the com	required: check al	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi	na (B13) Plants (B14 Ilfide Odor (C zospheres o Reduced Iro) C1) n Living Roo n (C4)	ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is response of the company of the com	required: check al	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of	na (B13) Plants (B14 Ilfide Odor (C zospheres o Reduced Iro Reduction in) C1) n Living Roo n (C4)	ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	- - - - - -	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F	na (B13) Plants (B14) Iffide Odor (Conspheres on Reduced Iron Reduction in urface (C7)) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: Retard Hydrology Indicators: Primary Indicators (minimum of one is in the second of the second		Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhii Presence of Recent Iron F Thin Muck St Gauge or We	na (B13) Plants (B14) Iffide Odor (Control of the Control of the C) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)		Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F	na (B13) Plants (B14) Iffide Odor (Control of the Control of the C) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: Retard Hydrology Indicators: Primary Indicators (minimum of one is in the second of the second		Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhii Presence of Recent Iron F Thin Muck St Gauge or We	na (B13) Plants (B14) Iffide Odor (Control of the Control of the C) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface.	ery (B7)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhii Presence of Recent Iron F Thin Muck St Gauge or We	na (B13) Plants (B14) Iffide Odor (Control of Control Reduced Iron Reduction in urface (C7) In In Remark) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks:	ery (B7)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Si Gauge or We Other (Explai	na (B13) Plants (B14) Iffide Odor (Conspheres on Reduced Iron Reduction in urface (C7) Fell Data (D9) In in Remark) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is research of the second of the secon	ery (B7) face (B8)	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of Recent Iron F Thin Muck Si Gauge or We Other (Explai	Plants (B14) Plants (B14) Iffide Odor (Coospheres of Reduced Iron (Coorpheres) Reduction in urface (C7) In In Remark) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicato Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St X Geomorphic	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is research of the second of the secon	ery (B7) face (B8) s NoX sX No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of Recent Iron F Thin Muck Si Gauge or We Other (Explai	Plants (B14) Plants (B14) Iffide Odor (Coospheres of Reduced Iron (Coorpheres) Reduction in urface (C7) In In Remark) C1) n Living Roo n (C4) Tilled Soils (ots (C3)	Secondary Indicator Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St X Geomorphic X FAC-Neutral	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is responsible to the property of the	ery (B7) face (B8) s No s No s No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi. Presence of Recent Iron F Thin Muck St Gauge or We Other (Explai) Depth (inches) Depth (inches)	Plants (B14) Plants (B14) Iffide Odor (Coospheres of Reduced Iron Reduction in the Iron Iron Reduction in the Iron Reduction Iron Remark NA Section Section Reduction NA Section Reduction NA Section Reduction NA Section Reduction Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reductio) C1) n Living Roo n (C4) Tilled Soils (ots (C3) (C6)	Secondary Indicator Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St X Geomorphic X FAC-Neutral	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Depth (inches): Remarks:	ery (B7) face (B8) s No s No s No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi. Presence of Recent Iron F Thin Muck St Gauge or We Other (Explai) Depth (inches) Depth (inches)	Plants (B14) Plants (B14) Iffide Odor (Coospheres of Reduced Iron Reduction in the Iron Iron Reduction in the Iron Reduction Iron Remark NA Section Section Reduction NA Section Reduction NA Section Reduction NA Section Reduction Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reductio) C1) n Living Roo n (C4) Tilled Soils (ots (C3) (C6)	Secondary Indicator Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St X Geomorphic X FAC-Neutral	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is research of the second of the secon	ery (B7) face (B8) s No s No s No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi. Presence of Recent Iron F Thin Muck St Gauge or We Other (Explai) Depth (inches) Depth (inches)	Plants (B14) Plants (B14) Iffide Odor (Coospheres of Reduced Iron Reduction in the Iron Iron Reduction in the Iron Reduction Iron Remark NA Section Section Reduction NA Section Reduction NA Section Reduction NA Section Reduction Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reductio) C1) n Living Roo n (C4) Tilled Soils (ots (C3) (C6)	Secondary Indicator Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St X Geomorphic X FAC-Neutral	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Depth (inches): Remarks:	ery (B7) face (B8) s No s No s No	Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi. Presence of Recent Iron F Thin Muck St Gauge or We Other (Explai) Depth (inches) Depth (inches)	Plants (B14) Plants (B14) Iffide Odor (Coospheres of Reduced Iron Reduction in the Iron Iron Reduction in the Iron Reduction Iron Remark NA Section Section Reduction NA Section Reduction NA Section Reduction NA Section Reduction Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reduction NA Section Reduction Reductio) C1) n Living Roo n (C4) Tilled Soils (ots (C3) (C6)	Secondary Indicator Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St X Geomorphic X FAC-Neutral	rs (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)

Project/Site:	Arche Solar						City/County	/: Fayette/Fulton			Sampling Da	ate: 10/21/20	019
Applicant/Owner:	7X Energy						State	e: OH	Sampling Point	t:	dp	004	
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsl	hip, Range: S21 T9S I	R1E			
Landform (hillslope	, terrace, etc.):		Stream Terrace					Lo	cal relief (concave, co	nvex, none): c	onvex		
Slope (%):	2%	Lat:		41.6673759	93		Long:	-8	34.29557042		Datum: N	IAD83 UTM1	6N
Soil Map Unit Name	e: Sloan silty clay loam	n, frequently t	flooded (So)							NWI classific	cation: P	FO1A	
Are climatic / hydro	ologic conditions on the	site typical f	or this time of year	r?			Yes	X No	(If no, explain	in Remarks.)			
Are Vegetation	<u>N</u>	, Soil	N	, or Hydrology	N	significantly di	sturbed?	Are "Norm	nal Circumstances" pre	esent?	Yes _	X No	
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally probl	ematic?	(If needed	, explain any answers	in Remarks.)			
SUMMARY OF	FINDINGS Att	ach site n	nap showing	sampling point lo	ocations	s, transects, in	nportant featu	res, etc.					
Hydrophytic Ve	getation Present?)		Yes x		No	Is the	Sampled Ar	ea				
Hydric Soil Pre				Yes		No x		n a Wetland?		Yes	No_	X	
Wetland Hydro	logy Present?			Yes		No x	_						
Remarks:	Use scientific	names of	nlante										
VEGETATION	OSC SCICITUIE	names or	piants.			Absolute	Dominant	Indicator					
Tree Stratum (Plot	size: 30' radius)					% Cover	Species?	Status	Dominance Test v	vorksheet:			
1. Quercus macro	ocarpa					10%	No	FAC					
2. Gleditsia triaca	nthos					25%	Yes	FACU	Number of Domina	nt Species			
3. Morus alba						10%	No	FAC	That Are OBL, FAC	CW, or FAC:		5	(A)
4. Aesculus glabr	ra					25%	Yes	FAC					
5.									Total Number of Do	ominant			
						70%	= Total Cover		Species Across All	Strata:		9	(B)
<u></u>													
Sapling/Shrub Stra	tum (Plot size: 15' rad	ius)							Percent of Domina	nt Species			
1									That Are OBL, FAC	CW, or FAC:	5	6%	(A/B)
2													
3													
4									Prevalence Index v	worksheet:			
5.													
							= Total Cover		Total % C			Multiply by:	
									That Are OBL, FAC	W, or FAC:			A/B
Herb Stratum (Plot	· · · · · · · · · · · · · · · · · · ·								OBL species		x1 = _		
1. Lysimachia nui						10%	Yes	FACW	FACW species	10%	x2 = _	0.20	
2. Geum canader	nse					10%	Yes	FAC	FAC species	90%	x3 = _	2.70	
3. Carex blanda						5%	No	FAC	FACU species	50%	x4 = _	2.00	
4. Ambrosia trifida						20%	Yes	FAC	UPL species	10%	x5 = _	0.50	
5. Hesperis matro						10%	Yes	FACU	Column Totals:	160%	(A)	5.40	(B)
6. Asarum canad						15%	Yes	FACU					
7. Lamium purpui						10%	Yes	UPL	Prevale	ence Index = B	/A =	3.38	
8. Hydrophyllum	virginianum					10%	Yes	FAC					
9													
10.									Hydrophytic Vege	tation indicate	ors:		
11.									4 Double		4:	•	
12.										est for Hydropl	-	ion	
13.							_		X 2-Domina	nce Test Is >50 nce Index is ≤3			
14.							_			logical Adaptat		e supporting	
15.							_		<u> </u>	-		-	
16.							_			emarks or on a itic Hydrophytic			
17.							_			ilio i iyaropiiyii	o vegetation	(Explair)	
18 19.							<u> </u>	·	¹ Indicators of hydric	soil and wetla	and hydrology	v must	
									•			y must	
20						90%	= Total Cover		be present, unless	uistui bea or pi	เบมเ ย เทสแ¢.		
						9070	- 10tal COVE						
Woody Vine Stratus	m (Plot size: 30' radiu	16)							Hydrophytic				
1	(1 101 3126. 00 TAUIL	,							Vegetation				
2									Present?	Vae	X No		
							= Total Cover		Fresents	ies_	X No		
							- 10(4) 00/6						
Remarks: (Include	photo numbers here of	or on a senar	ate sheet)						1				
imane. (morado	, namboro noro c	a copun	,										

OIL							Samp	ling Point:	ap04
rofile Desc	cription: (Describe to	the depth needed to	document the	indicator or co	nfirm the al	bsence of	f indicators.)		
Depth	Matrix			Redox Features					
(inches)	Color (moist)	% Co	olor (moist)	%	Type ¹	Loc ²	Texture	Ren	narks
			oloi (molot)		. , , , ,			TOIL	iano
0-8"	10YR 3/3	100					Sandy Loam		
¹ Type: C=C	Concentration, D=Depl	etion, RM=Reduced M	fatrix, CS=Cove	ered or Coated S	and Grains.	² Location	on: PL=Pore Lining,	M=Matrix.	
	Indicators ³ :						Indicators of Hydri		
Histoso	ol (A1)		Sandy Gle	eyed Matrix (S4)			=	ese Masses (F12)
	Epipedon (A2)	_	Sandy Re					v Dark Surface (F:	
	Histic (A3)	=		Matrix (S6)				in in Remarks)	,
	gen Sulfide (A4)	-	Dark Surf	, ,			Other (Explo	in in romano,	
	ed Layers (A5)	_		ucky Mineral (F1)					
		=		eyed Matrix (F2)					
	luck (A10)	_ (0.44)		• ,					
	ed Below Dark Surface	= (ATT)		Matrix (F3)			3		
	Dark Surface (A12)	_		rk Surface (F6)			³ The hydric soil inc		•
	Mucky Mineral (S1)	<u>-</u>		Dark Surface (F7	()		. ,	Field Indicators	,
5 cm N	lucky Peat or Peat (S	<u> </u>	Redox De	pressions (F8)			in the United S	tates, Version 8.0	, 2016.
Restrictive I	Layer (if observed):								
Type:	• , ,								
-	inches):					Hydric	Soil Present?	Yes	No X
	,	•							-
HYDROL	OGY								
Netland Hye	drology Indicators:						_		
Primary Indi	cators (minimum of on	e is required: check a	ll that apply)				Secondary Indicate	ors (minimum of to	wo required)
Surfac	e Water (A1)		Water-Sta	ined Leaves (B9)		Surface Soil	Cracks (B6)	
— Hiah W	/ater Table (A2)	_	Aguatic F	auna (B13)			Drainage Pa	tterns (B10)	
	tion (A3)	-		atic Plants (B14)				Water Table (C2)	
	Marks (B1)	_		Sulfide Odor (C1	1)		Crayfish Bur		
	ent Deposits (B2)	-		Rhizospheres on	•	c (C3)		isible on Aerial Im	nagony (CQ)
	ent Deposits (B2) eposits (B3)	-			_	s (C3)		tressed Plants (D	• • • •
	. , ,	_		of Reduced Iron				•	1)
	lat or Crust (B4)	_		on Reduction in T	illed Soils (0	26)		Position (D2)	
Iron De	eposits (B5)	_	Thin Mucl	Surface (C7)			FAC-Neutral	Test (D5)	
Inunda	tion Visible on Aerial I	magery (B7)	Gauge or	Well Data (D9)					
Sparse	ely Vegetated Concave	Surface (B8)	Other (Ex	plain in Remarks)				
Eigld Obser	votiona	_		1					
Field Obser		Vec N- V	Daniel Co. 1	00). NA					
	ter Present?	Yes No X	Depth (inch	· ——					
Water Table		Yes No X	Depth (inch	· — —					
Saturation F		Yes No X	Depth (inch	es): <u>NA</u>	Wetland	Hydrolog	gy Present?	Yes	NoX
	pillary fringe)								
Describe Re	ecorded Data (stream	gauge, monitoring wel	l, aerial photos,	previous inspect	tions), if ava	ilable:			
Remarks:				<u></u>		<u></u>			<u></u>

Project/Site:	Arche Solar				City/County	/: Fayette/Fulton		Sampling Date: 10/21/2019
Applicant/Owner:	7X Energy				State	e: OH	Sampling Point:	dp05
Investigator(s):	Ben Hess & Maggie	Mason				Section, Townsl	hip, Range: S21 T9S R1E	
Landform (hillslope,	, terrace, etc.):	Stream	m Terrace			Lo	cal relief (concave, convex, none):	concave
Slope (%):	1%	Lat:	41.6688546		Long:	-8	34.30301796	Datum: NAD83 UTM16N
Soil Map Unit Name	e: Millgrove loam (Mo)						NWI classif	ication: None
Are climatic / hydrol	logic conditions on the	site typical for this	time of year?		Yes	X No	(If no, explain in Remarks.)	
Are Vegetation	N	, Soil	N , or Hydrology	N significantly di	sturbed?	Are "Norm	nal Circumstances" present?	Yes <u>X</u> No
Are Vegetation	N	, Soil	N , or Hydrology	N naturally probl	ematic?	(If needed	, explain any answers in Remarks.)	
SUMMARY OF	FINDINGS Att	ach site map s	showing sampling point loca	ations, transects, in	nportant featu	res, etc.		
Hydrophytic Ve	getation Present?		Yes x	No	Is the	Sampled Ar	·ea	
Hydric Soil Pres			Yes	No x		n a Wetland?		No <u>x</u>
Wetland Hydrol	logy Present?		Yes	No x	_			
VEGETATION - Tree Stratum (Plot 1. Quercus rubra	Use scientific	names of plan	ts.	Absolute <u>% Cover</u> 40%	Dominant Species? Yes	Indicator Status FACU	Dominance Test worksheet:	
2. Ulmus americai	na			35%	Yes	FACW	Number of Dominant Species	
3. Acer saccharum				20%	No	FACU	That Are OBL, FACW, or FAC:	2 (A)
4. Populus deltoid				20%	No	FAC	mat Ale OBE, I AOW, OF I AO.	(A)
5.	100					1710	Total Number of Dominant	
··-				115%	= Total Cover	· 	Species Across All Strata:	3 (B)
								(-/
Sapling/Shrub Strat	tum (Plot size: 15' rad	ius)					Percent of Dominant Species	
1.							That Are OBL, FACW, or FAC:	67% (A/B)
2.								
3.								
4.							Prevalence Index worksheet:	
5.								
					= Total Cover		Total % Cover of:	Multiply by:
							That Are OBL, FACW, or FAC:	A/B
Herb Stratum (Plot	size: 5' radius)						OBL species	x1 =
1. Viola sororia				10%	No	FAC	FACW species 35%	x2 = 0.70
2. Toxicodendron				40%	Yes	FAC	FAC species 75%	x3 = 2.25
3. Persicaria virgir	niana			5%	No	FAC	FACU species 60%	x4 = 2.40
4							UPL species	x5 =
5							Column Totals: 170%	(A) 5.35 (B)
6					_			
7							Prevalence Index = I	B/A = 3.15
8						· 		
9						· 	Hadaaahada Waadadaa ladka	4
10						· 	Hydrophytic Vegetation Indica	tors:
11 12.					_		1-Rapid Test for Hydrop	obytic Vagatation
						· 	X 2-Dominance Test is >5	
13 14.						· 	3-Prevalence Index is ≤	
15.								ations ¹ (Provide supporting
16.						· 	data in Remarks or on	
17.						·		tic Vegetation ¹ (Explain)
18.						· 	-	,
19.							¹ Indicators of hydric soil and wet	land hydrology must
20.					_	· 	be present, unless disturbed or p	problematic.
				55%	= Total Cover	· 		
Woody Vine Stratur	m (Plot size: 30' radiu	s)					Hydrophytic	
1						. <u></u> -	Vegetation	
2.							Present? Yes	X No
					= Total Cover			
Remarks: (Include	photo numbers here o	r on a separate she	eet.)					

OIL							Samp	ling Point:	apu5
rofile Desci	ription: (Describe to	the depth needed to	o document th	he indicator or co	onfirm the al	bsence of	indicators.)		
epth	. Natrix	•		Redox Features			,		
inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Rer	narks
0-20"	10YR 3/2	100	,				Loam		
0 20	10111 0/2						Louin		
Type: C=C	oncentration, D=Deple	etion RM=Reduced N	Matrix CS=Co	vered or Coated S	and Grains	² l ocatio	on: PL=Pore Lining,	M=Matrix	
	ndicators ³ :	Alon, Till Troduced i	, , , , , , , , , , , , , , , , , , ,	Toron or Conton o	dia Granio.		Indicators of Hydri		
Histoso			Sandy G	Gleyed Matrix (S4)				nese Masses (F12	')
	pipedon (A2)	-		Redox (S5)				v Dark Surface (F	
	listic (A3)	-		l Matrix (S6)				in in Remarks))
	en Sulfide (A4)	-		rface (S7)					
	d Layers (A5)	-		Mucky Mineral (F1))				
	uck (A10)	-		Gleyed Matrix (F2)					
	ed Below Dark Surface	(A11)		d Matrix (F3)					
	ark Surface (A12)			Dark Surface (F6)			³ The hydric soil inc	dicators have bee	n undated to
	Mucky Mineral (S1)	-		d Dark Surface (F7	7)		•	Field Indicators	•
	ucky Peat or Peat (S3	<u>-</u>		Depressions (F8)	' /		. ,	tates, Version 8.0	,
		_					mrano ormou o		
	ayer (if observed):								
Type:							0 11 10	v	
Depth (ii	nches):					Hydric	Soil Present?	Yes	NoX
VDDOL	201								
YDROL									
-	rology Indicators:						I		
	ators (minimum of one	e is required: check a					Secondary Indicat	•	wo required)
Surface	Water (A1)	-	Water-S	tained Leaves (B9	9)		Surface Soil	Cracks (B6)	
High W	ater Table (A2)	_	Aquatic	Fauna (B13)			Drainage Pa	,	
Saturati	ion (A3)	_	True Aqı	uatic Plants (B14)			Dry-Season	Water Table (C2)	1
Water N	Marks (B1)	_	Hydroge	en Sulfide Odor (C	1)		Crayfish Bur	rows (C8)	
Sedime	nt Deposits (B2)	_	Oxidized	d Rhizospheres on	Living Roots	s (C3)	Saturation V	isible on Aerial In	nagery (C9)
Drift De	posits (B3)	_	Presenc	e of Reduced Iron	(C4)		Stunted or S	tressed Plants (D	1)
Algal M	at or Crust (B4)	_	Recent I	Iron Reduction in T	Γilled Soils (0	C6)	Geomorphic	Position (D2)	
Iron De	posits (B5)		Thin Mu	ck Surface (C7)			FAC-Neutra	Test (D5)	
Inundat	ion Visible on Aerial In	nagery (B7)	Gauge o	or Well Data (D9)					
Sparsel	y Vegetated Concave	Surface (B8)	Other (E	xplain in Remarks	s)				
ield Observ	rations:								
Surface Wate		Yes No X	Depth (inc	ches): NA					
Vater Table		Yes No X	Depth (inc	· —					
vater Table Saturation Pr		 	Depth (inc	· ——	Watland	l Hydrolog	y Present?	Yes	No X
	oillary fringe)	Yes No X	թեհու (iug	ones). INA	vveilailu	i riyurolog	y riesenti	169	NoX
	corded Data (stream g	auge monitoring wol	II aerial nhoto	s previous inspec	tions) if ava	ilahle.			
JUSUING IVE	oorded Data (Stream y	auge, monitoring we	ii, aciiai piiulu	s, previous irispec	nionoj, n ava	mabic.			
Remarks:									

Project/Site:	Arche Solar						City/County	: Fayette/Fulton		Samr	oling Date: 10/2	21/2019
Applicant/Owner:	7X Energy						State	: <u>OH</u>	Sampling Point:		dp06	
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsh	nip, Range: S27 T9S R1E	-		
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Loc	cal relief (concave, conve	x, none): concav	е	
Slope (%):	1%	Lat:		41.6667102	23		Long:	-8	4.27431176	Da	tum: NAD83 U	TM16N
Soil Map Unit Nam	e: Sloan silty clay loan	n, frequently f	looded (So)						N	WI classification	None	
Are climatic / hydro	ologic conditions on the	site typical f	or this time of yea	ır?			Yes_	X No	(If no, explain in R	lemarks.)		
Are Vegetation	N	, Soil	N	, or Hydrology		significantly distu		Are "Norm	al Circumstances" preser	ıt?	Yes X No	
Are Vegetation	N	, Soil	N	, or Hydrology		naturally problen			, explain any answers in F	Remarks.)		
SUMMARY OF	F FINDINGS Att	ach site n	nap showing	sampling point lo	ocations, tr	ransects, imp	ortant featur	es, etc.				
	egetation Present?	>		Yes	N			Sampled Ar				
Hydric Soil Pre				Yes	N		within	n a Wetland?	`	Yes	No X	
Wetland Hydro	nogy Present?			Yes X	N	0						
Remarks: VEGETATION	Use scientific	names of	plants.									
						Absolute	Dominant	Indicator				
Tree Stratum (Plo	t size: 30' radius)					% Cover	Species?	Status	Dominance Test work	ksheet:		
1												
2									Number of Dominant S			
3									That Are OBL, FACW,	or FAC:	1	(A)
4									Total Novel on at Daniel			
5						-	= Total Cover		Total Number of Domi		2	(D)
							= Total Cover		Species Across All Str	ala	2	(B)
Sanling/Shrub Stra	atum (Plot size: 15' rad	lius)							Percent of Dominant S	Snecies		
1.	(1 101 3126. 10 146	iiu <i>3)</i>							That Are OBL, FACW,		50%	(A/B)
2.									That Ale OBE, TAOV,		0070	(/\/_)
3.												
4.									Prevalence Index wor	ksheet:		
5.												
							= Total Cover		Total % Cove	r of:	Multiply b	DY:
									That Are OBL, FACW,			A/B
Herb Stratum (Plo	t size: 5' radius)			_					OBL species	`	κ1 =	
1. Setaria pumila						25%	Yes	FAC	FACW species)	(2 =	
2. Poa annua						60%	Yes	FACU	FAC species	25% >	(3 = 0.7	75
3. Stellaria media	7					5%	No	FACU	FACU species	65% >	(4 = 2.6	50
4									UPL species		(5 =	
5									Column Totals:	90% (A)3.3	35 (B)
6						· -						
7									Prevalence	e Index = B/A = _	3.72	
8												
9												
10.									Hydrophytic Vegetati	on Indicators:		
11.						-			4 Danid Took	f =	/	
12.										for Hydrophytic \	/egetation	
13.										Test is >50% Index is ≤3.0 ¹		
14 15.						-				cal Adaptations ¹	(Provide suppo	rtina
16.										arks or on a sepa		9
17.										Hydrophytic Vege		n)
18.										.,,	(=	·· · /
19.									¹ Indicators of hydric so	il and wetland h	drology must	
20.									be present, unless dis	•		
						90%	= Total Cover		amout dis	5. Problem		
							35.51					
Woody Vine Stratu	ı <u>m</u> (Plot size: 30' radiı	ıs)							Hydrophytic			
1.	-	•							Vegetation			
2.									Present?	Yes	No X	
							= Total Cover					
Remarks: (Include	photo numbers here o	or on a separa	ate sheet.)									

OIL							Sampii	ng Point: dp06
Profile Desc	ription: (Describe to	the depth needed	to document tl	he indicator or co	onfirm the a	bsence of	findicators.)	<u> </u>
Depth	Matrix	·		Redox Features			,	
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10"	10YR 3/2	100	,				Silt Loam	
							·	
¹ Type: C=C	Concentration, D=Deple	etion, RM=Reduced	Matrix, CS=Co	vered or Coated S	Sand Grains.	² Location	on: PL=Pore Lining, I	M=Matrix.
Hydric Soil I			•				Indicators of Hydric	
Histoso	ol (A1)		Sandy G	Gleyed Matrix (S4)			=	ese Masses (F12)
	Epipedon (A2)			Redox (S5)				Dark Surface (F22)
	Histic (A3)			l Matrix (S6)				n in Remarks)
— Hydrog	en Sulfide (A4)		Dark Su	rface (S7)				•
Stratifie	ed Layers (A5)		Loamy N	Mucky Mineral (F1)			
2 cm M	luck (A10)		Loamy C	Gleyed Matrix (F2)				
	ed Below Dark Surface	e (A11)		d Matrix (F3)				
Thick E	Oark Surface (A12)		Redox D	Oark Surface (F6)			³ The hydric soil indi	cators have been updated to
	Mucky Mineral (S1)		Depleted	d Dark Surface (F	7)		comply with the	Field Indicators of Hydric Soils
5 cm M	lucky Peat or Peat (S3)	Redox D	Depressions (F8)			in the United Sta	ates, Version 8.0, 2016.
Postrictivo I	_ayer (if observed):							
Type:	Layer (II Observeu).							
-	inches):					Hydric	Soil Present?	Yes No X
Remarks:								
HYDROL	OGY							
Wetland Hyd	drology Indicators:						•	
Primary Indic	cators (minimum of one	e is required: check	all that apply)				Secondary Indicato	rs (minimum of two required)
Surface	e Water (A1)		Water-S	tained Leaves (B	9)		Surface Soil (Cracks (B6)
High W	ater Table (A2)		Aquatic	Fauna (B13)			Drainage Pat	terns (B10)
Saturat	tion (A3)		True Aq	uatic Plants (B14)			Dry-Season V	Vater Table (C2)
Water I	Marks (B1)		Hydroge	en Sulfide Odor (C	1)		Crayfish Burr	ows (C8)
Sedime	ent Deposits (B2)		Oxidized	d Rhizospheres on	Living Root	ts (C3)	Saturation Vis	sible on Aerial Imagery (C9)
Drift De	eposits (B3)		Presenc	e of Reduced Iron	(C4)		Stunted or St	ressed Plants (D1)
X Algal M	lat or Crust (B4)		Recent I	Iron Reduction in ⁻	Tilled Soils (C6)	X Geomorphic I	Position (D2)
	eposits (B5)			ck Surface (C7)	,	,	FAC-Neutral	
	tion Visible on Aerial Ir	magery (B7)		or Well Data (D9)				,
	ly Vegetated Concave	0) ()		Explain in Remarks	s)			
		\ -/			, 			
Field Observ								
Surface Wat		Yes No X	Depth (inc	· —				
Water Table		Yes No X	Depth (inc	· — —				
Saturation P		Yes No X	Depth (inc	ches): NA	Wetland	d Hydrolog	gy Present?	Yes X No
	pillary fringe)							
Describe Re	corded Data (stream g	gauge, monitoring w	ell, aerial photo	s, previous inspec	ctions), if ava	ailable:		
Domarka:								
Remarks:								

Project/Site:	Arche Solar						City/County:	Fayette/Fulton		Sa	mpling Date: 1	0/21/2019
Applicant/Owner:	7X Energy						State:	ОН	Sampling Point:		dp07	
Investigator(s):	Ben Hess & Maggie	Mason					;	Section, Townsh	ip, Range: S27 T9S R1	<u>E</u>		
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Loc	cal relief (concave, conve	ex, none): cond	ave	
Slope (%):	0%	Lat:		41.6668761	4		Long:	-8	4.27800512		Datum: <u>NAD83</u>	UTM16N
Soil Map Unit Name	e: Sloan silty clay loan	n, frequently	flooded (So)						11	NWI classificati	on: None	
Are climatic / hydro	ologic conditions on the	site typical	for this time of yea	ır?			Yes_	X No	(If no, explain in l	Remarks.)		
Are Vegetation	N	, Soil	N	, or Hydrology	N	significantly dist	urbed?	Are "Norm	al Circumstances" prese	nt?	Yes X N	o
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally problen	natic?	(If needed	explain any answers in	Remarks.)		
SUMMARY OF	FINDINGS Att	ach site r	nap showing	sampling point lo	cations, tr	ansects, imp	ortant featur	es, etc.				
	egetation Present?	•		Yes x	No			Sampled Ar				
Hydric Soil Pre				Yes x			within	a Wetland?		Yes x	No	_
Wetland Hydro	logy Present?			Yes X	No)						
Remarks:	Use scientific	names of	nlante									
VEGETATION	OSC SCICITIFIC	names or	piarito.			Absolute	Dominant	Indicator				
Tree Stratum (Plot	t size: 30' radius)					% Cover	Species?	Status	Dominance Test wor	rksheet:		
1. Ulmus rubra						10%	Yes	FAC				
2									Number of Dominant	Species		
3									That Are OBL, FACW	, or FAC:	4	(A)
4												
5									Total Number of Dom			
						10%	= Total Cover		Species Across All St	rata:	4	(B)
	tum (Plot size: 15' rad	ius)							Percent of Dominant			
1									That Are OBL, FACW	, or FAC:	100%	(A/B)
2							· 					
3									Dravalance Index wa	ulcabaat.		
4									Prevalence Index wo	rksneet:		
5.							= Total Cover		Total % Cove	or of:	Multipl	v bve
							- Total Cover		That Are OBL, FACW,		Multipl	A/B
Herb Stratum (Plot	t size: 5' radius)								OBL species	15%	x1 =	0.15
1. Phalaris arunda				<u>-</u>		60%	Yes	FACW	FACW species	90%	-	1.80
2. Echinochloa cr						10%	No	FACW	FAC species	30%		0.90
3. Carex lacustris						15%	No	OBL	FACU species		x4 =	
4. Panicum dicho	otomiflorum					20%	Yes	FACW	UPL species		x5 =	
5. Setaria pumila						20%	Yes	FAC	Column Totals:	135%	(A)	2.85 (B)
6.									_			
7.									Prevalend	ce Index = B/A	= 2.1	1
8.												
9												
10									Hydrophytic Vegetat	ion Indicators		
11						1	. <u></u>					
12									1-Rapid Test	t for Hydrophyti	c Vegetation	
13									X 2-Dominance			
14							·		X 3-Prevalence		1,	
15										ical Adaptation		porting
16.										narks or on a se		I = i =)
17.									—— Froblematic	: Hydrophytic Ve	egetation (Exp	iaiii)
18.									¹ Indicators of hydric se	oil and wetland	hydrology mus	t
19.												·
20.						125%	= Total Cover		be present, unless dis	numed or prob	ematic.	
						125%	- rotal Cover					
Woody Vine Stratu	m (Plot size: 30' radiu	ie)							Hydrophytic			
1	(1 101 3126. 00 1ault	,							Vegetation			
2						-			Present?	Yas Y	No	
= Total							= Total Cover					
Remarks: (Include	photo numbers here of	or on a senar	ate sheet.)						1			
(. Iz -20	,									

SOIL							Sampli	ng Point:	dp07
Profile Desc	ription: (Describe to th	e depth nee	eded to document the in	ndicator or c	onfirm the a	bsence of	indicators.)		-
Depth	Matrix		Re	dox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rer	marks
0-20"	10YR 3/1	98	10YR 3/4	2	С	PL	Silty Clay Loam		
¹ Type: C=C	concentration, D=Depletion	n. RM=Red	uced Matrix. CS=Covere	ed or Coated	Sand Grains.	² Locatio	on: PL=Pore Lining, N	 ∕I=Matrix.	
Hydric Soil I		,	,				Indicators of Hydric		
Histoso			Sandy Gleye	ed Matrix (S4	.)		•	ese Masses (F12	2)
Histic E	Epipedon (A2)		Sandy Redo	x (S5)			Very Shallow	Dark Surface (F	22)
Black H	Histic (A3)		Stripped Ma	trix (S6)			Other (Explain	າ in Remarks)	
Hydrog	en Sulfide (A4)		Dark Surfac	, ,					
	ed Layers (A5)			ky Mineral (F	-				
	luck (A10)			ed Matrix (F2	2)				
	ed Below Dark Surface (A	A11)	Depleted Ma				3		
	Dark Surface (A12)			Surface (F6)			³ The hydric soil indi		
	Mucky Mineral (S1) lucky Peat or Peat (S3)			ark Surface (F essions (F8)			comply with the in the United Sta		•
			Redox Depi	essions (Fo)			iii the Officed Sta	les, version 6.0	7, 2016. ————
	_ayer (if observed):								
Type:			•				0 11 5 40	.	
Depth (i	nches):		=			Hydric	Soil Present?	Yes X	No
HYDROLO	OCY								
	drology Indicators:								
-	cators (minimum of one is	s required: cl	heck all that apply)				Secondary Indicator	rs (minimum of t	wo required)
X Surface	e Water (A1)		Water-Stain	ed Leaves (B	39)		Surface Soil 0		
High W	ater Table (A2)		Aquatic Fau	na (B13)			Drainage Patt	erns (B10)	
Saturat	ion (A3)		True Aquation	c Plants (B14	!)		Dry-Season V	Vater Table (C2))
	Marks (B1)			ulfide Odor (0	*		Crayfish Burro		
	ent Deposits (B2)				n Living Roof	ts (C3)		sible on Aerial In	
	eposits (B3)			Reduced Iro				ressed Plants (D	11)
	lat or Crust (B4)				Tilled Soils (C6)	Geomorphic F	` '	
	posits (B5)	(- -)	Thin Muck S				X FAC-Neutral	est (D5)	
	tion Visible on Aerial Ima ly Vegetated Concave Si			ell Data (D9) ain in Remark					
Field Observ	vations:				Ι				
Surface Wat		es X No	Depth (inches	s): 2"					
Water Table			X Depth (inches	′ ———	•				
Saturation P	resent?		X Depth (inches	· ———	Wetland	d Hydrolog	y Present?	Yes X	No
(includes car	pillary fringe)				'				
Describe Re	corded Data (stream gau	ıge, monitori	ng well, aerial photos, p	revious inspe	ections), if ava	ailable:			
Dawren									
Remarks:									

Project/Site:	Arche Solar						City/County	: Fayette/Fulton			Sampling Da	ate: <u>10/21/2</u>	019
Applicant/Owner:	7X Energy						State	: OH	Sampling Point	t:	dp	800	
Investigator(s):	Ben Hess & Maggie	e Mason						Section, Townsh	nip, Range: S27 T9S I	R1E			
Landform (hillslope	e, terrace, etc.):		Backslope					Loc	cal relief (concave, co	nvex, none): no	one		
Slope (%):	4%	Lat:		41.6624439	96		Long:	-8	4.28427416		Datum: N	IAD83 UTM	16N
Soil Map Unit Nam	e: Haskins loam, 0 to	3 percent slo	pes (HkA)							_NWI classific	ation: N	lone	
Are climatic / hydro	ologic conditions on th	e site typical	for this time of ye	ar?			Yes	X No	(If no, explain	in Remarks.)			
Are Vegetation	N	, Soil	N	, or Hydrology	N	significantly dist	urbed?	Are "Norm	al Circumstances" pre	sent?	Yes _	X No	
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally problen	natic?	(If needed	, explain any answers	in Remarks.)			
SUMMARY OF	FINDINGS At	tach site r	map showing	sampling point lo	cations	s, transects, imp	ortant featur	res, etc.					
	egetation Present	?		Yes		No x	Is the	Sampled Ar	ea				
Hydric Soil Pre				Yes		No x	withir	n a Wetland?	•	Yes	No_	X	
Wetland Hydro	ology Present?			Yes		No x							
Remarks:													
VEGETATION	Use scientific	names of	r plants.			Absolute	Dominant	Indicator					
Tree Stratum (Plo	t size: 30' radius)					% Cover	Species?	Status	Dominance Test v	vorksheet:			
1. Morus alba						60%	Yes	FAC					
2. Gleditsia triaca	anthos					30%	Yes	FACU	Number of Domina	nt Species			
3. Prunus serotin	а					5%	No	FACU	That Are OBL, FAC	CW, or FAC:		2	(A)
4.													•
5.									Total Number of Do	ominant			
,						95%	= Total Cover		Species Across All	Strata:		4	(B)
Sapling/Shrub Stra	<u>itum</u> (Plot size: 15' rad	dius)							Percent of Domina	nt Species			
Crataegus crus	s-galli					5%	Yes	FAC	That Are OBL, FAC	CW, or FAC:	5	50%	(A/B)
2													
3													
4									Prevalence Index v	vorksheet:			
5.													
						5%	= Total Cover		Total % C			Multiply by:	. (5
Llamb Christina (Dla	A simo. Fl madica)								That Are OBL, FAC	W, or FAC:			A/B
Herb Stratum (Plo	t size: 5 radius)			_		400/	NI.	FA.0	OBL species		_ x1 = _	0.40	
Carex blanda Dubus socider	-1-1i-					<u>10%</u> 5%	No No	FAC UPL	FACW species	5% 	_ x2 = _	0.10	
Rubus occider Poa pratensis	italis					2%	No	FAC	FAC species FACU species	127%	x3 = x4 =	2.37 5.08	
4. Geum canadei	nsa					2%	No	FAC	UPL species	10%	x5 =	0.50	
5. Urtica dioica	1130					5%	No	FACW	Column Totals:	221%	(A)	8.05	(B)
6. Arctium minus						10%	No	FACU	Column Fotals.	22170	_('') _	0.00	(D)
7. Galium aparine						2%	No	FACU	Prevale	ence Index = B	/A =	3.64	
8. Hesperis matro						80%	Yes	FACU					
9. Leonurus card						5%	No	UPL					
10.									Hydrophytic Vege	tation Indicate	ors:		
11.													
12.									1-Rapid T	est for Hydroph	nytic Vegetat	tion	
13.									2-Domina	nce Test is >50)%		
14.									3-Prevale	nce Index is ≤3	.0 ¹		
15.									4-Morphol	ogical Adaptat	ions ¹ (Provid	le supportin	g
16.									data in R	emarks or on a	separate sh	neet)	
17							·		Problema	itic Hydrophytic	: Vegetation ¹	¹ (Explain)	
18													
19.									¹ Indicators of hydric	soil and wetla	nd hydrolog	y must	
20									be present, unless	disturbed or pr	oblematic.		
						121%	= Total Cover						
Woody Vine Stratu	ım (Plot size: 30' radi	us)							Hydrophytic				
1									Vegetation				
2									Present?	Yes_	No	X	
							= Total Cover						
Remarks: (Include	e photo numbers here	or on a sepai	rate sheet.)										

SOIL							Sam	oling Point:	dp08
Profile Descr	ription: (Describe to t	he depth needed t	o document the inc	dicator or co	onfirm the a	bsence of	indicators.)		
Depth	Matrix		Redo	ox Features					
(inches)	Color (moist)	<u> </u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-20"	10YR 3/2	100					Loam		
									
	oncentration, D=Deplet	ion, RM=Reduced l	Matrix, CS=Covered	or Coated S	and Grains.		n: PL=Pore Lining		
Hydric Soil Ir						Test	Indicators of Hydi		
Histosol	` '		Sandy Gleyed					nese Masses (F1	
	pipedon (A2)	,	Sandy Redox					w Dark Surface (F22)
	istic (A3)	•	Stripped Matr	` '			Other (Expl	ain in Remarks)	
	en Sulfide (A4)		Dark Surface						
	d Layers (A5)	,	Loamy Mucky						
	uck (A10)	(4.44)	Loamy Gleye						
	d Below Dark Surface (A11)	Depleted Mat				3	diameters to	ana sumalaka dik
	ark Surface (A12) Mucky Mineral (S1)		Redox Dark S		7\		³ The hydric soil in		•
	ucky Nineral (S1)		Depleted Dark Redox Depres		()			e <i>Field Indicators</i> States , Version 8	-
			Redox Depre	SSIUIIS (FO)			in the Officed S	states, version o	.0, 2016.
Restrictive L	ayer (if observed):								
Type:									
Depth (ir	nches):					Hydric S	Soil Present?	Yes	NoX
LIVEROL (207								
HYDROLO									
=	rology Indicators:						I		
	ators (minimum of one	is required: check a	,	-l.l /D0	\\		Secondary Indica		two required)
	Water (A1)		Water-Staine	•	9)			I Cracks (B6)	
	ater Table (A2)		Aquatic Faun	` '				atterns (B10)	٠,
Saturati	` '	•	True Aquatic					Water Table (C	2)
·	Marks (B1)		Hydrogen Sul	•	-	- (00)	Crayfish Bu		(00)
	nt Deposits (B2) posits (B3)		Oxidized Rhiz Presence of F		_	s (C3)		/isible on Aerial I Stressed Plants (
						Ce)		c Position (D2)	D1)
	at or Crust (B4) posits (B5)		Recent Iron R Thin Muck Su		i illea Solis (t	C6)	FAC-Neutra	, ,	
		ogon/(D7)					rac-neutra	ii Test (D3)	
	ion Visible on Aerial Im		Gauge or We	` '	.\				
Sparser	y Vegetated Concave S	buriace (bo)	Other (Explain	n in Remarks	5)				
Field Observ	ations:								
Surface Water		Yes No X	Depth (inches):	. NA					
Water Table		Yes No _X	Depth (inches):						
Saturation Pr		Yes No _X	Depth (inches):	. NA	Wetland	l Hydrology	y Present?	Yes	No X
(includes cap									
Describe Red	corded Data (stream ga	uge, monitoring we	ell, aerial photos, pre	vious inspec	tions), if ava	iilable:			
Remarks:									
nemants.									

Project/Site:	Arche Solar						_ City/County	: Fayette/Fulton		{	Sampling Dat	e: 10/21/2019	l
Applicant/Owner:	7X Energy						State	: <u>OH</u>	Sampling Point:		dp0)9	
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsh	nip, Range: <u>S28 T9S R</u>	1E			
Landform (hillslope	e, terrace, etc.):		Toeslope					Loc	cal relief (concave, con	vex, none): nc	ne		
Slope (%):	3%	Lat	i	41.6559416	1		Long:	-8	4.29143322		Datum: NA	AD83 UTM16N]
Soil Map Unit Nam	e: Lenawee silty clay l	oam, 0 to 1 _l	percent slopes (L	f)						NWI classifica	ation: <u>No</u>	ne	
Are climatic / hydro	ologic conditions on the	e site typical	for this time of ye	ar?			Yes	X No	(If no, explain ir	ı Remarks.)			
Are Vegetation	N	, Soil	N	, or Hydrology	N	significantly dis	turbed?	Are "Norm	al Circumstances" pres	ent?	Yes X	(No	_
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally proble			, explain any answers i	n Remarks.)			
SUMMARY OF	FINDINGS Att	ach site	map showing	sampling point lo	cations	s, transects, im	portant featui	res, etc.					
	egetation Present	?		Yes		No x		Sampled Ar					
Hydric Soil Pre				Yes		No x	_ withir	n a Wetland?		Yes	No	X	
Wetland Hydro	nogy Present?			Yes		No x	_						
Remarks:	Use scientific		f wlanta										
VEGETATION	USE SCIENTING	names o	i piaiits.			Absolute	Dominant	Indicator					
Tree Stratum (Plo	t size: 30' radius)					% Cover	Species?	Status	Dominance Test we	orksheet:			
1.													
2.									Number of Dominan	t Species			
3.							_		That Are OBL, FAC	N, or FAC:	0	(A)	
4													
5							_		Total Number of Do	minant			
							= Total Cover		Species Across All S	Strata:	3	(B)	
	tum (Plot size: 15' rac	lius)							Percent of Dominan	•			
1							- 		That Are OBL, FAC	N, or FAC:	09	% (A/E	3)
2													
3							_		Prevalence Index w	oulcoboot.			
4 5.									Prevalence index w	orksneet.			
J.							= Total Cover		Total % Co	iver of	M.	ultiply by:	
							- Total Covel		That Are OBL, FACV			A/B	_
Herb Stratum (Plo	t size: 5' radius)								OBL species	, -	x1 =		_
Cirsium arvens				_		5%	No	FACU	FACW species		x2 =		_
2. Schedonorus a	arundinaceus					20%	Yes	FACU	FAC species	15%	x3 =	0.45	_
3. Trifolium reper	าร					20%	Yes	FACU	FACU species	105%	x4 =	4.20	_
4. Bromus inermi	is					50%	Yes	FACU	UPL species		x5 =		_
5. Setaria faberi						5%	No	FACU	Column Totals:	120%	(A)	4.65	(B)
6. Taraxacum off	iicinale					5%	No	FACU					
7. Ambrosia trifid	la					15%	No	FAC	Prevaler	nce Index = B/	A =	3.88	_
8													
9													
10.									Hydrophytic Veget	ation Indicato	rs:		
11.									4 Danid Ta	-4 f 1 h	. 4:- \/4-4:.		
12.										est for Hydroph	-	on	
13 14.										ce Test is >50° ce Index is ≤3.			
15.										ogical Adaptatio		supporting	
16.										marks or on a			
17.							_			ic Hydrophytic			
18.							- 						
19.									¹ Indicators of hydric	soil and wetlar	nd hydrology	must	
20.									be present, unless of	disturbed or pro	oblematic.		
						120%	= Total Cover						
Woody Vine Stratu	ım (Plot size: 30' radi	us)							Hydrophytic				
1									Vegetation				
2									Present?	Yes	No_X	<u> </u>	
							= Total Cover						
Remarks: (Include	e photo numbers here o	or on a sepa	rate sheet.)										

SOIL							Sam	pling Point:	dp09
Profile Desc	cription: (Describe to	the depth neede	d to document the in	dicator or co	onfirm the a	bsence of	indicators.)		
Depth	Matrix		Red	ox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-20"	10YR 3/2	100					Silt Loam		
	-		_						
									
	Concentration, D=Deple	etion, RM=Reduce	ed Matrix, CS=Covered	d or Coated S	Sand Grains.		n: PL=Pore Lining		
Hydric Soil						Test	Indicators of Hyd		
Histoso	` '		Sandy Gleye					nese Masses (F	•
	Epipedon (A2)		Sandy Redox					w Dark Surface ((F22)
	Histic (A3)		Stripped Mati	` '			Other (Expl	ain in Remarks)	
	gen Sulfide (A4)		Dark Surface						
	ed Layers (A5)		Loamy Mucky		-				
	luck (A10)		Loamy Gleye						
	ed Below Dark Surface	(A11)	Depleted Mat				2		
	Dark Surface (A12)		Redox Dark S				³ The hydric soil ir		•
	Mucky Mineral (S1)		Depleted Dar		7)			e Field Indicators	-
5 cm N	Mucky Peat or Peat (S3)	Redox Depre	ssions (F8)			in the United S	States, Version 8	.0, 2016.
Restrictive I	Layer (if observed):								
Type:									
Depth (inches):					Hydric S	Soil Present?	Yes	NoX
HYDROL	OGY								
Wetland Hy	drology Indicators:								
Primary Indi	cators (minimum of one	e is required: chec	k all that apply)				Secondary Indica	tors (minimum of	two required)
Surface	e Water (A1)		Water-Staine	d Leaves (B9	9)		Surface So	il Cracks (B6)	
High W	Vater Table (A2)		Aquatic Faun	a (B13)			Drainage P	atterns (B10)	
Satura	tion (A3)		True Aquatic	Plants (B14)			Dry-Seasor	Water Table (C	2)
Water	Marks (B1)		Hydrogen Su	lfide Odor (C	1)		Crayfish Bu	rrows (C8)	
Sedime	ent Deposits (B2)		Oxidized Rhiz	zospheres on	Living Root	ts (C3)	Saturation \	Visible on Aerial ∣	Imagery (C9)
Drift De	eposits (B3)		Presence of I	Reduced Iron	(C4)		Stunted or	Stressed Plants (D1)
Algal N	/lat or Crust (B4)		Recent Iron F	Reduction in ⁻	Tilled Soils (C6)	Geomorphi	c Position (D2)	
Iron De	eposits (B5)		Thin Muck Su	urface (C7)			FAC-Neutra	al Test (D5)	
 Inunda	ition Visible on Aerial Ir	nagery (B7)	Gauge or We	ell Data (D9)					
Sparse	ely Vegetated Concave	Surface (B8)	Other (Explai	n in Remarks	s)				
Field Obser	vations:								
	ter Present?	Yes No >	C Depth (inches)	: NA					
Water Table		Yes No >							
Saturation F		Yes No >			Wetland	l Hydrolog	y Present?	Yes	No X
	pillary fringe)					, 5.59	,		<u> </u>
	ecorded Data (stream g	gauge, monitoring	well, aerial photos. pre	evious inspec	tions), if ava	nilable:			
	, ,		, , , , , , , , , , , , , , , , , , , ,	•	,,				
Remarks:									

Project/Site:	Arche Solar						City/Count	ty: Fayette/Fulton			Sampling Date	e: 10/22/2019
Applicant/Owner:	7X Energy						Stat	e: OH	Sampling Poin	t:	dp1	0
Investigator(s):	Ben Hess & Maggie	Mason						Section, Towns	hip, Range: S22 T9S I	R1E		
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Lo	ocal relief (concave, co	nvex, none): <u>c</u>	oncave	
Slope (%):	5%	Lat	:	41.671552	2		Long:	-8	84.28374793		Datum: NA	D83 UTM16N
Soil Map Unit Nam	e: Fulton silty clay loar	n, 0 to 2 per	cent slopes (FtB)							_NWI classific	cation: No	ne
Are climatic / hydro	ologic conditions on the	site typical	for this time of year	r?			Yes	S_X No	(If no, explain	in Remarks.)		
Are Vegetation	N	, Soil	N	, or Hydrology	N	significantly o	listurbed?	Are "Norn	nal Circumstances" pre	sent?	Yes X	
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally prob	lematic?	(If needed	d, explain any answers	in Remarks.)		
SUMMARY OF	F FINDINGS Att	ach site	map showing	sampling point lo	ocations	s, transects, i	mportant featu	ıres, etc.				
	egetation Present?			Yes x		No		e Sampled A				
Hydric Soil Pre				Yes		No x	with	in a Wetland	?	Yes	No	X
Wetland Hydro	logy Present?			Yes	•	No x						
Remarks: VEGETATION	Use scientific	names o	f plants.									
			•			Absolute	Dominant	Indicator				
Tree Stratum (Plo						% Cover	Species?	Status	Dominance Test v	vorksheet:		
1. Acer saccharu	ım					75%	Yes	FACU				
2								_	Number of Domina			
3									That Are OBL, FAC	W, or FAC:	2	(A)
4									. Total Name to a st D			
5						75%	= Total Cover	_	Total Number of Do		2	(D)
						75%	= Total Cover		Species Across All	Siraia.	3	(B)
Sanling/Shrub Stra	atum (Plot size: 15' rad	lius)							Percent of Domina	nt Species		
Fraxinus penna		iiu3)				50%	Yes	FACW	That Are OBL, FAC	•	679	% (A/B)
Sambucus nig						5%	No	FAC	·	, or i 710.		(, (, 5)
3.	, u							- 1710				
4.									Prevalence Index v	worksheet:		
5.												
						55%	= Total Cover		Total % C	over of:	Mι	ultiply by:
							_		That Are OBL, FAC			A/B
Herb Stratum (Plo	t size: 5' radius)								OBL species		x1 =	
1. Phalaris arund	linacea					40%	Yes	FACW	FACW species	100%	x2 =	2.00
2. Toxicodendror	n radicans					5%	No	FAC	FAC species	15%	x3 =	0.45
3. Ulmus america	ana					5%	No	FACW	FACU species	75%	x4 =	3.00
4. Elymus virginio						5%	No	FACW	UPL species		x5 =	
5. Cryptotaenia c	anadensis					5%	No	FAC	Column Totals:	190%	(A)	5.45 (B)
6												
7							_		Prevale	ence Index = B	/A =	2.87
8												
9									.			
10									Hydrophytic Vege	tation indicate	ors:	
11.							_		. 1 Ponid T	est for Hydroph	hytia Vagatatic	nn
12. 13.									· —	nce Test is >50	-) i i
14.								_	· ——	nce I est is >30 nce Index is ≤3		
15.							_		.	logical Adaptat		supporting
16.									· —	emarks or on a		-
17.										atic Hydrophytic		
18.									· —			
19.							_	_	Indicators of hydric	soil and wetla	and hydrology i	must
20.									be present, unless	disturbed or p	roblematic.	
						60%	= Total Cover			•		
Woody Vine Stratu	ı <u>m</u> (Plot size: 30' radiı	ıs)							Hydrophytic			
1						<u> </u>			Vegetation			
2.									Present?	Yes_	X No	_
							= Total Cover			_		•
Remarks: (Include	e photo numbers here o	or on a sepa	rate sheet.)									

SOIL							Samp	ling Point:	dp10	
Profile Descrip	ption: (Describe t	o the depth need	led to document th	e indicator or co	onfirm the al	bsence of	indicators.)			
Depth	Matrix			Redox Features			ŕ			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks	
0-20"	10YR 4/2	100					Silty Clay Loam			
							only only roun			
¹ Type: C=Cor	centration D=Den	letion RM=Redu	ced Matrix, CS=Cov	ered or Coated S	Sand Grains	² l ocatio	on: PL=Pore Lining,	M=Matrix		
Hydric Soil Inc	•	iodon, ravi racad	oca matrix, oc cov	crea or obuled c	dia Graino.		Indicators of Hydr			
Histosol (Sandy Gl	eyed Matrix (S4)			=	ese Masses (F1	2)	
	ipedon (A2)		Sandy Re					v Dark Surface (-	
Black His				Matrix (S6)				in in Remarks)	1 22)	
	Sulfide (A4)		Dark Surf				Other (Explo	iii iii rteiriarite)		
	Layers (A5)			ucky Mineral (F1	\					
2 cm Muc				leyed Matrix (F2)						
	Below Dark Surfac	· (Δ11)		Matrix (F3)						
	rk Surface (A12)	~ (\(\cappa_11)\)		ark Surface (F6)			³ The hydric soil inc	dicatore have he	en undated to	
	ucky Mineral (S1)			Dark Surface (F6)	7)		•	Field Indicators	•	
	cky Peat or Peat (S	3)		epressions (F8)	')		' '	tates, Version 8	,	3
		<u> </u>	Nedox De	epressions (i o)			in the Officed S	lates, version o	.0, 2010.	
	yer (if observed):									
Type:										
Depth (inc	ches):					Hydric	Soil Present?	Yes	No	Χ
HYDROLO	CV									
_	ology Indicators:		11 41 4 1- 3				10	(!!	£	
	tors (minimum of o	ne is required: ch	117/	-in-add-saves (DC	2)		Secondary Indicat	`	two required)	
	Vater (A1)			ained Leaves (B	9)		Surface Soil			
	er Table (A2)			auna (B13)			Drainage Pa			
Saturation				atic Plants (B14)				Water Table (C2	2)	
Water Ma				Sulfide Odor (C	-	(00)	Crayfish Bur		(00)	
	t Deposits (B2)			Rhizospheres or	_	s (C3)		isible on Aerial I		
Drift Depo				of Reduced Iron		20)		tressed Plants ((וט	
	t or Crust (B4)			on Reduction in ⁷	lilled Soils (C	26)		Position (D2)		
Iron Depo				k Surface (C7)			X FAC-Neutra	Test (D5)		
	n Visible on Aerial	0 , (,		Well Data (D9)						
Sparsely	Vegetated Concav	e Surface (B8)	Other (Ex	plain in Remarks	s)					
Field Observat	tions:									
Surface Water	Present?	Yes No_	X Depth (inch	nes): NA						
Water Table P	resent?	Yes No	X Depth (inch	nes): NA						
Saturation Pres	sent?	Yes No_	X Depth (inch	nes): NA	Wetland	Hydrolog	gy Present?	Yes	No	Χ
(includes capill	lary fringe)									
Describe Reco	orded Data (stream	gauge, monitorin	g well, aerial photos	, previous inspec	ctions), if ava	ilable:				
Remarks:										
. tomanto.										

Project/Site:	Arche Solar						City/County:	Fayette/Fulton		8	Sampling Date	e: 10/22/2019	9
Applicant/Owner:	7X Energy						State	OH	Sampling Point:		dp11	1	
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsh	ip, Range: S22 T9S R	1E			
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Loc	al relief (concave, con	vex, none): co	ncave		
Slope (%):	3%	Lat:		41.6720395			Long:	-84	4.28123583		Datum: NA	D83 UTM16N	N
Soil Map Unit Name	e: Shinrock silty clay lo	am, 2 to 6 p	ercent slopes, ero	ded (SfB2)						NWI classifica	ation: Nor	ne	
Are climatic / hydro	ologic conditions on the	site typical	for this time of yea	ır?			Yes_	X No	(If no, explain in	Remarks.)			
Are Vegetation	<u>N</u>	, Soil	N	, or Hydrology	N s	significantly dist	urbed?	Are "Norma	al Circumstances" pres	ent?	Yes X	No	
Are Vegetation	N	, Soil	N	, or Hydrology	N r	naturally problen	natic?	(If needed,	explain any answers in	n Remarks.)			
SUMMARY OF	FINDINGS Att	ach site r	nap showing	sampling point lo	cations, tra	ansects, imp	ortant featur	es, etc.					
	egetation Present?			Yes x	No			Sampled Ar	ea				
Hydric Soil Pre				Yes X)		a Wetland?		Yes_x	No		
Wetland Hydro	logy Present?			Yes X	No								
Remarks:	Use scientific	namos of	· nlonto										
VEGETATION	Ose scientific	names of	piants.			Absolute	Dominant	Indicator	1				
Tree Stratum (Plot	t size: 30' radius)					% Cover	Species?	Status	Dominance Test we	orksheet:			
1. Salix nigra						20%	Yes	OBL					
2. Juglans nigra						10%	Yes	FACU	Number of Dominan	t Species			
3.									That Are OBL, FAC\	V, or FAC:	4	(A)	١)
4.											-		
5.									Total Number of Dor	minant			
						30%	= Total Cover		Species Across All S	Strata:	5	(B)	()
Sapling/Shrub Stra	tum (Plot size: 15' rad	ius)							Percent of Dominant	Species			
1. Salix interior						10%	Yes	FACW	That Are OBL, FAC	V, or FAC:	80%	% (A	/B)
2. Sambucus nigr	ra					10%	Yes	FAC					
3.						-							
4									Prevalence Index w	orksheet:			
5.													
						20%	= Total Cover		Total % Co		Mu	ıltiply by:	
									That Are OBL, FACV	/, or FAC:		A/I	В
Herb Stratum (Plot	t size: 5' radius)			<u>-</u>					OBL species	20%	x1 =	0.20	
1. Phalaris arundi	inacea					100%	Yes	FACW	FACW species	115%	x2 =	2.30	
2. Cirsium arvens	Se					5%	No	FACU	FAC species	10%	x3 =	0.30	
3. Urtica dioica						5%	No	FACW	FACU species	15%	x4 =	0.60	
4									UPL species		x5 =		
5									Column Totals:	160%	(A)	3.40	(B)
6													
7									Prevaler	nce Index = B/	A =	2.13	
8													
9													
10									Hydrophytic Vegeta	ation Indicato	rs:		
11													
12										-	ytic Vegetatio	n	
13									X 2-Dominan				
14									X 3-Prevalence				
15										-	ons ¹ (Provide s		
16											separate shee		
17									Problemati	c Hydrophytic	Vegetation ¹ (F	Explain)	
18									1				
19									¹ Indicators of hydric			nust	
20									be present, unless d	isturbed or pro	oblematic.		
						110%	= Total Cover						
NA/	(Dist. 1	- >											
vvoody vine Stratui	m (Plot size: 30' radiu	s)							Hydrophytic				
1									Vegetation	• •	v		
2									Present?	Yes	X No	_	
							= Total Cover						
D			-41 -1										
remarks: (Include	photo numbers here o	r on a separ	ate sneet.)										

Profile Description	: (Describe to t	he depth need	ed to document the in	ndicator or co	onfirm the a	bsence o	f indicators.)	
Depth	Matrix	-	Re	dox Features				
inches) C	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20"	10YR 4/2	85	5YR 5/8	15	С	М	Silty Clay Loam	
	hes) Color (moist) % Color (moist) % Type¹ Loc² Texture Remain 10/18 4/2 85 SYR 5/8 15 C M Sity Clay Loam Per: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ** **Total Indicators**: Test Indicators of Hydric Solls: Inon-Manganese Masses (F12) Inside Epipedon (A2) Sandy Redox (S5) Very Shallow Dark Surface (F22) Inside Layers (A3) Stripped Matrix (S6) Other (Explain in Remarks) Other (Explain in Remarks) **Histosol (A1) Sandy Redox (S5) Other (Explain in Remarks) Other (Explain in Remarks) **Hydrogen Sulfide (A4) Dark Surface (S7) **Stratified Layers (A5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) **Depleted Below Dark Surface (A11) X Depleted Matrix (F2) **Depleted Below Dark Surface (A11) X Depleted Matrix (F2) **Depleted Below Dark Surface (A12) Redox Dark Surface (F7) Comply with the Field Indicators of In the United States. Version 8.0, 2 **Trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X **arks:** **DROLOGY** **Indicators (iminimum of one is required: check all that apply) Surface Water (A1) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) **Surface Water (A1) Present (A1) Drainage Patterns (B10) **Surface Water (A1) Preseason Water Table (C2) **Saturation (A3) True Aquatic Plains (B14) Dry-Season Water Table (C2) **Saturation Visible on Aerial Image Soil Cracks (C3) Saturation Visible							
								
Color (moist) % Color (moist) % Type¹ Loc² Texture Rem 0-20" 10YR 4/2 85 5YR 5/8 15 C M Silty Clay Loam Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Histosol (A1) Sandy Gleyed Matrix (S4) Iron-Manganese Masses (F12) Histic Epipedon (A2) Sandy Redox (S5) Very Shallow Dark Surface (F2) Black Histic (A3) Stripped Matrix (S6) Other (Explain in Remarks) Hydrogen Sulfide (A4) Dark Surface (S7) Stratified Layers (A5) Loamy Mucky Mineral (F1) Depleted Below Dark Surface (A11) X Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) comply with the Field Indicators of Inthe United States, Version 8.0, Restrictive Layer (if observed):								
					-	-		
Type: C=Concent	tration, D=Deplet	ion, RM=Reduc	ced Matrix, CS=Covere	ed or Coated S	Sand Grains.	² Locat	ion: PL=Pore Lining,	M=Matrix.
ydric Soil Indicate	ors³:					Tes	t Indicators of Hydri	c Soils:
	, ,			` '				
	•						Other (Expla	in in Remarks)
				, ,				
	` '			,	,			
	-	(444)		` '				
	,	(A11)		, ,			³ The hydric soil inc	licators have been undated to
	` '			, ,	7)		•	·
	Willicial (O1)			· ·	')		· ·	
	eat or Peat (S3)		Redox Debr	essions (F8)			in the United St	ates. Version 8.0. 2016.
5 cm Mucky P			Redox Depr	essions (F8)			in the United St	ates, Version 8.0, 2016.
5 cm Mucky P			Redox Depr	essions (F8)			in the United St	ates , Version 8.0, 2016.
5 cm Mucky P estrictive Layer (i Type:	if observed):		Redox Depr	essions (F8)		Hydric		
5 cm Mucky P Restrictive Layer (i Type:	if observed):		Redox Depr	essions (F8)		Hydric		
5 cm Mucky P estrictive Layer (i Type: Depth (inches) marks:	if observed):		Redox Depr	essions (F8)		Hydric		
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks:	if observed):		Redox Depr	essions (F8)		Hydric		
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY //etland Hydrology	if observed):	ic required; che		essions (F8)		Hydric	Soil Present?	Yes <u>X</u> No
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY //etland Hydrology	if observed): : / Indicators: (minimum of one	is required: che	eck all that apply)		2)	Hydric	Soil Present?	Yes X No
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology Primary Indicators (Surface Water	if observed): if i	is required: che	eck all that apply) Water-Stain	ed Leaves (B	9)	Hydric	Secondary Indicate	Yes X No ors (minimum of two required) Cracks (B6)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology /cimary Indicators (Surface Water High Water Ta	/ Indicators: (minimum of one r (A1) able (A2)	is required: che	eck all that apply) Water-Stain Aquatic Fau	ed Leaves (B		Hydric	Secondary Indicate Surface Soil Drainage Pa	Yes X No
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Ta X Saturation (A3	/ Indicators: (minimum of one r (A1) able (A2)	is required: che	eck all that apply) Water-Stain Aquatic Fau True Aquatic	ed Leaves (Bt na (B13) c Plants (B14))	Hydric	Secondary Indicate Surface Soil Drainage Pa Dry-Season	Yes X No
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (y Indicators: (minimum of one r (A1) able (A2) (B1)	is required: che	eck all that apply) Water-Stain Aquatic Fau True Aquati Hydrogen S	ed Leaves (Bena (B13) c Plants (B14) ulfide Odor (C	1 (1)		Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur	Yes X No
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology /rimary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep	/ Indicators: (minimum of one r (A1) able (A2) (B1) posits (B2)	is required: che	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh	ed Leaves (Bena (B13)) c Plants (B14) ulfide Odor (Coizospheres or	i1) n Living Roof		Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	Yes X No
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY fetland Hydrology rimary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep X Drift Deposits	/ Indicators: (minimum of one r (A1) able (A2) (B1) posits (B2) (B3)	is required: che	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh	ed Leaves (B na (B13) c Plants (B14) ulfide Odor (C izospheres or Reduced Iror	n 11) n Living Room n (C4)	ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology Primary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep X Drift Deposits Algal Mat or C	/ Indicators: (minimum of one r (A1) able (A2) 83) (B1) cosits (B2) (B3) crust (B4)	is required: che	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leaves (Bona (B13) c Plants (B14) ulfide Odor (C izospheres or Reduced Iror Reduction in	n 11) n Living Room n (C4)	ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY etland Hydrology rimary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep X Drift Deposits Algal Mat or C Iron Deposits	y Indicators: (minimum of one r (A1) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5)	•	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves (Bena (B13)) c Plants (B14) ulfide Odor (Cizospheres or Reduced Iror Reduction in Surface (C7)	n 11) n Living Room n (C4)	ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY Vetland Hydrology rimary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep X Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis	/ Indicators: (minimum of one r (A1) able (A2) (B1) cosits (B2) (B3) crust (B4)	agery (B7)	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves (Bona (B13) c Plants (B14) ulfide Odor (C izospheres or Reduced Iror Reduction in	n Living Roof n (C4) Tilled Soils (ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology /etland Hydrology Primary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep X Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Sparsely Vege	y Indicators: (minimum of one r (A1) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Imagetated Concave Separated	agery (B7)	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves (Bena (B13)) c Plants (B14) ulfide Odor (Colizospheres or Reduced Iror Reduction in Courface (C7) fell Data (D9)	n Living Roof n (C4) Tilled Soils (ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology /etland	if observed): if indicators: (minimum of one of the original original original original original original original original	agery (B7)	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves (Bena (B14)) c Plants (B14) ulfide Odor (Colizospheres or Reduced Iror Reduction in Courface (C7) fell Data (D9) ain in Remarks	n Living Roof n (C4) Tilled Soils (ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
5 cm Mucky P estrictive Layer (i Type: Depth (inches) emarks: YDROLOGY /etland Hydrology /etland	/ Indicators: (minimum of one r (A1) able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) sible on Aerial Imagetated Concave Security	agery (B7) Surface (B8)	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves (Bina (B13)) c Plants (B14) ulfide Odor (Cizospheres or Reduced Iror Reduction in Surface (C7) ell Data (D9) ain in Remarks	n Living Roof n (C4) Tilled Soils (ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
5 cm Mucky P lestrictive Layer (i Type: Depth (inches) emarks: PYDROLOGY Vetland Hydrology Primary Indicators (Surface Water High Water Ta X Saturation (A3 Water Marks (Sediment Dep X Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis	if observed): if indicators: (minimum of one of (A1)) (B1) (B3) (B3) (B3) (B3) (B4) (B5) (B5) (B5) (B5) (B5) (B5) (B5) (B5	agery (B7) Surface (B8) Yes No	eck all that apply) Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves (Bena (B13)) c Plants (B14) ulfide Odor (Caizospheres or Reduced Iror Reduction in Surface (C7) ell Data (D9) ain in Remarks b): NA NA	at 1) In Living Room In (C4) Tilled Soils (ts (C3)	Secondary Indicate Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Yes X No Ors (minimum of two required) Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)

Project/Site:	Arche Solar						City/County	/: Fayette/Fulton			Sampling Date	e: 10/22/2019
Applicant/Owner:	7X Energy						State	e: <u>OH</u>	Sampling Point:		dp12	2
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsh	nip, Range: S22 T9S R	.1E		
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Loc	cal relief (concave, con	vex, none): no	one	
Slope (%):	4%	Lat:		41.672028	348		Long:	-8	4.28244154		Datum: NA	D83 UTM16N
Soil Map Unit Nam	e: Lenawee silty clay l	oam, 0 to 1 p	ercent slopes (Lf)							NWI classific	ation: Non	ne
Are climatic / hydro	ologic conditions on the	e site typical	for this time of yea	r?			Yes	X No	(If no, explain in	า Remarks.)		
Are Vegetation	<u> </u>	, Soil	N	, or Hydrology	N	significantly dis	sturbed?	Are "Norm	al Circumstances" pres	sent?	Yes X	No
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally proble	ematic?	(If needed	, explain any answers i	n Remarks.)		
SUMMARY OF	FINDINGS Att	ach site r	nap showing	sampling point l	ocation	s, transects, in	nportant featu	res, etc.				
	egetation Present?			Yes		No x		Sampled Ar	ea			
Hydric Soil Pre				Yes	-	No X		n a Wetland?		Yes	No	X
Wetland Hydro	logy Present?			Yes	_	No X	_					
Remarks:	lla a a i a waiti a		- Indonés									
VEGETATION	Use scientific	names or	piants.			Absolute	Dominant	Indicator				
Tree Stratum (Plot	t size: 30' radius)					% Cover	Species?	Status	Dominance Test w	orksheet:		
1. Morus alba	,					20%	Yes	FAC				
2. Juglans nigra						10%	Yes	FACU	Number of Dominar	ıt Species		
3. Ulmus rubra						5%	No	FAC	That Are OBL, FAC	W, or FAC:	3	(A)
4. Fraxinus penns	sylvanica					5%	No No	FACW				` '
5.	-								Total Number of Do	minant		
						40%	= Total Cover		Species Across All	Strata:	7	(B)
Sapling/Shrub Stra	tum (Plot size: 15' rac	lius)							Percent of Dominan	t Species		
Ulmus america	ana					5%	Yes	FACW	That Are OBL, FAC	W, or FAC:	43%	% (A/B)
2. Juglans nigra						10%	Yes	FACU				
3. Fraxinus penns	sylvanica					5%	Yes	FACW				
4.									Prevalence Index w	orksheet:		
5.												
						20%	= Total Cover		Total % Co	ver of:	Mu	Itiply by:
							_		That Are OBL, FAC	V, or FAC:		A/B
Herb Stratum (Plo	t size: 5' radius)								OBL species		x1 =	
1. Bromus inermi	is					60%	Yes	FACU	FACW species	25%	x2 =	0.50
2. Phalaris arund	linacea					10%	No	FACW	FAC species	30%	x3 =	0.90
3. Hesperis matro	onalis					25%	Yes	FACU	FACU species	115%	x4 =	4.60
4. Solidago altiss	ima					10%	No	FACU	UPL species		x5 =	
5. Verbena urticif	olia					5%	No	FAC	Column Totals:	170%	(A)	6.00 (B)
6												
7									Prevale	nce Index = B/	A =	3.53
8												
9												
10									Hydrophytic Veget	ation Indicato	irs:	
11							_					
12									1-Rapid Te	st for Hydroph	nytic Vegetation	n
13.							_			ce Test is >50		
14							_			ce Index is ≤3.		
15							_		4-Morpholo	gical Adaptati	ions ¹ (Provide s	supporting
16							_				separate shee	
17							_		Problemat	ic Hydrophytic	: Vegetation ¹ (E	Explain)
18							_					
19							_		¹ Indicators of hydric	soil and wetla	nd hydrology n	nust
20							_		be present, unless of	listurbed or pr	oblematic.	
						110%	= Total Cover					
Woody Vine Stratu	m (Plot size: 30' radi	us)							Hydrophytic			
1							_		Vegetation			
2							_		Present?	Yes	No X	_
1							= Total Cover					
Remarks: (Include	photo numbers here o	or on a separ	ate sheet.)									

SUIL							Samp	oling Point:	ap12
Profile Desc	ription: (Describe to	the depth needed	to document t	he indicator or co	onfirm the al	bsence of	findicators.)		
Depth	Matrix			Redox Features			· ,		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-20"	10YR 4/2	100	, ,				Silty Clay Loam		
U-2U	101114/2						Only Olay Loan		
¹ Type: C=C	Concentration, D=Deple	ation RM-Reduced	Matrix CS-Co	vered or Coated 9	Sand Grains	² Location	on: PL=Pore Lining	M-Matriy	
Hydric Soil I		elion, Nivi-Neduced	Matrix, C3-C0	vered or Coaled S	dilu Giallis.		Indicators of Hydr		
Histoso			Sandy G	Gleyed Matrix (S4)		1631	=	nese Masses (F1)	2)
	Epipedon (A2)			Redox (S5)				w Dark Surface (F	·
	Histic (A3)			Matrix (S6)				ain in Remarks)	22)
	en Sulfide (A4)			rface (S7)			Other (Expire	alli ili Relliarks)	
	ed Layers (A5)			mace (57) Mucky Mineral (F1)				
	luck (A10)			olucky Milierai (F i Gleyed Matrix (F2)	•				
	ed Below Dark Surface	- (Δ11)		d Matrix (F3)	•				
	Dark Surface (A12)	<i>(</i> A11)		Dark Surface (F6)			³ The hydric soil in	dicators have hee	an undated to
	Mucky Mineral (S1)			d Dark Surface (F	7)		•	e Field Indicators	•
	lucky Peat or Peat (S3	1)		Depressions (F8)	')			tates, Version 8.0	-
		·')					III the office c	tates, version o.	5, 2010.
	_ayer (if observed):								
Type:									
Depth (i	inches):					Hydric	Soil Present?	Yes	NoX
1)/DD01	001								
YDROL									
_	drology Indicators:	- ii	-11 41411 ()				loddddd	(mainima a.	h
	cators (minimum of on	e is required: check		Stained Leaves (PC	2)		Secondary Indicat	•	two requirea)
	e Water (A1)			Stained Leaves (BS	9)			Cracks (B6)	
	/ater Table (A2)			Fauna (B13)				atterns (B10)	
	tion (A3)			uatic Plants (B14)				Water Table (C2)
	Marks (B1)			en Sulfide Odor (C	•	(00)	Crayfish Bu	, ,	(00)
	ent Deposits (B2)			d Rhizospheres or	_	s (C3)		isible on Aerial Ir	• • • •
	eposits (B3)			e of Reduced Iron				Stressed Plants (D)1)
	lat or Crust (B4)			Iron Reduction in	Tilled Soils (C	26)		Position (D2)	
	eposits (B5)			ick Surface (C7)			FAC-Neutra	l Test (D5)	
	tion Visible on Aerial Ir	3 , (,		or Well Data (D9)					
Sparse	ly Vegetated Concave	Surface (B8)	Other (E	Explain in Remarks	s)				
Field Observ	vations:								
Surface Wat	er Present?	Yes No X	Depth (inc	ches): NA					
Water Table	Present?	Yes No X	Depth (inc	ches): NA					
Saturation P	resent?	Yes No X	Depth (inc	ches): NA	Wetland	Hydrolog	gy Present?	Yes	No X
(includes ca	pillary fringe)		<u> </u>		<u> </u>				_ _
	corded Data (stream o	gauge, monitoring w	ell, aerial photo	s, previous inspec	ctions), if ava	ilable:			
Remarks:									

Project/Site:	Arche Solar						City/County:	Fayette/Fulton			Sampling D	ate: 10/22/2019	9
Applicant/Owner:	7X Energy						State:	ОН	Sampling Point	:	dr	o13	
Investigator(s):	Ben Hess & Maggie	Mason						Section, Townsl	hip, Range: S22 T9S F	₹1E			
Landform (hillslope	e, terrace, etc.):		Stream Terrace					Lo	cal relief (concave, cor	ıvex, none): c	oncave		
Slope (%):	1%	Lat	:	41.6724566	1	_	Long:	-8	34.28356941		Datum: <u>N</u>	IAD83 UTM16N	N
Soil Map Unit Nam	e: Shinrock silty clay lo	oam, 2 to 6	percent slopes, erc	oded (SfB2)						NWI classific	cation: <u>N</u>	lone	
Are climatic / hydro	ologic conditions on the	e site typical	for this time of year	ar?			Yes_	X No	(If no, explain i	n Remarks.)			
Are Vegetation	N	, Soil	N	, or Hydrology	N	_significantly distu	rbed?	Are "Norm	nal Circumstances" pre	sent?	Yes _	X No	_
Are Vegetation	N	, Soil	N	, or Hydrology	N	_naturally problem	atic?	(If needed	, explain any answers	in Remarks.)			
SUMMARY OF	FINDINGS Att	ach site	map showing	sampling point lo	cations, t	ransects, imp	ortant feature	es, etc.					
Hydrophytic Ve	egetation Present?	?		Yes x	N	lo	Is the	Sampled A	·ea				
Hydric Soil Pre				Yes		10 X	within	a Wetland?	•	Yes	No_	X	
Wetland Hydro	logy Present?			Yes x	١	10							
Remarks:													
VEGETATION	Use scientific	names o	f plants.			A la a a la séa	Daminant	lo di e et e e	<u> </u>				
Tree Stratum (Plot	t size: 30' radius)					Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w	vorksheet:			
Acer saccharul						40%	Yes	FACU		ornoneou.			
Acer saccharing						10%	No	FACW	Number of Domina	nt Species			
3. Ulmus rubra						25%	Yes	FAC	That Are OBL, FAC			5 (A))
4.										.,	_	()	,
5.									Total Number of Do	ominant			
						75% =	= Total Cover		Species Across All			6 (B)	.)
									'				,
Sapling/Shrub Stra	<u>ıtum</u> (Plot size: 15' rac	lius)							Percent of Dominal	nt Species			
1.									That Are OBL, FAC		8	33% (A	/B)
2.												·	
3.													
4.									Prevalence Index v	vorksheet:			
5.													
						=	= Total Cover		Total % Co	over of:	ı	Multiply by:	
									That Are OBL, FAC	√, or FAC:		A/I	В
Herb Stratum (Plo	t size: 5' radius)			_					OBL species	15%	x1 =	0.15	
1. Toxicodendron	n radicans					15%	Yes	FAC	FACW species	26%	x2 =	0.52	_
2. Geum canadei	nse					25%	Yes	FAC	FAC species	107%	x3 =	3.21	_
3. Impatiens cape	ensis					5%	No	FACW	FACU species	40%	x4 =	1.60	
4. Elymus virginio	cus					5%	No	FACW	UPL species		x5 =		_
5. Persicaria pun	ctata					10%	No	OBL	Column Totals:	188%	(A)	5.48	(B)
6. Carex grayi						5%	No	FACW					
7. Symphyotrichu						25%	Yes	FAC	Prevale	ence Index = B	/A =	2.91	
8. Glyceria striata	9					2%	No	OBL					
9. Pilea pumila						1%	No	FACW					
10. Persicaria virgi						2%	No	FAC	Hydrophytic Vege	ation Indicate	ors:		
11. Boehmeria cyli						3%	No	OBL					
12. Ranunculus sa	ardous					15%	Yes	FAC		est for Hydroph	-	tion	
13.									X 2-Domina				
14										nce Index is ≤3			
15										ogical Adaptat		-	
16.										emarks or on a			
17									Problema	tic Hydrophytic	vegetation	(⊏xpiain)	
18.									1 Indiantary 201	ooil	الماميط المسم	14 mars = 4	
19.									¹ Indicators of hydric		-	y must	
20									be present, unless	disturbed or pr	roblematic.		
						113% :	= Total Cover						
	(2)												
Woody Vine Stratu	ı <u>m</u> (Plot size: 30' radiı	ıs)							Hydrophytic				
1									Vegetation				
2									Present?	Yes_	X No_		
							= Total Cover						
	-												
Remarks: (Include	e photo numbers here o	or on a sepa	rate sheet.)										

SOIL							Samp	ling Point:	dp13
Profile Desc	ription: (Describe to t	he depth needed to	o document the in	dicator or co	onfirm the a	bsence of	indicators.)		
Depth	Matrix		Red	ox Features					
(inches)	Color (moist)		olor (moist)	%	Type ¹	Loc ²	Texture	Ren	marks
0-20"	10YR 4/2	100					Silty Clay Loam		
			_						
· ·						_			
				-					
Type: C=C	 Concentration, D=Deplet	ion RM=Reduced N	Matrix CS=Covered	d or Coated S	and Grains	² l ocatio	n: PL=Pore Lining,	M=Matrix	
	ndicators ³ :	ion, ravi reduced i	viatrix, GG GGVerec	a or ocalca c	ana Oramo.		Indicators of Hydri		
Histoso			Sandy Gleye	d Matrix (S4)				iese Masses (F12	<u>'</u>)
	Epipedon (A2)	-	Sandy Redox					v Dark Surface (F:	•
Black H	Histic (A3)		Stripped Mat	rix (S6)			Other (Expla	in in Remarks)	
_ · ·	en Sulfide (A4)	<u>-</u>	Dark Surface	(S7)					
	ed Layers (A5)	-	Loamy Muck)				
	luck (A10)	-	Loamy Gleye						
	ed Below Dark Surface	(A11) -	Depleted Mat	` '			3		1 . 1 .
	Dark Surface (A12) Mucky Mineral (S1)	-	Redox Dark S Depleted Dar	, ,	7)		³ The hydric soil inc	cators nave bee	•
	lucky Peat or Peat (S3)	-	Redox Depre)			tates, Version 8.0	-
		-	Redex Bepre	330013 (1 0)			III tile eliited el		, 2010.
	_ayer (if observed):								
Type:	inches):					Hydric 9	Soil Present?	Yes	No 2
Dopui (ii						Tiyunc C	John Tesenti		
IYDROLO	OGY								
	drology Indicators:								
	cators (minimum of one	is required: check a	all that apply)				Secondary Indicate	ors (minimum of t	wo required)
Surface	e Water (A1)		Water-Staine	d Leaves (B9))		Surface Soil	Cracks (B6)	
X High W	ater Table (A2)	_	Aquatic Faun	ıa (B13)			Drainage Pa	tterns (B10)	
X Saturati	tion (A3)		True Aquatic	Plants (B14)			Dry-Season	Water Table (C2)	1
	Marks (B1)	-	Hydrogen Su	Ifide Odor (C	1)		Crayfish Bur		
	ent Deposits (B2)	-	Oxidized Rhiz	•	•	s (C3)		isible on Aerial Im	
	eposits (B3)	_	Presence of I					tressed Plants (D	1)
	lat or Crust (B4)	_	Recent Iron F		illed Soils (C6)		Position (D2)	
	eposits (B5)	-	Thin Muck Su				FAC-Neutral	Test (D5)	
	tion Visible on Aerial Im		Gauge or We		,				
Sparsel	ly Vegetated Concave S	Surface (B8)	Other (Explai	n in Remarks	5)				
ield Observ	vations:								
		Yes No _X	Depth (inches)						
Water Table		Yes X No	Depth (inches)					••	
Saturation P		Yes X No	Depth (inches)	: Surface	Wetland	Hydrolog	y Present?	Yes X	No
	pillary fringe) corded Data (stream ga	auge monitoring we	ll aerial photos pre	evious inspec	tions) if ava	ilahle [.]			
Pesoning IVE	ooraca Data (siteatii ye	ago, monitoring we	, αστιαί μποίσο, μπ	zvious irispec	, 11 ava	шаыс.			
Remarks:									

Project/Site:	Arche Solar						City/County:	Fayette/Fulton		Sampling Date: 10/22/2019
Applicant/Owner:	7X Energy						State:		Sampling Point:	dp14
Investigator(s):	Ben Hess & Maggie Maso	n							ip, Range: S22 T9S R1E	
Landform (hillslope,		Stream Terrace							al relief (concave, convex, none):	concave
Slope (%):	4%	Lat:	41.6721902	5			Long:		1.28325446	Datum: NAD83 UTM16N
Soil Map Unit Name	e: Shinrock silty clay loam, 2	to 6 percent slopes, ero	ded (SfB2)						NWI classif	ication: None
Are climatic / hydrol	logic conditions on the site t	ypical for this time of yea	r?				Yes	X No	(If no, explain in Remarks.)	·
Are Vegetation	N , Sc	oil N	, or Hydrology	N	significa	ntly dist	urbed?	Are "Norma	al Circumstances" present?	Yes X No
Are Vegetation	N , Sc	oil N	, or Hydrology	N	naturally	probler	matic?	(If needed,	explain any answers in Remarks.)	
SUMMARY OF	FINDINGS Attach	site map showing	sampling point lo	cations	s, transec	ts, im _l	portant featur	es, etc.		
Hydrophytic Ve	getation Present?		Yes x		No		Is the	Sampled Are	ea	
Hydric Soil Pres	sent?		Yes		No	Χ	within	a Wetland?	Yes	No <u> </u>
Wetland Hydrol	ogy Present?		Yes x		No		-			
Remarks: VEGETATION	Use scientific name	es of plants.								
T 01 1 (D) 1						olute	Dominant	Indicator		
Tree Stratum (Plot	size: 30' radius)					Cover	Species?	Status	Dominance Test worksheet:	
1. Acer rubrum						0%	Yes	FAC		
2. Juglans nigra						5%	No No	FACU	Number of Dominant Species	
3. Fraxinus penns	yıvanıca					5%	No	FACW	That Are OBL, FACW, or FAC:	6 (A)
4. 5.									Total Number of Dominant	
5.						0%	= Total Cover		Species Across All Strata:	6 (B)
					0	0 70	- Total Cover		Species Across Air Strata.	(B)
Sanling/Shrub Strat	um (Plot size: 15' radius)								Percent of Dominant Species	
Crataegus molli		•			F	5%	Yes	FAC	That Are OBL, FACW, or FAC:	100% (A/B)
Aesculus glabra						5%	Yes	FAC		(**=)
Fraxinus penns						0%	Yes	FACW		
4.	,						·		Prevalence Index worksheet:	
5.							·			
					2	0%	= Total Cover		Total % Cover of:	Multiply by:
							-		That Are OBL, FACW, or FAC:	A/B
Herb Stratum (Plot	size: 5' radius)		=,						OBL species	x1 =
1. Toxicodendron	radicans				3	5%	Yes	FAC	FACW species 85%	x2 = 1.70
2. Elymus virginic	us				2	0%	No	FACW	FAC species 105%	x3 = 3.15
Carex grayi					5	0%	Yes	FACW	FACU species 5%	x4 = 0.20
4. Symphyotrichui	m lanceolatum				1	0%	No	FAC	UPL species	x5 =
5									Column Totals: 195%	(A) 5.05 (B)
6							<u> </u>			
7									Prevalence Index = I	B/A = 2.59
8										
9							·		Hardwards Manadation Indian	·
11.							. ———		Hydrophytic Vegetation Indicat	lors.
12.									1-Rapid Test for Hydrop	obutic Vegetation
13.							·		X 2-Dominance Test is >5	
14.							·		3-Prevalence Index is ≤	
15.							. ———			itions ¹ (Provide supporting
16.							-		data in Remarks or on	
17.							-			ic Vegetation ¹ (Explain)
18.							·			
19.									¹ Indicators of hydric soil and wet	and hydrology must
20.							-		be present, unless disturbed or p	problematic.
						5%	= Total Cover			
Woody Vine Stratur	n (Plot size: 30' radius)								Hydrophytic	
1									Vegetation	
2.									Present? Yes	X No
							= Total Cover			
Remarks: (Include	photo numbers here or on a	separate sheet.)								

rofile Descr	iption: (Describe to th	e depth nee	ded to document the	indicator or c	onfirm the a	bsence o	f indicators.)	
Depth	Matrix			edox Features	- 1	. 2		
(inches)	Color (moist)	%	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks
0-20"	10YR 4/2	100					Silty Clay Loam	
							· -	
 .								
	oncentration, D=Depletion	on, RM=Redu	uced Matrix, CS=Cover	ed or Coated S	Sand Grains.		on: PL=Pore Lining	
ydric Soil Ir			0 1 0	1.5.4 () () ()		Test	Indicators of Hydi	
Histosol	` '			ed Matrix (S4))			inese Masses (F12)
	pipedon (A2)		Sandy Red Stripped Ma	. ,				w Dark Surface (F22) ain in Remarks)
	istic (A3) en Sulfide (A4)		Dark Surface				Other (Expi	alli ili Nelliaiks)
	d Layers (A5)			cky Mineral (F1	1)			
	uck (A10)			yed Matrix (F2	,			
	d Below Dark Surface (A	\11)	Depleted M		,			
	ark Surface (A12)	,		Surface (F6)			³ The hydric soil ir	ndicators have been updated to
	Mucky Mineral (S1)			ark Surface (F	7)			e Field Indicators of Hydric Soils
	ucky Peat or Peat (S3)			ressions (F8)	,		in the United S	States, Version 8.0, 2016.
Restrictive L	ayer (if observed):							
Type:	,							
ιyρ c .								
Depth (in	nches):					Hydric	Soil Present?	Yes No
Depth (in	nches):					Hydric	Soil Present?	Yes No
Depth (in	nches):					Hydric	Soil Present?	Yes No
Depth (in	nches):					Hydric	Soil Present?	YesNo
Depth (in	nches):					Hydric	Soil Present?	Yes No
Depth (in	nches):					Hydric	Soil Present?	Yes No
Depth (in						Hydric	Soil Present?	Yes No
Depth (ir	DGY					Hydric	Soil Present?	Yes No
Depth (ir emarks:	DGY rology Indicators:	s required: cl	neck all that apply)			Hydric		
Depth (in permarks: YDROLC Vetland Hydromary Indicates	OGY rology Indicators: ators (minimum of one is	s required: cl		ned Leaves (B	9)	Hydric	Secondary Indica	ntors (minimum of two required)
Depth (ir emarks: YDROLC Vetland Hydromary Indications Surface	OGY rology Indicators: ators (minimum of one is Water (A1)	s required: cl	Water-Stair	ned Leaves (B	9)	Hydric	Secondary Indica	ntors (minimum of two required) il Cracks (B6)
Depth (in permarks: YDROLO	OGY rology Indicators: ators (minimum of one is Water (A1) ater Table (A2)	s required: cl	Water-Stair Aquatic Fat			Hydric	Secondary Indica Surface So Drainage P	ntors (minimum of two required)
Depth (in emarks: YDROLC	OGY rology Indicators: ators (minimum of one is Water (A1) ater Table (A2)	s required: cl	Water-Stair Aquatic Fau True Aquat	una (B13))	Hydric	Secondary Indica Surface So Drainage P	ntors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2)
Depth (in permarks: YDROLC	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3)	s required: cl	Water-Stair Aquatic Fai True Aquat Hydrogen S	una (B13) ic Plants (B14)) C1)		Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu	ntors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2)
Depth (in permarks: YDROLC	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) farks (B1)	s required: cl	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R	una (B13) ic Plants (B14) Sulfide Odor (C) C1) n Living Root		Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu	ntors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8)
Primary Indication X High Water M Sedimer Drift Dep	rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	s required: cl	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres o) C1) n Living Root n (C4)	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	ntors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Depth (in permarks: YDROLC	POGY rology Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3)	s required: ch	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres of f Reduced Iron) C1) n Living Root n (C4)	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (in permarks: YDROLC	or o		Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres or f Reduced Iron n Reduction in) C1) n Living Root n (C4)	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation S Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (in emarks: IYDROLC Vetland Hydr Primary Indica Surface X High Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati	or Crust (B4) posits (B5)	gery (B7)	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck Gauge or V	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres or f Reduced Iron n Reduction in Surface (C7)) n Living Root n (C4) Tilled Soils (G	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation S Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (in Depth	or vegetated Concave Su	gery (B7)	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck Gauge or V	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres or f Reduced Iron Reduction in Surface (C7) Vell Data (D9)) n Living Root n (C4) Tilled Soils (G	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation S Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (in Primary Indication Surface X High Water M Sedimer Drift Dep Algal Material Iron Dep Inundatitis Sparsely Field Observation	or very series of the series o	gery (B7) urface (B8)	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck Gauge or V Other (Expl	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres or f Reduced Iron n Reduction in Surface (C7) Vell Data (D9) lain in Remark) n Living Root n (C4) Tilled Soils (G	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation S Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (in Depth	pogy Indicators: ators (minimum of one is Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial Image y Vegetated Concave Su ations:	gery (B7)	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck Gauge or V Other (Expl	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres or f Reduced Iron n Reduction in Surface (C7) Vell Data (D9) lain in Remark s): NA) n Living Root n (C4) Tilled Soils (G	es (C3)	Secondary Indica Surface So Drainage P Dry-Seasor Crayfish Bu Saturation S Stunted or X Geomorphi	tors (minimum of two required) il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)

Sparsely Vegetated Concave Surface (B8)

Other (Explain in Remarks)

Field Observations:

Surface Water Present?

Yes No X Depth (inches): NA
Water Table Present?

Yes X No Depth (inches): 3"
Saturation Present?

Yes X No Depth (inches): Surface
Wetland Hydrology Present?

Yes X No
Includes capillary fringe)

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

Remarks:

Project/Site:	Arche Solar				City	y/County	: Fayette/Fulton		Sampling Date: 10/22/2019
Applicant/Owner:	7X Energy				· · · · · · · · · · · · · · · · · · ·	State	: OH	Sampling Point:	dp15
Investigator(s):	Ben Hess & Maggie	Mason					Section, Townshi	p, Range: S28 T9S R1E	
Landform (hillslope,	terrace, etc.):	Stream Terr	ace				Loc	al relief (concave, convex, none):	concave
Slope (%):	5%	Lat:	41.6651479		Long:		-84	.28936123	Datum: NAD83 UTM16N
Soil Map Unit Name	: Sloan silty clay loam	frequently flooded (So)						NWI classifi	cation: None
Are climatic / hydrol	ogic conditions on the	site typical for this time of	f year?			Yes	X No	(If no, explain in Remarks.)	
Are Vegetation	N	, Soil N	, or Hydrology	N significantl	y disturbed?	-	Are "Norma	l Circumstances" present?	Yes X No
Are Vegetation	N	, Soil N	, or Hydrology	N naturally p	roblematic?		(If needed,	explain any answers in Remarks.)	
SUMMARY OF	FINDINGS Atta	ch site map show	ing sampling point lo	ations, transects	, important	featur	res, etc.		
Hydrophytic Ved	getation Present?		Yes	No x		Is the	Sampled Are	a	
Hydric Soil Pres			Yes	No X		within	n a Wetland?	Yes	No <u>x</u>
Wetland Hydrol	ogy Present?		Yes x	No					_
VEGETATION - Tree Stratum (Plot 1.	Use scientific r	names of plants.		Absoli % Co		inant	Indicator Status	Dominance Test worksheet:	
2.								Number of Dominant Species	
3.								That Are OBL, FACW, or FAC:	0 (A)
J								That Ale Obl., FACW, of FAC.	(A)
5.								Total Number of Dominant	
					= Total C	Cover		Species Across All Strata:	1 (B)
								'	
Sapling/Shrub Strate 1. 2.	um (Plot size: 15' radi	us)						Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
3.									
4.								Prevalence Index worksheet:	
5.									
					= Total C	Cover		Total % Cover of:	Multiply by:
								That Are OBL, FACW, or FAC:	A/B
Herb Stratum (Plot	size: 5' radius)							OBL species	x1 =
1. Glycine max				90%	Y	es	UPL	FACW species	x2 =
2.								FAC species	x3 =
3.								FACU species	x4 =
4								UPL species 90%	x5 = 4.50
5								Column Totals: 90%	(A) 4.50 (B)
6									
7								Prevalence Index = E	3/A = 5.00
8									
9									
10								Hydrophytic Vegetation Indicat	ors:
11.									
12.								1-Rapid Test for Hydrop	
13.								2-Dominance Test is >5 3-Prevalence Index is ≤	
14. 15.									tions ¹ (Provide supporting
16.								data in Remarks or on	· · · · · ·
17.									ic Vegetation ¹ (Explain)
18.									o regenation (Explain)
19.								¹ Indicators of hydric soil and wetl	and hydrology must
20.								be present, unless disturbed or p	
				90%	= Total C	Cover		, , , , , , , , , , , , , , , , , , , ,	
				30 //	. 5.6.1				
Woody Vine Stratun	n (Plot size: 30' radiu	s)						Hydrophytic	
1.								Vegetation	
2.								-	No X
					= Total C	Cover		_	
									
Remarks: (Include	photo numbers here o	on a separate sheet.)				_			

SOIL							Samp	ling Point:	dp15	
		he depth need	ed to document the in		onfirm the a	bsence o	f indicators.)			
Depth (inches)	Matrix	%		ox Features	Type ¹	Loc ²	Toytura	Do	um arlea	
(inches)	Color (moist)		Color (moist)	<u></u> %	туре	LOC	Texture	Re	emarks	
0-20"	10YR 4/2	100					Clay Loam			
							·			
							· .			
		ion, RM=Reduc	ed Matrix, CS=Covered	d or Coated S	and Grains.	² Locati	on: PL=Pore Lining,	M=Matrix.		
Hydric Soil I	ndicators ³ :					Test	Indicators of Hydri			
Histoso	` '		Sandy Gleye					nese Masses (F1	,	
	pipedon (A2)		Sandy Redox					w Dark Surface (F	- 22)	
	listic (A3)		Stripped Mate				Other (Expla	ain in Remarks)		
	en Sulfide (A4) ed Layers (A5)		Loamy Muck	` '	١					
	uck (A10)		Loamy Gleye		•					
	ed Below Dark Surface	(A11)	Depleted Mat	, ,						
	ark Surface (A12)	()	Redox Dark				³ The hydric soil inc	dicators have bee	en updated to	
	Mucky Mineral (S1)		Depleted Dar		7)			e Field Indicators		
	ucky Peat or Peat (S3)		Redox Depre		•		in the United S	tates, Version 8.	0, 2016.	
Restrictive L Type:	ayer (if observed):	_								
Depth (ii	nches):					Hydric	Soil Present?	Yes	No	X
Remarks:										
HYDROLO	OGY									
Wetland Hyd	Irology Indicators:									
Primary Indic	cators (minimum of one	is required: che	eck all that apply)				Secondary Indicat	ors (minimum of	two required)	
Surface	Water (A1)		Water-Staine	d Leaves (B9	9)		Surface Soil	Cracks (B6)		
High W	ater Table (A2)		Aquatic Faun	ıa (B13)			Drainage Pa	atterns (B10)		
Saturati	ion (A3)		True Aquatic	Plants (B14)			Dry-Season	Water Table (C2	<u>'</u>)	
Water N	Marks (B1)		Hydrogen Su	•	,		Crayfish Bur	` ,		
	ent Deposits (B2)		Oxidized Rhi	-	-	s (C3)		isible on Aerial Ir	. ,	
	posits (B3)		Presence of I					Stressed Plants (D) 1)	
	at or Crust (B4)		Recent Iron F		Filled Soils (C	C6)		Position (D2)		
	posits (B5)		Thin Muck Su	urface (C7)			FAC-Neutra	l Test (D5)		
	ion Visible on Aerial Im		Gauge or We	, ,						
Sparsel	ly Vegetated Concave S	Surface (B8)	Other (Explai	n in Remarks	5)					
Field Observ	vations:									
Surface Water	er Present?	Yes No _	X Depth (inches)	: NA						
Water Table		Yes X No	Depth (inches)	: 3"						
Saturation Pr		Yes X No	Depth (inches)	: Surface	Wetland	Hydrolo	gy Present?	Yes X	No	
(includes cap	ollary fringe)				<u> </u>					

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

Remarks:

Site:	w01		Rater(s):	BRH & MM	Date:	October 21, 2019
1	1	Metric 1. Wetland Area (size).	Project:	Arche Solar		
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pt 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2 pts) X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pts) <0.1 acres (0.04ha) (0 pts)	ts)	- Autoric Solar		
7	8	Metric 2. Upland buffers and su	ırrounding	land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only of WIDE. Buffers average 50m (164ft) or X MEDIUM. Buffers average 25m to <50 NARROW. Buffers average 10m to <29 VERY NARROW. Buffers average <10m very NARROW. Buffers average <10m very LOW. 2nd growth or older fores X LOW. Old field (>10 years), shrubland, MODERATELY HIGH. Residential, fenc X HIGH. Urban, industrial, open pasture	one and assign some are around wom (82 to <164f 5m (32ft to <82 ft) around to condition (32ft) around the check, prairie, savand, young second and pasture, par	core. Do not double check vetland perimeter (7) t) around wetland perimet ft) around wetland perimed develand perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) k, conservation tillage, nev	er (4) ter (1)	
24	32	Metric 3. Hydrology				
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or strear 3c. Maximum water depth. Select only one and	m) (5)	Part of wet X Part of ripa 3d. Duration inundation	oodplain (1) ream/lake and other land/upland (e.g. for rian or upland corrido	est), complex (1) or (1) ne or dbl check.
		>0.7 (27.6in) (3) X 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1)	_	X Regularly ir Seasonally Seasonally	nundated/saturated (inundated (2) saturated in upper 30	(3)
		3e. Modifications to natural hydrologic regime. X None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater in	observed point sou filling/gra road bed dredging	/RR track	
13	45	Metric 4. Habitat Alteration and D)evelopmei	nt.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double X None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and a	check and aver			
		Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2)	Ü			
		X Recovered (6)	k all disturbance mowing	shrub/sa	pling removal	
•	45 subtotal this page	Recovering (3) Recent or no recovery (1) X	grazing clearcutting selective cutt woody debris toxic pollutan	sedimen ing dredging removal farming		val
		<u> </u>				

Site:	w01		Rater(s):	BRH 8	& MM	Date:	October 21, 2019
	0		<u> </u>		<u> </u>		
			Project:	Arche	Solar		
	subtotal thi	s page					
		Metric 5. Special Wetlands					
ax 10 p	ts subtotal	Check all that apply and score as indicated. Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland (5) Lake Erie coastal/tributary wetland-u	unrestricted hydro	ology (10)	1		
		Lake Erie coastal/tributary wetland-r	•	0, , ,	,		
		Lake Plain Sand Prairies (Oak Openin	gs) (10)				
		Relict Wet Prairies (10) Known occurrence state/federal thre	eatened or endan	gered spe	ecies (10)		
		Significant migratory songbird/water	r fowl habitat or u	sage (10)			
		Category 1 Wetland. See Question 1 Not Applicable (0)	. Qualitative Ratin	g (-10)			
		Not Applicable (0)					
0	0	Metric 6. Plant communities, into	orenoreion r	nicrota	nograhy		
12v 20 n	ts subtotal	6a. Wetland Vegetation Communities.	Vegetation Co				
ιαλ 20 μ	is subtotal	Score all present using 0 to 3 scale.	0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Absent or comprises	<0.1ha (0.2471 a	cres) contiguous area
		Aquatic bed			Present and either co		
		Emergent Shrub	1		vegetation and is significant part b		ality, or comprises a
		0 Forest			Present and either co		
		Mudflats	2				ality or comprises a small
		Open water Other			part and is of hig Present and comprise	gn quality es significant pari	, or more, of wetland's
		6b. Horizontal (plan view) Interspersion.	3		vegetation and is		
		Select only one. High (5)	Narrativo Dos	crintian a	of Vegetation Quality		
		Moderately high (4)		cription c	Low spp diversity and	d/or predominan	ce of nonnative or
		Moderate (3)	low		disturbance tole		
		Moderately low (2) X Low (1)			Native spp are domin		of the vegetation, bance tolerant native spp
		None (0)	mod		can also be pres	ent, and species	diversity moderate to
		6c. Coverage of invasive plants. Refer					o presence of rare
		to Table 1 ORAM long form for list. Add or deduct points for coverage	-		threatened or er A predominance of n		h nonnative spp
		Extensive >75% cover (-5)	high		and/or disturbar	nce tolerant nativ	e spp absent or virtually
		Moderate 25-75% cover (-3)	111611				d often, but no always,
		X Sparse 5-25% cover (-1) Nearly absent <5% cover (0)	-		the presence of	rare, mreatened	or endangered spp
		Absent (1))pen Wat	er Class Quality	-	
		6d. Microtopography. Score all present using 0 to 3 scale.	0		Absent < 0.1ha (0.247 Present very small an		common
		Vegetated hummocks/tussocks	1		of marginal qual		Common
		Coarse woody debris >15cm (6in)	2		Present in moderate		
		Standing dead >25cm (10in) dbh O Amphibian breading pools			quality or in sma Present in moderate		
		o , an primaran areading pools	3		and of highest q	O	1.5
	7						
45	Grand Tota	l (max 100 pts)					
.5		(
afar to the	most recent OPA	M Score Calibration Papert for the scoring breakpaints between the	etland categories at th	a following a	addrace: http://www.one.stat	te oh us/dsw/401/401	html
eiei to thê	most recent OKAI	VI Score Calibration Report for the scoring breakpoints between w	recianu categories at th	e ioliowing a	iuuress: nitp://www.epa.stat	.e.on.us/usw/401/401	num
ommen	ts:						

Site:	w02		Rater(s):	BRH & MM	Date:	October 21, 2019
1	1	Metric 1. Wetland Area (size).	Project:	Arche Solar		
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2 pts) X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 p <0.1 acres (0.04ha) (0 pts)	5)	Arche Joiai		
4	5	Metric 2. Upland buffers and su	rrounding	land use		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only or WIDE. Buffers average 50m (164ft) or MEDIUM. Buffers average 25m to <50 X NARROW. Buffers average 10m to <25 VERY NARROW. Buffers average <10m 2b. Intensity of surrounding land use. Select one VERY LOW. 2nd growth or older forest X LOW. Old field (>10 years), shrubland, MODERATELY HIGH. Residential, fence X HIGH. Urban, industrial, open pasture,	ne and assign somore around with me (82 to <164fism (82ft to <82ft) around to or double check, prairie, savan young second and assure, parlied pasture, parlied and assure, parlied pasture,	core. Do not double check. vetland perimeter (7) t) around wetland perimeter ft) around wetland perimete d wetland perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) k, conservation tillage, new f	r (1)	
23	28	Metric 3. Hydrology				
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream 3c. Maximum water depth. Select only one and 3c. 7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. S	n) (5) assign score. Score one or do	Part of wetlan X Part of riparia 3d. Duration inundation/s Semi- to pern X Regularly inu Seasonally in Seasonally sa suble check and average.	dplain (1) am/lake and other I nd/upland (e.g. fore an or upland corrido aturation. Score on nanently inundated, ndated/saturated (3	est), complex (1) or (1) de or dbl check. /saturated (4)
		X None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	ll disturbances ditch tile dike weir stormwater ir	point source filling/grad road bed/R dredging	•	
13	41	Metric 4. Habitat Alteration and D	evelopmer	nt.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double of X None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and as Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check	check and avera	age.		
	41 subtotal this pag	X Recovered (6) Recovering (3) Recent or no recovery (1) X	mowing grazing clearcutting selective cutti woody debris toxic pollutan	shrub/sapli herbaceou: sedimentating dredging removal farming		val

pecial Wetlands oly and score as indicated. ol) obtained forest (10) e forested wetland (5) e coastal/tributary wetlar ie coastal/tributary wetlar ain Sand Prairies (Oak Ope Vet Prairies (10) occurrence state/federal ant migratory songbird/w ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. bed ent ts vater lan view) Interspersion.	nd-unrestricted hydrology nd-restricted hydrology (5 nings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1	d species (10) e (10) 10) rotopograhy.	rea
oly and score as indicated. (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	nd-unrestricted hydrology nd-restricted hydrology (5 nings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1 nterspersion, mice Vegetation Comm 0	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous a vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
oly and score as indicated. (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
oly and score as indicated. (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
oly and score as indicated. (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
o) over the forest (10) over t	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
powth forest (10) c forested wetland (5) rie coastal/tributary wetlar rain Sand Prairies (Oak Ope Vet Prairies (10) occurrence state/federal ant migratory songbird/w ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. c bed ent ts vater	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
e forested wetland (5) rie coastal/tributary wetlar rie coastal/tributary wetlar rie coastal/tributary wetlar ain Sand Prairies (Oak Ope Vet Prairies (10) occurrence state/federal ant migratory songbird/w. ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. bed ent ts vater	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
rie coastal/tributary wetlar ie coastal/tributary wetlar in Sand Prairies (Oak Ope Vet Prairies (10) occurrence state/federal ant migratory songbird/wry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. c bed ent	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
rie coastal/tributary wetlar ain Sand Prairies (Oak Ope Vet Prairies (10) occurrence state/federal ant migratory songbird/w. ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. c bed ent	nd-restricted hydrology (5 inings) (10) threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1) nterspersion, mice Vegetation Comm 0 1	rotopograhy. sunity Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous at vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
Vet Prairies (10) occurrence state/federal ant migratory songbird/w ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. bed ent ts vater	threatened or endangere ater fowl habitat or usage on 1 Qualitative Rating (-1 nterspersion, micro Vegetation Comm 0 1	rotopograhy. unity Cover Scale Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
occurrence state/federal ant migratory songbird/w.ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. c bed ent	nterspersion, mici Vegetation Comm 0	rotopograhy. unity Cover Scale Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
ry 1 Wetland. See Questic plicable (0) ant communities, i etation Communities. using 0 to 3 scale. c bed ent	nterspersion, mici Vegetation Comm 0	rotopograhy. unity Cover Scale Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
plicable (0) ant communities, i etation Communities. using 0 to 3 scale. bed ent ts	nterspersion, mic Vegetation Comm 0	rotopograhy. nunity Cover Scale Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
ant communities, i etation Communities. using 0 to 3 scale. c bed ent ts	Vegetation Comm 0	Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	ırea
etation Communities. using 0 to 3 scale. bed ent ts	Vegetation Comm 0	Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	ırea
etation Communities. using 0 to 3 scale. bed ent ts	Vegetation Comm 0	Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	rea
using 0 to 3 scale. c bed ent ts vater	1	Absent or comprises < 0.1ha (0.2471 acres) contiguous a Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprise significant part but is of low quality	irea
ent ts vater		vegetation and is of moderate quality, or comprise significant part but is of low quality	
ts vater		significant part but is of low quality	
vater	2		3 a
vater	2		i's
		vegetation and is of moderate quality or comprises	a small
lan view) Interspersion.		part and is of high quality Present and comprises significant part, or more, of wetl	and's
	3	vegetation and is of high quality	
)	Narrativo Docerint	cion of Vegetation Quality	
ately high (4)		Low spp diversity and/or predominance of nonnative or	:
ate (3)	low	disturbance tolerant native species	
, , ,			tive snn
	mod		
			e
	high		rtually
	ııığıı		
		the presence of rare, threatened, or endangered sp	ìħ
(1)			
	0		
	1	of marginal quality	
	2	Present in moderate amounts, but not of highest	
. ,			
olali bi cadilig pools	3	and of highest quality	
	ately low (2)) 0) nvasive plants. Refer long form for list. Add for coverage ive >75% cover (-5) ate 25-75% cover (-3) 5-25% cover (-1) absent <5% cover (0) (1) aphy. using 0 to 3 scale. ted hummocks/tussocks	ately low (2)) 0) mod nvasive plants. Refer long form for list. Add for coverage ive >75% cover (-5) ate 25-75% cover (-3) 5-25% cover (-1) absent <5% cover (0) (1) Mudflat and Oper aphy. using 0 to 3 scale. ted hummocks/tussocks woody debris >15cm (6in) ng dead >25cm (10in) dbh	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant na can also be present, and species diversity moderate moderately high, but generally w/o presence of rar threatened or endangered spp and/or disturbance tolerant native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native species diversity moderate moderately high, but generally w/o presence of rar threatened or endangered sp and/or disturbance tolerant native spp absent or vi absent, and high spp diversity and often, but no alves the presence of rare, threatened, or endangered sp absent <5% cover (-1) absent <5% cover (0) (1) Mudflat and Open Water Class Quality aphy. 0 Absent <0.1ha (0.247 acres) vegetation, although nonnative and/or disturbance tolerant native spp absent or vi absent, and high spp diversity and often, but no alves the presence of rare, threatened, or endangered sp absent or vi absent, and high spp diversity and often, but no alves the presence of rare, threatened, or endangered sp absent or vi absent, and high spp diversity and often, but no alves the presence of rare, threatened, or endangered sp and/or disturbance tolerant native spp absent or vi absent, and high spp diversity and often, but no alves the presence of rare, threatened, or endangered sp and/or disturbance tolerant native spp a

Site:	w03		Rater(s):	BRH & MM	Date:	October 22, 2019
3	3	Metric 1. Wetland Area (size).	Project:	Arche Solar		
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pt 10 to <25 acres (4 to <10.1ha) (4 pts) X 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2 pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pts) <0.1 acres (0.04ha) (0 pts)	s)	Arche Solai		
1	4	Metric 2. Upland buffers and su	rrounding	land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only o WIDE. Buffers average 50m (164ft) or MEDIUM. Buffers average 25m to <50 NARROW. Buffers average 10m to <25 X VERY NARROW. Buffers average <10m 2b. Intensity of surrounding land use. Select one VERY LOW. 2nd growth or older fores LOW. Old field (>10 years), shrubland, MODERATELY HIGH. Residential, fence X HIGH. Urban, industrial, open pasture	ne and assign s more around w Im (82 to <164f 5m (32ft to <82 or double che t, prairie, savan young second ed pasture, par	core. Do not double check vetland perimeter (7) t) around wetland perimet ft) around wetland perimed d wetland perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) k, conservation tillage, nev	ter (4) ter (1)	
21	25	Metric 3. Hydrology				
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) X Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream	n) (5)	Part of wet Part of ripa 3d. Duration inundation	oodplain (1) ream/lake and other land/upland (e.g. ford rian or upland corridd r/saturation. Score o	est), complex (1) or (1) ne or dbl check.
		3c. Maximum water depth. Select only one and >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. None or none apparent (12) Check a	-	Regularly in Seasonally Seasonally Seasonally Seasonally Duble check and average.	ermanently inundated nundated/saturated (inundated (2) saturated in upper 30	3)
		X Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater ir	point sou filling/gra road bed dredging	/RR track	
10	35	Metric 4. Habitat Alteration and D	evelonmer	nt.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double X None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and a Excellent (7) Very good (6) Good (5) Moderately good (4)	check and avera			
		Recovered (6) X Recovering (3) X	k all disturbance mowing grazing	shrub/sa herbaced	pling removal pus/aquatic bed remo	oval
•	35 subtotal this page	Recent or no recovery (1)	clearcutting selective cutti woody debris toxic pollutan	removal farming		

Site:	w03		Rater(s):	BRH 8	k MM	Date:	October 22, 2019
	5						
	٦		Project:	Arche	Solar		
	subtotal thi	s page					
		Metric 5. Special Wetlands					
max 10 p	ts subtotal	Check all that apply and score as indicated. Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-un Lake Erie coastal/tributary wetland-re: Lake Plain Sand Prairies (Oak Opening: Relict Wet Prairies (10) Known occurrence state/federal threa Significant migratory songbird/water f Category 1 Wetland. See Question 1 0	stricted hydrolog s) (10) tened or endang owl habitat or u	gy (5) gered spe sage (10)			
		Not Applicable (0)	Quantative natio	8 (20)			
5	5	Metric 6. Plant communities, inte	rspersion. n	nicroto	pograhv.		
max 20 ni	ts subtotal	6a. Wetland Vegetation Communities.	Vegetation Co				
ах 20 р	er ou o co co.	Score all present using 0 to 3 scale.	0			<0.1ha (0.2471 a	cres) contiguous area
		Aquatic bed 1 Emergent 0 Shrub	1		Present and either co	mprises small pa s of moderate qu	art of wetland's Jality, or comprises a
		2 Forest Mudflats	2		Present and either co vegetation and is	mprises significa s of moderate qu	
		Open water Other			part and is of hig Present and comprise		t, or more, of wetland's
		6b. Horizontal (plan view) Interspersion.	3		vegetation and is		
		Select only one. High (5)	Narrative Desi	crintion o	f Vegetation Quality		
		Moderately high (4)	low	cription o	Low spp diversity and		
		X Moderate (3) Moderately low (2)			disturbance tole Native spp are domin		
		Low (1) None (0) 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add	mod		although nonnat can also be prese	ive and/or distuent, and species, but generally w	rbance tolerant native spp diversity moderate to //o presence of rare
		or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) X Sparse 5-25% cover (-1)	high		A predominance of na and/or disturbar absent, and high	ative species, wince tolerant natives spp diversity an	th nonnative spp ve spp absent or virtually d often, but no always, , or endangered spp
		Nearly absent <5% cover (0)	N4dfl=+ =! C		or Class Out lite:		
		Absent (1) 6d. Microtopography.	Mudflat and C	pen wat	er Class Quality Absent <0.1ha (0.247	'acres)	
		Score all present using 0 to 3 scale. Vegetated hummocks/tussocks	1	_	Present very small an of marginal quali	nounts or if more	
		Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh	2		Present in moderate a quality or in sma		
		Amphibian breading pools	3		Present in moderate and of highest qu	•	nts
40 Refer to the	most recent ORAM	I (max 100 pts) M Score Calibration Report for the scoring breakpoints between wet	land categories at the	e following a			.html

Site:	w04		Rater(s):	BRH & MM	Date:	October 22, 2019
3	3	Metric 1. Wetland Area (size).	Project:	Arche Solar		
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pt 10 to <25 acres (4 to <10.1ha) (4 pts) X 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2 pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pts) <0.1 acres (0.04ha) (0 pts)	s)	Archie Solai		
1	4	Metric 2. Upland buffers and su	rrounding	land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only of WIDE. Buffers average 50m (164ft) or MEDIUM. Buffers average 25m to <50 NARROW. Buffers average 10m to <29 NARROW. Buffers average 10m to <29 NARROW. Buffers average <10m NARROW. Buffers average <10m NARROW. Buffers average <10m NARROW. Buffers average <10m NARROW. Select one NARROW. Select one NARROW. Old field (>10 years), shrubland, MODERATELY HIGH. Residential, fencing MIDERATELY HIGH. Residential, fencing MIDERATELY HIGH. Nature 10m NARROW.	ne and assign s more around w Im (82 to <164f 5m (32ft to <82 or double che t, prairie, savan young second ed pasture, par	core. Do not double check. vetland perimeter (7) t) around wetland perimete ft) around wetland perimete d wetland perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) k, conservation tillage, new	er (4) er (1)	
17	21	Metric 3. Hydrology				
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream	n) (5)	Part of wetl Part of ripar 3d. Duration inundation,	odplain (1) eam/lake and other and/upland (e.g. fore ian or upland corrido 'saturation. Score or	est), complex (1) or (1) ne or dbl check.
		3c. Maximum water depth. Select only one and >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. None or none apparent (12) X Recovered (7) Recovering (3) Recent or no recovery (1)	-	X Regularly in Seasonally in Seasonally in Seasonally in Seasonally souble check and average. Observed point sour filling/graroad bed/dredging		3) Ocm (12in) (1)
8	29	Metric 4. Habitat Alteration and D	evelonmer	nt.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and a Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	check and avera			
· ·	29 ubtotal this page	4c. Habitat alteration. Score one or double chec None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1) X	k all disturbance mowing grazing clearcutting selective cutti	shrub/sar herbaceo sedimenti ing dredging removal X farming	oling removal us/aquatic bed remo ation nrichment	val

Site:	w04		Rater(s):	BRH 8	k MM	Date:	October 22, 2019
	3		<u> </u>				
			Project:	Arche	Solar		
	subtotal thi	s page					
max 10 p	ts subtotal	Metric 5. Special Wetlands Check all that apply and score as indicated. Bog (10)					
		Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-re: Lake Plain Sand Prairies (Oak Opening: Relict Wet Prairies (10) Known occurrence state/federal threa	stricted hydrolog s) (10) tened or endang	gy (5) gered spe			
	1	Category 1 Wetland. See Question 1 C					
3	3	Metric 6. Plant communities, inte	•				
max 20 p	ts subtotal	6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.	Vegetation Co		Cover Scale Absent or comprises	<0.1h2/0.2471 c	cros) contiguous area
		Aquatic bed			Present and either co	mprises small pa	rt of wetland's
		1 Emergent 0 Shrub	1		significant part b	ut is of low quali	
		1 Forest Mudflats Open water	2		part and is of hig	s of moderate qu th quality	ality or comprises a small
		Other 6b. Horizontal (plan view) Interspersion.	3		Present and comprise vegetation and is		, or more, of wetland's
		Select only one. High (5)	Narrative Des	cription of	f Vegetation Quality		
		Moderately high (4) Moderate (3)	low		Low spp diversity and disturbance toler		
		X Moderately low (2) Low (1) None (0) 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add	mod		can also be prese	ive and/or disturent, and species of the species of	of the vegetation, bance tolerant native spp diversity moderate to /o presence of rare
		or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) X Sparse 5-25% cover (-1)	high		A predominance of na and/or disturbar absent, and high	ative species, wit nce tolerant nativ spp diversity and	h nonnative spp e spp absent or virtually d often, but no always, or endangered spp
		Nearly absent <5% cover (0) Absent (1)	Mudflat and C	lnon Wate	er Class Quality		
		6d. Microtopography.	0		Absent < 0.1ha (0.247	acres)	
		Score all present using 0 to 3 scale. Vegetated hummocks/tussocks	1		Present very small an of marginal quali	nounts or if more	
		Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh	2		Present in moderate a quality or in sma	ll amounts of hig	hest quality
		Amphibian breading pools	3		Present in moderate and of highest qu	•	nts
32	Grand Tota	I (max 100 pts)					
		M Score Calibration Report for the scoring breakpoints between wet	land categories at the	e following ac	ddress: http://www.epa.stat	e.oh.us/dsw/401/401.	html
Commen	ts:						

Arche Solar Project

APPENDIX

STREAM ASSESSMENT FORMS



Qualitative Habitat Evaluation Index Field Sheet

Date: 11/21/2019 Scorers Full Name: Ben Hess 1.) SUBSTRATE (Check ONLY Two Search Pool Riffle Pool R	Location: Fulton County, Ohio Affiliation: C ubstrate TYPE BOXES; Estimate % present) Pool Riffle	ardno	
1.) SUBSTRATE (Check ONLY Two S	ubstrate TYPE BOXES; Estimate % present)	ardno	
TYPE Pool Riffle	, , ,		
	GRAVEL (7) 35 25 GRAVEL (7) 35 25 SAND (6) 40 20 BEDROCK (5) DETRITUS (3) ARTIFICIAL (0) NOTE: Ignore Sludge Originating From Point Sources 4 or More (2) 3 or Less (0)	SUBSTRATE QUA Check ONE (OR 2 & AVERAGE) LIMESTONE (1) TILLS (1) WETLANDS (0) HARDPAN (0) SANDSTONE (0) RIP/RAP (0) LACUSTRINE (0) SHALE (-1) COAL FINES (-2)	(ERAGE) (-1) Substrate
2.) INSTREAM COVER (Give eac (Structure) UNDERCUT BANKS (1) OVERHANGING VEGETATION (1) SHALLOWS (IN SLOW WATER) (1) ROOTMATS (1) COMMENTS:	POOLS >70 cm (2) ROOTWADS (1) BOULDERS (1)	,	Cover
3.) CHANNEL MORPHOLOGY SINUOSITY HIGH (4) MODERATE (3) LOW (2) NONE (1) COMMENTS:	NONE (6) H RECOVERED (4) M	& AVERAGE) STABILITY IGH (3) ODERATE (2) DW (1) SNAGGING SNAGGING SNAGGING SILANDS LEVEED DREDGING JOREDGING ONE SIDE CHANNEL MODIFICATIONS	Channel 5 Max 20
4.) RIPARIAN ZONE AND BANK RIPARIAN WIDTH (Per Bank) WIDE >50M (4) MODERATE 10-50M (3) VERY NARROW 5-10M (2) VERY NARROW <5M (1) NONE (0) COMMENTS:	EROSION (Check ONE box per bank FLOOD PLAIN QUALITY (Pa Most Predominant Per Bank) FOREST, SWAMP (3) SHRUB OR OLD FIELD (2) RESIDENTIAL, PARK, NEW FIELD (1) FENCED PASTURE (1)	e	Riparian 4
0.7-1m (4) POC	MORPHOLOGY (Check 1 or 2 & AVERAGE) DL WIDTH > RIFFLE WIDTH (2) DL WIDTH = RIFFLE WIDTH (1) DL WIDTH < RIFFLE WIDTH (0)	CURRENT VELOCITY (POOLS & RIFFLES!) (Check All that Apply) EDDIES (1) TORRENTIAL (-1) FAST (1) INTERSTITIAL (-1) MODERATE (1) INTERMITTENT (-2) SLOW (1) VERY FAST (1)	Pool/ Current 4 Max 12
*BEST AREAS >10cm (2) MAX	(> 50cm (2) STABLE (e.g., C (< 50cm (1) MOD. STABLE (NERAGE UN SUBSTRATE obble, Boulder (2) e.g., Large Gravel (1) e Gravel, Sand (0) NO RIFFLE (Metric = 0) RIFFLE/RUN EMBEDDEDNESS NONE (2) LOW (1) WODERATE (0) EXTENSIVE (-1)	Riffle/Run 3 Max 8 Gradient 10 Max 10
6.) GRADIENT (ft/mi): 9 *Best areas must be large enough to support a population	DRAINAGE AREA (se		DE: 40 UN: 20

QHEI Score:

Is Sampling Read	ch Representat	tive of the	Stream?	(Y/N) Ye	s In No	ot, Explain					Major Suspected Source	ces of
	·			· /							Impacts (Check All That	Apply):
											No	ne
											Industr	rial
											WW ⁻	TP
												Ag X
											Livesto	ock
											Silvicultu	ıre
1	1			Ge	ar:	Distance:	Water Clarity:	Water Sta	ge: Canopy	% Open:	Constructi	ion
4	4	Fir	rst Sampling								Urban Run	off
Subjective	Aesthetic		Pass						7	5	CS	Os
Rating	Rating			'		_					Suburban Impa	cts
(1-10)	(1-10)										Mini	ing
Gradie	ent:					Stream Meas	urements:				Channelizati	on
Low X Mode	erate High	Average	Average	Maximum	Av Bankfull	Bankfull Mean	W/D	Bankfull Max	Floodprone	Entrench.	Riparian Remo	val X
		Width (ft)	Depth (ft)	Depth (ft)	Width (ft)	Depth (ft)	Ratio	Depth (ft)	Area Width (ft)	Ratio	Landf	ills
		22	0.5	1	25	1	25.00	1.5	200	8.00	Natu	ral
			0.5		20	1	23.00	1.5	200	0.00	Da	ms
											Other Flow Alteration	ns
											Other:	

Instructions for scoring the alternate cover metric: Each cover type should receive a score of between 0 and 3, Where: 0 – Cover type absent: 1 – Cover type present in very small amounts or if more common of marginal quality; 2 – Cover type present in moderate amounts, but not of highest quality or in small amounts of highest quality; 3 – Cover type of highest quality in moderate or greater amounts. Examples of highest quality include very large boulders in deep or fast water, large diameter logs that are stable, well developed rootwads in deep/fast water, or deep, well-defined, functional pools.

Yes	s/No	.ls Stream Enhemeral (no pools
	Х	ls Stream Ephemeral (no pools, totally dry or only damp spots)?
	Х	Is There Water Upstream?
		How Far:
	Х	Is There Water Close Downstream?
		How Far:
	Χ	Is Dry Channel Mostly Natural?



Qualitative Habitat Evaluation Index Field Sheet

Qualitative H	labitat Evaluation Index	Field Sheet	QHEI Score:	41
River Code:	RM:	Stream: Spring Creek (S01b))	
Date: 11/21/2019	Location: Fulton County, Ohio			
Scorers Full Name: Ben Hess	Affiliation:	Cardno		
1.) SUBSTRATE (Check ONLY TW. TYPE Pool Riffle BLDR/SLBS (10) BOULDER (9) COBBLE (8) HARDPAN (4) MUCK (2) SILT (2) SILT (2) VARIABLE TYPES: (High Quality Only, Score 5 or >) COMMENTS:	o Substrate TYPE BOXES; Estimate % present Pool Riff GRAVEL (7) 20 25 SAND (6) 40 15 BEDROCK (5) DETRITUS (3) ARTIFICIAL (0) NOTE: Ignore Sludge Originating From Point Sources 4 or More (2) 3 or Less (0)	le <u>SUBSTRATE ORIGIN</u> <u>Ch</u> eck ONE (OR 2 & AVERA	SILT: SILT HEAVY (-2) SILT MODERATE (-1 ✓ SILT NORMAL (0) SILT FREE (1)	RAGE)
2.) INSTREAM COVER (Give en (Structure) UNDERCUT BANKS (1) OVERHANGING VEGETATION (1) 1 SHALLOWS (IN SLOW WATER) (1) ROOTMATS (1) COMMENTS	POOLS >70 cm (2) ROOTWADS (1) BOULDERS (1) 1	All that Occur OXBOWS, BACKWATERS (1) AQUATIC MACROPHYTES (1)	AMOUNT: (Check ONLY One Check 2 & AVERAGE) EXTENSIVE > 75% (11) MODERATE 25-75% (7) SPARSE 5-25% (3) NEARLY ABSENT < 5%	Cover 5 Max 20
3.) CHANNEL MORPHOLOGY SINUOSITY HIGH (4) MODERATE (3) LOW (2) NONE (1) COMMENTS:	RECOVERED (4)	STABILITY HIGH (3) MODERATE (2) LOW (1) SNAGGI RELOCA CANOPY CANOPY DREDGI	ATION ISLANDS Y REMOVAL LEVEED	Channel 5 Max 20
4.) RIPARIAN ZONE AND BAN RIPARIAN WIDTH WIDE >50M (4) MODERATE 10-50M (3) NARROW 5-10M (2) VERY NARROW <5M (1) NONE (0) COMMENTS:	K EROSION (Check ONE box per bank) FLOOD PLAIN QUALITY (FR. (Most Predominant Per Bank) FOREST, SWAMP (3) SHRUB OR OLD FIELD (2) RESIDENTIAL, PARK, NEW FIELD (1) FENCED PASTURE (1)	k OR Check 2 & AVERAGE per bank Past 100 ft Riparian) L R CONSERVATION TILLAGE URBAN OR INDUSTRIAL V OPEN PASTURE, ROWCR MINING/CONSTRUCTION	BANK EROSION L R (Per Bank) E (1)	Riparian 3
0.7-1m (4)	MORPHOLOGY (Check 1 or 2 & AVERAGE) OOL WIDTH > RIFFLE WIDTH (2) OOL WIDTH = RIFFLE WIDTH (1) OOL WIDTH < RIFFLE WIDTH (0)	·	OCITY (POOLS & RIFFLES!) eck All that Apply) TORRENTIAL (-1) INTERSTITIAL (-1) INTERMITTENT (-2) VERY FAST (1)	Pool/ Current 4 Max 12
	AX >50cm (2) STABLE (e.g., AX <50cm (1) ✓ MOD. STABLE	AVERAGE RUN SUBSTRATE Cobble, Boulder (2) E (e.g., Large Gravel (1) Ine Gravel, Sand (0) NO RIFFLE (Metric = 0)	RIFFLE/RUN EMBEDDEDNESS NONE (2) LOW (1) MODERATE (0) EXTENSIVE (-1)	Riffle/Run 3 Max 8 Gradient 10 Max 10
6.) GRADIENT (ft/mi): 7.1	DRAINAGE AREA		200L: 25 %GLIE	
*Best areas must be large enough to support a popul	ation of riffle-obligate species	%RII	FFLE: 25 %RU	JN: 25

Is Sampling Re	each Representat	ive of the	e Stream?	(Y/N) Ye	s In No	ot, Explain					Major Sus	spected Sources of
											Impacts (C	heck All That Apply)
												None
												Industrial
												WWTP
												Ag X
											_	Livestock
												Silviculture
3	3			Ge	ar:	Distance:	Water Clarity:	Water Sta	ge: Canopy	% Open:		Construction
		Fii	rst Sampling									Urban Runoff
Subjective	Aesthetic		Pass						7	5		CSOs
Rating	Rating										Su	uburban Impacts
(1-10)	(1-10)											Mining
	ndient:					Stream Meas	urements:					Channelization
Low X M	oderate High	Average	Average	Maximum	Av Bankfull	Bankfull Mean	W/D	Bankfull Max	Floodprone	Entrench.	R	iparian Removal 🗶
		Width (ft)	Depth (ft)	Depth (ft)	Width (ft)	Depth (ft)	Ratio	Depth (ft)	Area Width (ft)	Ratio	_	Landfills
		10	0.5	1	12	1	12.00	1.5	200	16.67		Natural
		10	0.5	ı	12	'	12.00	1.5	200	10.07]	Dams
											Other	Flow Alterations
											Other:	

Instructions for scoring the alternate cover metric: Each cover type should receive a score of between 0 and 3, Where: 0 – Cover type absent: 1 – Cover type present in very small amounts or if more common of marginal quality; 2 – Cover type present in moderate amounts, but not of highest quality or in small amounts of highest quality; 3 – Cover type of highest quality in moderate or greater amounts. Examples of highest quality include very large boulders in deep or fast water, large diameter logs that are stable, well developed rootwads in deep/fast water, or deep, well-defined, functional pools.

Yes	s/No	.ls Stream Enhemeral (no pools
	Х	Is Stream Ephemeral (no pools, totally dry or only damp spots)?
	Х	Is There Water Upstream?
		How Far:
	Х	Is There Water Close Downstream?
		How Far:
	Χ	Is Dry Channel Mostly Natural?



Qualitative Habitat Evaluation Index Field Sheet

Qu	alitative Ha	abitat Evalu	ation Index	Field	Sheet	(QHEI Score:	26
River Code:		RM:		Stream:	Deer Creek (S0	02)		
Date: 11/22/2019		Location: Fulton (County, Ohio					
Scorers Full Name:	Ben Hess		Affiliation:	Cardno				
1.) SUBSTRATE TYPE BLDR/SLBS (10) BOULDER (9) COBBLE (8) HARDPAN (4) HARDPAN (4) SILT (2) NUMBER OF SUBSTRATE (High Quality Only, Score 5)	Pool Riffle 10 10 50 50 ETYPES:	GRAVEL (7) SAND (6) BEDROCK (! DETRITUS (: ARTIFICIAL NOTE: Ignore Sludge From Point Sources 4 or More (2) 3 or Less (0)	Pool Riffi 40 40 3) (0)	Che	SUBSTRATE OF cck ONE (OR 2 & A LIMESTONE (1) TILLS (1) WETLANDS (0) HARDPAN (0) SANDSTONE (0) RIP/RAP (0) LACUSTRINE (0) SHALE (-1) COAL FINES (-2)	VERAGE) SILT: EMBEDDED NESS:	SUBSTRATE QUALI Check ONE (OR 2 & AVE SILT HEAVY (-2) SILT MODERATE (- SILT NORMAL (0) SILT FREE (1) EXTENSIVE (-2) MODERATE (-1) NORMAL (0) NONE (1)	RAGE)
	ture)	POOLS: ROOTW BOULDE	TYPE: Score >70 cm (2) ADS (1)	All that Occ OXBOW AQUATI	ur /S, BACKWATERS IC MACROPHYTE: ND WOODY DEBI	S (1) S (1) RIS (1)	OUNT: (Check ONLY One Check 2 & AVERAGE) IXTENSIVE > 75% (11) MODERATE 25-75% (7) IPARSE 5-25% (3) NEARLY ABSENT < 5%	Cover 2 Max 20
3.) CHANNEL MO SINUOSITY HIGH (4) MODERATE (3) LOW (2) VONE (1) COMMENTS:	DEVELOPMENT EXCELLENT (7) GOOD (5) FAIR (3)	(Check ONLY One per <u>CHANNELIZATION</u> NONE (6) RECOVERED (4) RECOVERING (3) RECENT OR NO)	2 & AVERAC <u>STABILITY</u> HIGH (3) MODERATI LOW (1)	SN RE(2) CA	AGGING LOCATION NOPY REMOV EDGING	ONS / OTHER IMPOUND ISLANDS AL LEVEED BANK SHAPING NEL MODIFICATIONS	Channel 4 Max 20
4.) RIPARIAN ZON RIPARIAN WIDTI R (Per Bank) WIDE >50M (4 MODERATE 10 NARROW 5-10 VERY NARROW V NONE (0) COMMENTS:	H)	FLOO (Most Predominant Per FOREST, SWAMP SHRUB OR OLD F	<u>D Plain Quality (F Bank)</u> (3) ELD (2) KK, NEW FIELD (1)	Past 100 ft Ri L R CC UR UR		LLAGE (1) FRIAL (0) DWCROP (0)	tiver Right Looking Downst BANK EROSION L R (Per Bank) NONE / LITTLE (MODERATE (2) HEAVY / SEVERE	Riparian 2
5.) POOL/GLIDE A MAX. DEPTH (Check 1 ONLY!) > 1m (6) 0.7-1m (4) 0.4-0.7m (2) 0.2-0.4m (1) < 0.2m (pool = 0)	PO	MORPHO (Check 1 or 2 & OL WIDTH > RIFFLE \ OL WIDTH = RIFFLE \ OL WIDTH < RIFFLE \	AVERAGE) WIDTH (2) WIDTH (1)	<i>J</i>	CURREN EDDIES (1) FAST (1) MODERATE (1) SLOW (1)	(Check All that	OOLS & RIFFLES!) Apply) ORRENTIAL (-1) NTERSTITIAL (-1) NTERMITTENT (-2) /ERY FAST (1)	Pool/ Current 4 Max 12
RIFFLE DEPTH *BEST AREAS > 10cr ✓ BEST AREAS 5-10cr ☐ BEST AREAS < 5cm (RIFFLE=0) COMMENTS:	m (2) 🔲 MA	<u>CHECK</u> <u>RUN DEPTH</u> X >50cm (2) X <50cm (1)	ONE OR CHECK 2 & RIFFLE/ RIFFLE/ STABLE (e.g., ' MOD. STABLE UNSTABLE (Fi	RUN SUBS Cobble, Bo (e.g., Larg ne Gravel,	ulder (2) e Gravel (1)	NONE (2 LOW (1) MODERA EXTENSIV	TE (0)	Riffle/Run 3 Max 8 Gradient 6 Max 10
6.) GRADIENT (ft/r	mi): 4.8	DRAI	NAGE AREA	sq. mi.):	17.7	%POOL:	%GLIE	DE: 100
*Best areas must be large enou	ugh to support a populati	on of riffle-obligate species			Q	%RIFFLE:	%RU	JN:

Is Sampling R	each Representat	tive of the	Stream?	(Y/N) Ye	s In No	ot, Explain					Major Suspected Sou	urces of
											Impacts (Check All Tha	at Apply):
											<u> </u>	None
											Indu	ıstrial
											W	WTP
											_	Ag X
											Lives	stock
											Silvicu	ılture
2	2			Ge	ar:	Distance:	Water Clarity:	Water Sta	ge: Canopy	% Open:	Constru	ction
		Fir	st Sampling								Urban Ri	unoff
Subjective	Aesthetic		Pass					_	10	00	C	CSOs
Rating	Rating			'							Suburban Imp	oacts
(1-10)	(1-10)									_	M	lining
Gra	adient:					Stream Meas	urements:				Channeliz	ation
Low X M	loderate High	Average	Average	Maximum	Av Bankfull	Bankfull Mean	W/D	Bankfull Max	Floodprone	Entrench.	Riparian Rem	noval X
		Width (ft)	Depth (ft)	Depth (ft)	Width (ft)	Depth (ft)	Ratio	Depth (ft)	Area Width (ft)	Ratio	Lan	ndfills
		15	0.5	1	20	1	20.00	1.5	350	17.50	Na	atural
		13	0.5	I	20	1	20.00	1.5	330	17.50		Dams
		·								•	Other Flow Altera	tions
											Other:	

Instructions for scoring the alternate cover metric: Each cover type should receive a score of between 0 and 3, Where: 0 – Cover type absent: 1 – Cover type present in very small amounts or if more common of marginal quality; 2 – Cover type present in moderate amounts, but not of highest quality or in small amounts of highest quality; 3 – Cover type of highest quality in moderate or greater amounts. Examples of highest quality include very large boulders in deep or fast water, large diameter logs that are stable, well developed rootwads in deep/fast water, or deep, well-defined, functional pools.

Yes	s/No	.ls Stream Enhemeral (no pools
	Х	Is Stream Ephemeral (no pools, totally dry or only damp spots)?
Х		Is There Water Upstream?
		How Far:
Х		Is There Water Close Downstream?
		How Far:
	Χ	Is Dry Channel Mostly Natural?

Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

52

	5	SITE NAME/LOCATION	Arche Solar							
		SITE NUMBER	s03	RIVER BASIN	Maumee	River	D	RAINAGE AR	EA (mi²) (0.98641
	LENG	GTH OF STREAM REAC	·	LAT 41.67					RIVER MILE	
	DAT	E 10/22/2019 SC	ORER B Hess	& M Mason		COMMENTS				
	NOT	E: Complete All Item	s On This Form	ı - Refer to "		_	or Ohio's PHWH	Streams" fo	r Instruction	s
			ONE / NATURA	AL CHANNEL	X RECO\	/ERED	RECOVERING	G R	RECENT OR N	IO RECOVERY
	MC	DIFICATIONS:						_		
								T/05 /		1
1.		STRATE (Est. % of eve		-				TYPE boxes (Max of 40).	HHEI
	TYPI	total number of signif	icant substrate	e types foun PERCENT	TYPE	Final metric s	score is A + B.	PFR	RCENT	Metric
		BLDR SLABS [16 pts]			X SILT [3	PTS1			45	Points
	=	BOULDER (>256mm)	[16 pts]			-	DEBRIS [3 PTS]		10	
	==	BEDROCK [16 PTS]				ETRITUS [3 P				Substrate
		COBBLE (65-256mm)	[12 pts]		CLAY o	r HARDPAN [[0 PT]			Max = 40
		GRAVEL (2-64mm) [9	pts]		■ MUCK	[0 PT]				
	X	SAND (<2mm) [6 pts]		45	ARTIFI	CIAL [3 PTS]				12
		Total of Percentages	s of Bldr	(A	N)			(B))	12
	Slab	s, Boulder, Cobble, & I		0 `	´ 9			` '	3	
S	ORE	OF 2 MOST PREDOM	INANT SUBST	RATE TYPES:		TOTAL NUMI	BER OF SUBSTR	ATE TYPES:		A + B
_							-0			
2.		imum Pool Depth (Mountain in Mountain in M		-	•	•	•		me of	Pool Depth Max = 30
ı	V V	>30 centimeters [20 p	•	au cuiveits o		- 10 cm [15 p		x).		IVIAX - 30
		>22.5 - 30 cm [30 pts]	· -			[5 pts]	itsj			
	Ħ	>10 - 22.5 cm [25 pts]	-			ATER OR MOI	CT CHANNEL IO	ntsl		20
							SI CHANNEL IU			
									41	
		COMMENTS					OOL DEPTH (ce		41	
2	BAN		urod as the av	orago of 2.4		MAXIMUM P	OOL DEPTH (ce	ntimeters):	41	
3.	BAN	K FULL WIDTH (Meas		erage of 3-4	measuremen	MAXIMUM Po	OOL DEPTH (ce	ntimeters):	41	Bankfull
3.		K FULL WIDTH (Meass >4.0 meters (>13') [30	0 pts]	erage of 3-4	measuremen	ts) (Check	OOL DEPTH (ce ONLY one box): 3" - 4'8") [15 pts	ntimeters):	41	
3.		K FULL WIDTH (Measi >4.0 meters (>13') [30' >3.0 m - 4.0 m (>9'7"	0 pts] - 13') [25 pts]		measuremen	MAXIMUM Po	OOL DEPTH (ce ONLY one box): 3" - 4'8") [15 pts	ntimeters):	iii L	Bankfull Width
3.		>4.0 meters (>13') [30') >3.0 m - 4.0 m (>9'7") >1.5 m - 3.0 m (>4'8")	0 pts] - 13') [25 pts]		measuremen	ts) (Check 1 - 1.5 m (>3'3 1 (≤ 3'3") [5 pt	OOL DEPTH (cei	ntimeters):	iii L	Bankfull Width
3.		K FULL WIDTH (Measi >4.0 meters (>13') [30' >3.0 m - 4.0 m (>9'7"	0 pts] - 13') [25 pts]		measuremen	ts) (Check 1 - 1.5 m (>3'3 1 (≤ 3'3") [5 pt	OOL DEPTH (ce ONLY one box): 3" - 4'8") [15 pts	ntimeters):	2.1	Bankfull Width Max = 30
3.		>4.0 meters (>13') [30') >3.0 m - 4.0 m (>9'7") >1.5 m - 3.0 m (>4'8")	0 pts] - 13') [25 pts]	1	measuremen >1.0 m ≤1.0 m	ts) (Check n - 1.5 m (>3'3 n (≤ 3'3") [5 pt AVERAGE B	OOL DEPTH (cei	ntimeters):	iii L	Bankfull Width Max = 30
3.		>4.0 meters (>13') [36' >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8"	0 pts] - 13') [25 pts] - 9'7") [20 pts]	This info	measuremen >1.0 m ≤1.0 m	ts) (Check n - 1.5 m (>3'3 n (≤ 3'3") [5 pt AVERAGE B	OOL DEPTH (cei	ntimeters):	2.1	Bankfull Width Max = 30
3.		>4.0 meters (>13') [36' >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS	0 pts] - 13') [25 pts] - 9'7") [20 pts]	This info	measuremen >1.0 m ≤1.0 m ≤mation must * NOTE: River	ts) (Check 1 - 1.5 m (>3'3 1 (≤ 3'3") [5 pt AVERAGE B also be comp Left (L) and F	OOL DEPTH (cei	ntimeters):	2.1	Bankfull Width Max = 30
3.		>4.0 meters (>13') [36' >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8"	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This info	measuremen >1.0 m ≤1.0 m	ts) (Check on - 1.5 m (>3'3") [5 pt AVERAGE B also be comp Left (L) and F	OOL DEPTH (cei ONLY one box): 3" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ntimeters):	2.1	Bankfull Width Max = 30
3.	X	X FULL WIDTH (Meass >4.0 meters (>13') [3') >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This informulation QUALITY FLOO R (Most	measuremen >1.0 m ≤1.0 m ≤1.0 m *mation must * NOTE: River DPLAIN QUAL Predominant re Forest, Wei	ts) (Check 1 - 1.5 m (>3'3 1 (≤ 3'3") [5 pt AVERAGE B also be comp Left (L) and F TY 1 per Bank)	OOL DEPTH (cer ONLY one box): 3" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	intimeters): H (meters) ing downstre	2.1	Bankfull Width Max = 30
3.	L R	X FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This infor QUALITY FLOO R (Most	measuremen >1.0 m >1.0 m ≤1.0 m *MOTE: River DPLAIN QUAL Predominant re Forest, Weture Forest, S	ts) (Checken - 1.5 m (>3'3') [5 pt AVERAGE Balso be complete (L) and FITY : per Bank) tland hrub, or Old F	OOL DEPTH (cei ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	intimeters): H (meters) ing downstre	2.1	Bankfull Width Max = 30
3.	X	X FULL WIDTH (Meass >4.0 meters (>13') [3') >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This infor QUALITY FLOO R (Most	measuremen >1.0 m ≤1.0 m ≤1.0 m *MOTE: River DPLAIN QUAL Predominant re Forest, We' ture Forest, Sential, Park, N	ts) (Checken - 1.5 m (>3'3') [5 pt AVERAGE Balso be complete (L) and FITY : per Bank) tland hrub, or Old F	OOL DEPTH (cei ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre	2.1	Bankfull Width Max = 30 20 Illage rial Row Crop
3.	L R	X FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This infor QUALITY FLOO R (Most	measuremen >1.0 m >1.0 m ≤1.0 m *MOTE: River DPLAIN QUAL Predominant re Forest, Weture Forest, S	ts) (Checken - 1.5 m (>3'3') [5 pt AVERAGE Balso be complete (L) and FITY : per Bank) tland hrub, or Old F	OOL DEPTH (cei ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre	2.1	Bankfull Width Max = 30 20 Illage rial Row Crop
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This infor QUALITY FLOO R (Most Mature Imma Reside Fence	measuremen >1.0 m >1.0 m ≤1.0 m *NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, S ential, Park, N d Pasture	ts) (Checken - 1.5 m (>3'3') [5 pt AVERAGE Balso be complete (L) and FITY : per Bank) tland hrub, or Old Few Field	OOL DEPTH (cei ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre	2.1	Bankfull Width Max = 30 20 Illage rial Row Crop
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin Stream Flowing	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This infor QUALITY R (Most Mature Imma Reside Fence	measuremen >1.0 m ≤1.0 m ≤1.0 m ≤1.0 m mation must * NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, We ture Forest, Sential, Park, N dd Pasture	MAXIMUM Posts) (Check of 1.5 m (>3'3") [5 prosection of 15 prosection of	OOL DEPTH (cei ONLY one box): 3" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb (XX) Ope	2.1 am asservation Ti ban or Indust en Pasture, F ning or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin	0 pts] - 13') [25 pts] - 9'7") [20 pts] 0 FLOODPLAIN	This infor QUALITY R (Most Mature Imma Reside Fence	measuremen >1.0 m >1.0 m ≤1.0 m ≤1.0 m Fraction must * NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, Sential, Park, N d Pasture DNLY one box	MAXIMUM Posts) (Check of 1.5 m (>3'3") [5 prosection of 15 prosection of	OOL DEPTH (cei ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb (XX) Ope	2.1 am asservation Ti ban or Indust en Pasture, F ning or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin Stream Flowing Subsurface flow with Comments	0 pts] - 13') [25 pts] - 9'7") [20 pts] D FLOODPLAIN L Imme of Evaluation isolated pools	This infor QUALITY FLOO R (Most Imma Reside Fence) On (Check Control (Interstitial)	measuremen >1.0 m >1.0 m ≤1.0 m ≤1.0 m × NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, Sential, Park, N d Pasture DNLY one box	ts) (Checken - 1.5 m (>3'3") [5 pt AVERAGE Balso be complete (L) and FITY per Bank) than dependent of the complete (b) and for the complete (c) a	OOL DEPTH (cer ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb (XX) Ope	2.1 am asservation Ti ban or Indust en Pasture, F ning or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [36 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin Stream Flowing Subsurface flow with	0 pts] - 13') [25 pts] - 9'7") [20 pts] D FLOODPLAIN L Imme of Evaluation isolated pools	This infor QUALITY FLOO R (Most Imma Reside Fence) On (Check Control (Interstitial)	measuremen >1.0 m >1.0 m ≤1.0 m ≤1.0 m × NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, Sential, Park, N d Pasture DNLY one box	ts) (Checken - 1.5 m (>3'3") [5 pt AVERAGE Balso be complete (L) and FITY per Bank) than dependent of the complete (b) and for the complete (c) a	OOL DEPTH (cer ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb (XX) Ope	2.1 am asservation Ti ban or Indust en Pasture, F ning or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin Stream Flowing Subsurface flow with Comments SINUOSITY (Number	0 pts] - 13') [25 pts] - 9'7") [20 pts] D FLOODPLAIN L Imme of Evaluation isolated pools	This infor QUALITY R (Most Mature Imma Reside Fence Fence	measuremen >1.0 m >1.0 m ≤1.0 m ≤1.0 m × NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, Sential, Park, N d Pasture DNLY one box	ts) (Checken - 1.5 m (>3'3') [5 pt AVERAGE B also be complete (L) and FITY per Bank) than the per Field hrub, or Old Few Field pry channel preck ONLY or oneck ONLY or one of the period of the perio	OOL DEPTH (cer ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb Ope Mir Ols, no flow (Inemeral)	2.1 am asservation Ti ban or Indust en Pasture, F ning or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin Stream Flowing Subsurface flow with Comments SINUOSITY (Number None	O pts] - 13') [25 pts] - 9'7") [20 pts] D FLOODPLAIN L me of Evaluation isolated pools of bends per 6	This info QUALITY R (Most Mature Imma Reside Fence con) (Check Constitution)	measuremen >1.0 m >1.0 m ≤1.0 m ≤1.0 m × NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, Sential, Park, N d Pasture DNLY one box	ts) (Check of 1-1.5 m (>3'3") [5 pt of 1.5 m (>	OOL DEPTH (cer ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb Ope Mir	2.1 am asservation Ti ban or Indust en Pasture, F ning or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction
3.	L R	K FULL WIDTH (Meass >4.0 meters (>13') [30 >3.0 m - 4.0 m (>9'7" >1.5 m - 3.0 m (>4'8" COMMENTS RIPARIAN ZONE AND RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At Tin Stream Flowing Subsurface flow with Comments SINUOSITY (Number None 0.5	O pts] - 13') [25 pts] - 9'7") [20 pts] D FLOODPLAIN L me of Evaluation isolated pools of bends per 6	This infor QUALITY R FLOO R (Most Mature Imma Reside Fence) (Interstitial) (Interstitial) (Interstitial) (Interstitial)	measuremen >1.0 m >1.0 m ≤1.0 m ≤1.0 m × NOTE: River DPLAIN QUAL Predominant re Forest, We ture Forest, Sential, Park, N d Pasture DNLY one box	ts) (Checken - 1.5 m (>3'3") [5 pt AVERAGE B also be complete (L) and FITY (1) per Bank) than the per Bank) the per Bank) than the per Bank) the per Bank) than the per Bank) the per	OOL DEPTH (cer ONLY one box): 8" - 4'8") [15 pts ts] ANKFULL WIDT Dieted Right (R) as look	ing downstre R Con Urb Ope Mir Ols, no flow (Inemeral)	2.1 am Disservation Tiles or Industen Pasture, Foing or Const	Bankfull Width Max = 30 20 Illage rrial Row Crop cruction

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): s03
QHEI PERFORMED? Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township/City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipition: Quantity:
Photographer Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. And attach results) Lab Number
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream? (Y/N) Y If not, please explain:
· · · · · · · · · · · · · · · · · · ·
Additional comments/description of pollution impacts
BIOTIC EVAULATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site
ID number. Include appopriate field data sheets from the Primary Hedwater Habitat Assessment Manual)
Fish observed? (Y/N) N Voucher(Y/N) N Salamander Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher(Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of Interest for site evaluation and a narrative description of the stream's location
FLOW——>
TOW /

Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

32

	9	SITE NAME/LOCATION	N Arche Solar							
		SITE NUMBER		RIVER BASIN	Maumee	River		DRAINAGE	AREA (mi²)	0.06
	LEN	GTH OF STREAM REAG	·	LAT 41.6720		-84.28308	3 RIVER C		RIVER MILE	
	DAT	E 10/22/2019 SC	CORER B Hess &	M Mason	_ '	COMMENTS _				
	NOT	TE: Complete All Item				_	r Ohio's PHV	VH Streams"	_	
			NONE / NATURAL	CHANNEL	RECOVI	RED	RECOVERI	NG	RECENT OR N	IO RECOVERY
	MC	ODIFICATIONS:								
4	CLIB	STRATE (Est. % of eve	ary type of subst	rato procent	Chock ONL	/ 2 prodomin	aant cuhetrat	to TVDE hove	os (May of 40)	İ
1.		total number of signi		-					:5 (IVIAX OI 40).	ННЕІ
	TYP	U		,, ,	<u>гүре</u>	mai metre se			PERCENT	Metric
		BLDR SLABS [16 pts]		Ī	X SILT [3	PTS]			65	Points
		BOULDER (>256mm)	[16 pts]		LEAF PA	ACK/WOODY	DEBRIS [3 P1	rs]	10	
		BEDROCK [16 PTS]			FINE DE	TRITUS [3 PT	rs]			Substrate
		COBBLE (65-256mm)	_	[==	HARDPAN [C	0 PT]	_		Max = 40
		GRAVEL (2-64mm) [9			MUCK I	-		_		l ——
		SAND (<2mm) [6 pts		25	AKTIFIC	IAL [3 PTS]		_		12
		Total of Percentage		(A)	_				(B)	
٠,		s, Boulder, Cobble, &	_	O	9 ,	OTAL NUMB	ED OF CURC	TD ATE TVDE	. 3	A . B
50	.UKE	OF 2 MOST PREDOM	IIINANI SUBSIKA	ATE TYPES:	<u> </u>	OTAL NUMB	EK OF SUBS	IKATE TYPES):	A + B
2.	Max	imum Pool Depth (M	leasure the max	imum nool de	nth within t	he 61m (200	') evaluation	reach at the	e time of	Pool Depth
۷.		uation. Avoid plunge		-	-	-	-		time of	Max = 30
		>30 centimeters [20	•		= -	10 cm [15 pt		,		
		>22.5 - 30 cm [30 pts			<5 cm [•			
		>10 - 22.5 cm [25 pts	s]		NO WA	TER OR MOIS	ST CHANNEL	[0 pts]		15
		COMMENTS		_		AVIBALIBA DO	OL DERTU		. 8	
		COMMENTS				AXIMUM PO	OC DEPTH (centimeters)	:	
3.	BAN	IK FULL WIDTH (Meas	sured as the ave	rage of 3-4 m	easurement	s) (Check C	ONLY one bo	x):	,	Bankfull
		>4.0 meters (>13') [3			= 1	- 1.5 m (>3'3'				Width
	Ĭ	>3.0 m - 4.0 m (>9'7'	•		= 1	(≤ 3'3") [5 pt s				Max = 30
		>1.5 m - 3.0 m (>4'8'							0.6	
		COMMENTS				AVERAGE BA	NIKELILI WI	DTU (motors	, 0.6	5
		COMMENTS				AVERAGE DA	AINKFULL WII	Din (illeteis	,	
				This inform	ation mount	laa ha samuul	lated			
		RIPARIAN ZONE ANI	D FLOODPLAIN C			ı lso be compl ₋eft (L) and Ri		oking downs	tream	
		RIPARIAN WIDTH			LAIN QUALI	. ,	0 - (,	. 0		
	L R	a ` ´	L F	_ `	edominant			L R		
	X	Wide >10m Moderate 5-10m			Forest, Wetl	and rub, or Old Fi	أماط		Conservation Ti Jrban or Indust	
		Narrow <5m			ial, Park, Ne		ieiu	1==1	Open Pasture, F	
		None		Fenced F	Pasture				Mining or Const	truction
		Comments								
		FLOW REGIME (At T	ime of Evaluatior	1) (Check <i>ONI</i>						
	H	Stream Flowing Subsurface flow with	n isolated nools (Interstitial)		Moist Channe Dry channel,			v (Intermittent)	
		Comments	r isolatea pools (meerstraary		Dry chamici,	no water (E)	pricrierary		
		SINUOSITY (Number	of bends per 61	m (200ft) of c	hannel) (Ch	eck <i>ONLY</i> one	e box):			
		None `		1.0	X	2.0	/-	3.0		
		0.5		1.5		2.5		>3		
		EAM GRADIENT ESTIN		. 🖃		(: /4.00(:)			-	400 (4050)
	[[Fl	at (0.5ft/100ft)	Flat to Modera	te 🔲	Moderate (2	π/100ft)	Modera	ate to Severe	Severe (10ft/100ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): s04
QHEI PERFORMED? Yes V NO QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township/City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipition: Quantity:
Photographer Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. And attach results) Lab Number
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream? (Y/N) Y If not, please explain:
Additional comments/description of pollution impacts
BIOTIC EVAULATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appopriate field data sheets from the Primary Hedwater Habitat Assessment Manual)
ib number. Include appophate ned data sheets from the rinnary fredwater flabitat Assessment Mandaij
Fish observed? (Y/N) N Voucher(Y/N) N Salamander Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher(Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology:
DRAMING AND MARRATIVE DESCRIPTION OF STREAM REACH (This must be completed).
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of Interest for site evaluation and a narrative description of the stream's location
include important landmarks and other leatures of interest for site evaluation and a narrative description of the stream's location
FLOW>

Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

		SITE NAME/LOCATION	N Arche Solar						
		SITE NUMBER	s05	RIVER BASIN	N Maumee	River	DRA	INAGE AREA (mi²)	0.14
		GTH OF STREAM REA	·	LAT 41.67			RIVER CODE	RIVER MILE	
	DAT					COMMENTS			
						_	=	reams" for Instruction	
		EAM CHANNEL XI	NONE / NATUR	AL CHANNEL	RECOV	EKED	RECOVERING	ECENT OR I	NO RECOVERY
	IVIC	DDIFICATIONS.							
1.	SUB	STRATE (Est. % of ev	ery type of sub	strate prese	nt. Check ONI	LY 2 predomina	ant substrate TYF	PE boxes (Max of 40).	1
		total number of sign		·=				,	HHEI
	TYP	<u>E</u>		PERCENT	<u>TYPE</u>			PERCENT	Metric
		BLDR SLABS [16 pts]			X SILT [3	-		50	Points
	쌰	BOULDER (>256mm)) [16 pts]			ACK/WOODY D		10	Substrate
	牉	BEDROCK [16 PTS] COBBLE (65-256mm	\ [12 ntc]			ETRITUS [3 PTS or HARDPAN [0	-		Max = 40
	HH	GRAVEL (2-64mm) [MUCK	-	P1]		
	X	SAND (<2mm) [6 pts		40		CIAL [3 PTS]			
								(D)	12
	Slab	Total of Percentages, Boulder, Cobble, &		0				(B) 3	
S		OF 2 MOST PREDON		RATE TYPES:	9	TOTAL NUMBE	R OF SUBSTRATI	TYPES: 3	A + B
					<u> </u>				
2.	Max	imum Pool Depth (<i>N</i>	Aeasure the ma	aximum pool	depth within	the 61m (200')	evaluation reac	h at the time of	Pool Depth
	eval	uation. Avoid plunge	pools from ro	ad culverts o	r storm water	pipes) (Check	ONLY one box):		Max = 30
		>30 centimeters [20	•			- 10 cm [15 pts	i]		I
	H	>22.5 - 30 cm [30 pt	•			[5 pts]	E CHANNEL TO	,	15
	Ш	>10 - 22.5 cm [25 pt	sj			ATER OR MOIST	I CHANNEI III nt e	5]	11111
							CIMMINIZE [O P C	- I Q I	11 -0 1
		COMMENTS					OL DEPTH (centir	8	
		COMMENTS						8	
3.	BAN	IK FULL WIDTH (Mea	sured as the av	verage of 3-4		MAXIMUM POO	OL DEPTH (centir	8	Bankfull
3.	BAN	IK FULL WIDTH (Mea >4.0 meters (>13') [3	30 pts]		measuremen >1.0 m	ts) (Check O	OL DEPTH (centing NLY one box): - 4'8") [15 pts]	8	Bankfull Width
3.	BAN	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7	30 pts] " - 13') [25 pts]		measuremen >1.0 m	MAXIMUM POo	OL DEPTH (centing NLY one box): - 4'8") [15 pts]	8	Bankfull
3.	BAN	IK FULL WIDTH (Mea >4.0 meters (>13') [3	30 pts] " - 13') [25 pts]		measuremen >1.0 m	ts) (Check O	OL DEPTH (centing NLY one box): - 4'8") [15 pts]	neters): 8	Bankfull Width Max = 30
3.	BAN	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7	30 pts] " - 13') [25 pts]		measuremen >1.0 m	MAXIMUM POO ts) (Check O 1 - 1.5 m (>3'3") 1 (≤ 3'3") [5 pts	OL DEPTH (centing NLY one box): - 4'8") [15 pts]	1.5	Bankfull Width
3.	BAN	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8	30 pts] " - 13') [25 pts]		measuremen >1.0 m	MAXIMUM POO ts) (Check O 1 - 1.5 m (>3'3") 1 (≤ 3'3") [5 pts	OL DEPTH (centin NLY one box): - 4'8") [15 pts]	1.5	Bankfull Width Max = 30
3.	BAN	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8	30 pts] " - 13') [25 pts] " - 9'7") [20 pts	This info	measuremen	ts) (Check O 1 - 1.5 m (>3'3") 1 (≤ 3'3") [5 pts] AVERAGE BA	OL DEPTH (centin NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (meters): 8	Bankfull Width Max = 30
3.	BAN	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This info	measuremen >1.0 m ≤1.0 m rmation must * NOTE: River	ts) (Check Oin - 1.5 m (>3'3") [5 pts] AVERAGE BA also be completed to the complete complet	OL DEPTH (centin NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (meters): 8	Bankfull Width Max = 30
3.	BAN X	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This info	measuremen	ts) (Check O 1 - 1.5 m (>3'3") 1 (≤ 3'3") [5 pts] AVERAGE BA also be completeft (L) and Right	OL DEPTH (centin NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (meters): 8	Bankfull Width Max = 30
3.	X	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN RIPARIAN WIDTH (Per Bank)	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This info	measuremen >1.0 m ≤1.0 m rmation must * NOTE: River DPLAIN QUALI	ts) (Check Oil - 1.5 m (>3'3") [5 pts] AVERAGE BA also be completeft (L) and Right (OL DEPTH (centing NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (eted ght (R) as looking	meters): 8	Bankfull Width Max = 30
3.	L R	>4.0 meters (>13') [3 >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN RIPARIAN WIDTH (PER Bank) Wide >10m Moderate 5-10m	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This information of the property of the proper	measuremen >1.0 m ≤1.0 m ≤1.0 m × mation must * NOTE: River DPLAIN QUALL Predominant re Forest, Wet ture Forest, SI	ts) (Check Of 1 - 1.5 m (>3'3") [5 pts] AVERAGE BA also be completed to the complete to the	OL DEPTH (centing NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (eted ght (R) as looking	meters): 8 downstream Conservation T Urban or Indus	Bankfull Width Max = 30 20
3.	L R	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This info	measuremen >1.0 m ≤1.0 m ≤1.0 m × NOTE: River * NOTE: River • Predominant re Forest, Wet ture Forest, St ential, Park, N	ts) (Check Of 1 - 1.5 m (>3'3") [5 pts] AVERAGE BA also be completed to the complete to the	OL DEPTH (centing NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (eted ght (R) as looking	downstream Conservation T Urban or Indus Open Pasture,	Bankfull Width Max = 30 20 illage trial Row Crop
3.	L R	>4.0 meters (>13') [3 >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN RIPARIAN WIDTH (PER Bank) Wide >10m Moderate 5-10m	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This info	measuremen >1.0 m ≤1.0 m ≤1.0 m × mation must * NOTE: River DPLAIN QUALL Predominant re Forest, Wet ture Forest, SI	ts) (Check Of 1 - 1.5 m (>3'3") [5 pts] AVERAGE BA also be completed to the complete to the	OL DEPTH (centing NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (eted ght (R) as looking	meters): 8 downstream Conservation T Urban or Indus	Bankfull Width Max = 30 20 illage trial Row Crop
3.	L R	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN	This information of the property of the proper	measuremen >1.0 m ≤1.0 m ≤1.0 m × note: River PDLAIN QUALI Predominant re Forest, Wet ture Forest, St ential, Park, N d Pasture	ts) (Check Of 1-1.5 m (>3'3") [5 pts] AVERAGE BA also be completed to the complete to the co	OL DEPTH (centing NLY one box): - 4'8") [15 pts]] NKFULL WIDTH (eted ght (R) as looking	downstream Conservation T Urban or Indus Open Pasture,	Bankfull Width Max = 30 20 illage trial Row Crop
3.	L R	>4.0 meters (>13') [: >3.0 m - 4.0 m (>9'7 >1.5 m - 3.0 m (>4'8 COMMENTS RIPARIAN ZONE AN RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Comments FLOW REGIME (At T Stream Flowing	30 pts] " - 13') [25 pts] " - 9'7") [20 pts D FLOODPLAIN L X Crime of Evaluati	This info I QUALITY R (Most Matu Imma Resid Fence	measuremen >1.0 m ≤1.0 m ≤1.0 m ≤1.0 m × note: River Predominant re Forest, Wet ture Forest, St ential, Park, N d Pasture ONLY one box	ts) (Check Of 1 - 1.5 m (>3'3") [5 pts] AVERAGE BA also be completed the complete of the com	OL DEPTH (centing NLY one box): - 4'8") [15 pts] NKFULL WIDTH (eted ght (R) as looking L R eld L R	downstream Conservation T Urban or Indus Open Pasture, Mining or Cons no flow (Intermittent	Bankfull Width Max = 30 20 illage trial Row Crop truction
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ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): s05
QHEI PERFORMED? Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township/City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipition: Quantity:
Photographer Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. And attach results) Lab Number
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream? (Y/N) Y If not, please explain:
Additional comments/description of pollution impacts
BIOTIC EVAULATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site
ID number. Include appopriate field data sheets from the Primary Hedwater Habitat Assessment Manual)
Fish observed? (Y/N) N Voucher(Y/N) N Salamander Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher(Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of Interest for site evaluation and a narrative description of the stream's location
FLOW——>