

Attachment E Wetland Delineation Report

- Wetland and Stream Delineation Report, February 2022
- Wetland and Stream Delineation Report Addendum, August 2022



WETLAND AND STREAM DELINEATION REPORT THOROUGHBRED SOLAR PROJECT HART COUNTY, KENTUCKY



Prepared for: Thoroughbred Solar, LLC

Prepared by: Haley & Aldrich, Inc.

File No. 0203928-000 February 2022



SIGNATURE PAGE FOR

WETLAND AND STREAM DELINEATION REPORT

THOROUGHBRED SOLAR PROJECT HART COUNTY, KENTUCKY

PREPARED FOR THOROUGHBRED SOLAR, LLC

PREPARED BY:

Timothy L. Walters Ph.D., PWS Senior Wetland Ecologist Haley & Aldrich, Inc.

REVIEWED AND APPROVED BY:

James B. Pippin

Associate | Senior Project Manager

fresock

Haley & Aldrich, Inc.

Lynn/Gresock//
Principal Consu

Principal Consultant Haley & Aldrich, Inc.

Table of Contents

			Page
List	of Figu	ures	iv
1.	Reg	ulatory Authorities	1
	1.1 1.2	WATERS OF THE UNITED STATES WATERS OF THE STATE/COMMONWEALTH	1 1
2.	Met	thodology	2
3.	Site	Setting	4
	3.1 3.2	PHYSIOGRAPHY AND SOILS HYDROLOGY	4 5
4.	Res	ults	6
	4.1 4.2 4.3		6 6 7
5.	Con	clusions	8
Refe	erence	es	9

Tables

Figures

Appendix A – Photo Log

Appendix B – Routine Wetland Determination and Stream Inventory Data Forms

Appendix C – Kentucky Wetland Rapid Assessment Method Forms



List of Figures

Figure No.	Title
1	Study Area Overview
2	Topography and Soils Series
3	Federal and State Mapped Aquatic Resources
4	Delineated Wetlands, Streams, and Karst Features



1. Regulatory Authorities

1.1 WATERS OF THE UNITED STATES

As defined by the United States Army Corps of Engineers (USACE), Waters of the United States include lakes, ponds, streams (intermittent and perennial), and wetlands which are regulated under Sections 401 and 404 of the Clean Water Act. Federally jurisdictional wetlands are defined as "those that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

The USACE also regulates navigable waters under Section 10 of the Rivers and Harbor Act (33 United States Code [U.S.C.] 401 et seq.), which requires a permit from the USACE to construct any structure in or over any navigable waters of the United States, as well as any proposed action that would alter or disturb these waters (such as excavation/dredging or deposition of materials). If the proposed structure or activity affects the course, location, condition, or capacity of the navigable water, even if the proposed activity is outside the boundaries of the water body, a permit from the USACE is required. Depending on the type of project and quantity of impact, the permit may be an Individual Permit or may qualify under the USACE Nationwide Permit program.

1.2 WATERS OF THE STATE/COMMONWEALTH

Consistent with Section 401 of the Clean Water Act, a state is required to issue a Water Quality Certification for any project requiring a federal permit. The Section 401 certification is typically issued in conjunction with the USACE Section 404 permit. If authorization under the Nationwide Permit program is applicable, many of those Nationwide Permits incorporate the Water Quality Certification as a part of the authorization and conditions. The Commonwealth of Kentucky does not take jurisdiction over any wetlands or waters beyond that of the USACE. For example, Kentucky does not have an isolated wetlands permit program (Kentucky Energy and Environment Cabinet, 2021). Sinkholes may be protected by the Kentucky Division of Water (KDOW) if they have a direct connection to subsurface water. A KDOW Stream Construction Permit would be needed for construction activities in a stream channel, wetland, or sinkhole drain area.



2. Methodology

Prior to initiating field investigations, Haley & Aldrich, Inc. (Haley & Aldrich) conducted a desktop review of publicly available data to evaluate the presence of mapped wetlands and streams within the Study Area (the approximately 450-acre property illustrated in Figure 1). Data consulted include: United States Geological Survey (USGS) topographic quadrangle maps, National Wetland Inventory (NWI) maps, the Natural Resources Conservation Service (NRCS) County Soil survey, Federal Emergency Management Agency (FEMA) Flood Insurance maps, and the National Hydrography Dataset (NHD). Information gathered from the desktop review is described in Section 3, Site Setting.

The wetland and stream delineation field survey was performed in accordance with criteria set forth in the Corps of Engineers Wetland Delineation Manual (1987) and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Regional Supplement (Version 2.0). Data was collected from one or more sample plots in each delineated wetland (depending on the size of the delineated area) and was recorded on USACE Routine Wetland Determination forms. The boundaries of wetlands were demarcated with pink survey ribbon (flagging) and located with a Trimble 3000 global positioning system (GPS) unit with reported sub-meter accuracy.

The Kentucky Wetland Rapid Assessment Method (KY-WRAM) is used to determine the existing quality and aid in permitting decisions. The KY-WRAM is made up of six metrics: wetland size and distribution, upland buffers and intensity of surrounding land use, hydrology, habitat alteration and habitat structure development, special situations, and vegetation, interspersions, and habitat features. Methodology described in the *Guidance Manual for KY-WRAM*, *Version 3.0 (2016)* was used for assessing the wetlands.

Hydrology was evaluated based on indicators that are divided into two categories, primary and secondary. The 1987 manual and 2012 supplement define hydrology as present when at least one primary indicator or two secondary indicators are identified. One primary indicator is sufficient to evaluate if hydrology is present; however, if primary indicators are absent then two or more of the secondary indicators are required to evaluate hydrology. If other probable hydrology evidence was found, then this was subsequently documented on the Routine Wetland Determination Form.

Hydrophytic vegetation was assessed by identifying plant species and their assigned wetland indicator rating of obligate (OBL), facultative wet (FACW), facultative (FAC), facultative upland (FACU), and upland (UPL) according to the 2016 National Wetland Plant List. Vegetation in both upland and wetland communities was characterized using the areal dominance method, with a radius of 30 feet around the soil sample location for trees, a 15-foot-radius for saplings/shrubs, and a five-foot-radius for herbaceous plants.

Hydric soil indicators were evaluated using soil characteristics as defined in *Field Indicators of Hydric Soils in the United States (Version 8.0, 2016)*. Evidence of hydric soil indicators was recorded based on the presence of color matrix, hue, and redoximorphic features such as saturation, gleyed matrix, mottling, hydrogen sulfide odor, and organic/peat layers. Soil test pits were dug using a shovel to a depth of approximately 18 inches or refusal due the presence of a hard pan layer, rock, or hard fill materials. Soil color was described using the Munsell Color book, texture using United State Department of Agriculture (USDA) hand-texture methods, and the presence/absence of redoximorphic features, including depletions and concentrations.



Additional surface waters, including stream channels and drainage ways, found during field work would have been investigated, flagged, located with the GPS unit, and characterized on Stream Inventory Data Forms. To the extent practicable, these surface waters would be investigated to evaluate drainage patterns and potential connections to other Waters of the United States.



3. Site Setting

3.1 PHYSIOGRAPHY AND SOILS

The Study Area is located in the Mississippian Plateau of Kentucky which consists of karst terrain, a limestone plain characterized by sink holes, sinking streams, streamless valleys, springs, and caverns. The Study Area itself is typical of this physiographic province and had been cleared and primarily planted with hay, row-crops, or alfalfa fields. An approximately 23-acre upland woodlot is also present. Elevations within the Study Area range from 600 to 650 feet above mean sea level (ft amsl). A topographic map of the Study Area and surrounding region is provided as Figure 2.

Soil series units mapped by the NRCS web soil survey are listed in Table 1 and provided as Figure 2. Soil units, drainage class, and whether or not the soil unit is classified as hydric are also summarized in Table 1 below. Eleven soil types occur within the Study Area; none of them are hydric.

Table 1. Study Area Soils

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Conditions ¹
CaD	Caneyville silt loam, very rocky, 6 to 20 percent slopes	Well drained	Non-hydric
CrB2	Crider silt loam, 2 to 12 percent slopes, eroded	Well drained	Non-hydric
CrC2	Crider silt loam, 6 to 6 percent slopes, eroded	Well drained	Non-hydric
EIB	Elk silt loam, 2 to 6 percent slopes, rarely flooded	Well drained	Non-hydric
FdC	Fredonia-Hagerstown-Vertrees silt loams, rocky, 6 to 20 percent slopes	Well drained	Non-hydric
HdB	Hagerstown-Fredonia- Vertrees silt loams, rocky, 2 to 6 percent slopes	Well drained	Non-hydric
Np	Nolin silt loam, depressional, frequently flooded	Well drained	Non-hydric
RxE	Rock outcrop-Caneyville complex 12 to 30 percent slopes	Well drained	Non-hydric
VrB2	Vertrees silt loam, 2 to 6 percent slopes, eroded	Well drained	Non-hydric
VrC2	Vertrees silt loam, 6 to 12 percent slopes, eroded	Well drained	Non-hydric
VrC3	Vertrees silt loam, 6 to 12 percent slopes, severely eroded	Well drained	Non-hydric

¹ Soils mapping source: USDA, NRCS web soil survey (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm).



3.2 HYDROLOGY

The Study Area is located in the northern portion of the Lower Kentucky Region Watershed (Hydrologic Unit Code [HUC] 05100205). Most of the surface hydrology within the Study Area is generated by precipitation with some surface flow from neighboring areas. Total average annual precipitation is 52 inches of rain and 8 inches of snow (Source: http://usclimatedata.com as measured in nearby Horse Cave, Kentucky).

The NWI map identifies nine aquatic features mapped within the Study Area. Seven of these features are classified as open water, and the remaining two are classified as palustrine emergent (PEM) wetlands. Mapped wetlands identified within the Study Area are included in Table 2 below and are depicted on Figure 3. Based upon field review, the mapped open water areas and one of the mapped PEM wetlands were found to be associated with karst features rather than wetlands or waters. One NWI mapped open water feature was delineated as a forested wetland. All other NWI mapped features were determined to be upland areas.

Table 2. Federal and State Mapped Wetland and Streams

Name	Classification ¹	Status
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Open Water	Unprotected
NWI-mapped wetland	Emergent Wetland	Unprotected
NWI-mapped wetland	Emergent Wetland	Unprotected

Notes:



¹ NWI Wetland Data Sources.

4. Results

Field investigations to delineate wetlands and streams within and adjacent to the Study Area were completed by a Haley & Aldrich wetland scientist accompanied by an environmental professional on 8 and 9 November 2021. A total of one palustrine forested (PFO) wetland was identified, which was identified as a NWI mapped open water feature. This feature is summarized in Table 3 below and is depicted on Figure 4. No streams were identified within the Study Area.

Table 3. Delineated Wetland

Wetland	Wetland Community ¹	State Classification ²	Area within Study Area	Jurisdiction ³
Wetland W1	PFO	none	0.25 acre	Non-jurisdictional

Notes:

Representative photos of the delineated wetland feature and associated upland areas are included as Attachment A. The completed routine wetland determination is included as Attachment B. Wetland type was classified according to the Cowardin classification system (Cowardin, et al., 1979).

4.1 KARST FEATURES

Several karst features were observed on site of varying sizes and depressions. Two large holes were observed and noted on Figure 4. These were typified as having 10- to 12-foot shear sides with a maximum depression of up to 25 feet. These two holes were approximately 37,042 square feet (sq ft) and 4,764 sq ft in area. Both holes had the potential for a cave-like opening at the bottom of the depression. Haley & Aldrich did not descend into the bottom of these depressions to investigate further.

4.2 WETLAND DESCRIPTION

Wetland W-1 is a 0.25-acre (10,886 sq ft) PFO wetland that may have been a karst depression that has previously been filled. The center of the wetland was dominated by *Persicaria longiseta* (smartweed: FAC), *Microstegium vimineum* (Japanese stilt grass: FAC), and *Symphyotrichum lanceolatum* (lance-leaf aster: FAC). The forested edge was dominated by *Celtis occidentalis* (hackberry: FAC) and *Fraxinus pennsylvanica* (green ash: FAC). Positive indicators of hydrology within this wetland included geomorphic position, microtopographic relief, water-stained leaves, and a positive FAC-neutral test. Observed hydric soil indicators were Depleted Matrix (F3). The wetland scored a 46 using the KY-WRAM (Appendix C). No outflow was observed from this wetland. This wetland would likely be considered isolated and is therefore considered non-jurisdictional by the USACE due the lack of a hydrologic connection to jurisdictional Waters of the United States.



 $^{^{1}}$ Wetland classifications are based on the Cowardin classification system whereby: P = Palustrine; EM = Emergent; SS = Shrub Scrub; FO = Forested.

² The State/Commonwealth does not take jurisdiction over USACE non-jurisdictional wetlands.

³ Based on field observations of hydrologic connections. If necessary, final federal jurisdiction can only be confirmed through consultation with USACE staff.

4.3 STREAM DESCRIPTIONS

During the site visit, no streams or waterways were observed. A culvert was observed under L and N Turnpike Road connecting small, vegetated swales (Figure 4). These swales did not contain a bed, bank, or ordinary high-water mark, and it appeared the culvert was installed for roadside drainage only.



5. Conclusions

A total of one PFO wetland was delineated during November 2021 as part of an on-site wetland and stream delineation. The wetland scored a 46 using the KY-WRAM. The wetland had no visible outlet to jurisdictional Waters of the United States and would be considered non-jurisdictional by the USACE. No streams or other waterways were observed. If needed, a final determination of jurisdictional status can only be made through consultation with the USACE.



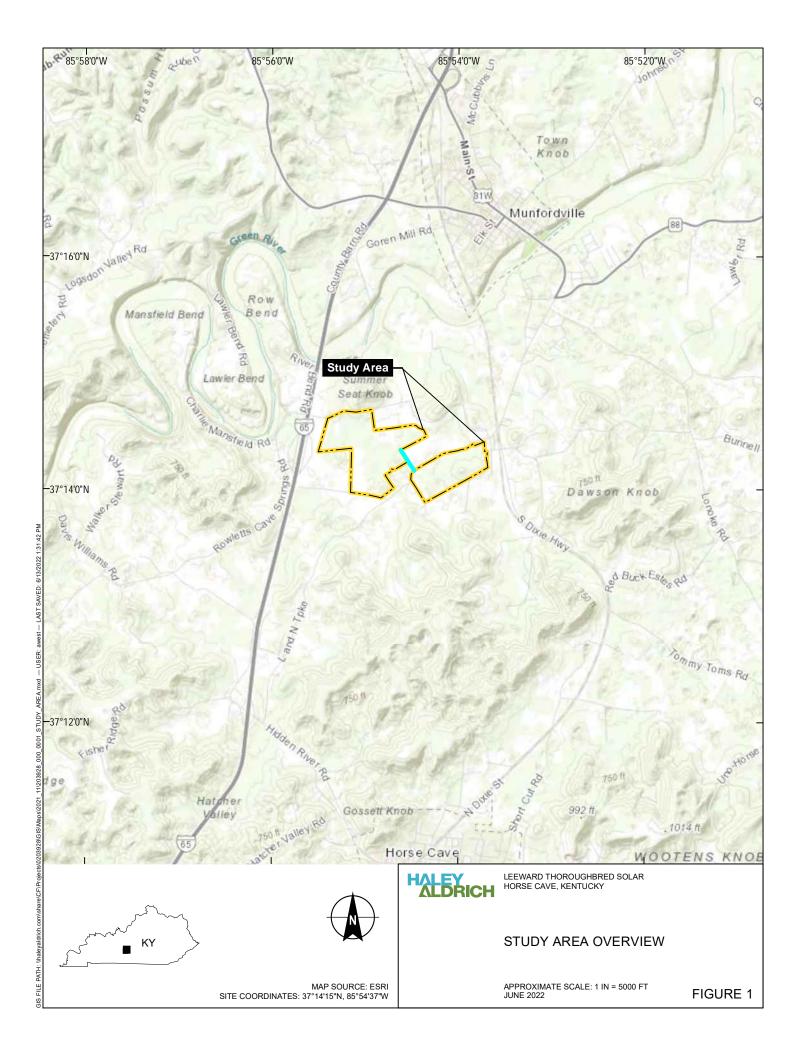
References

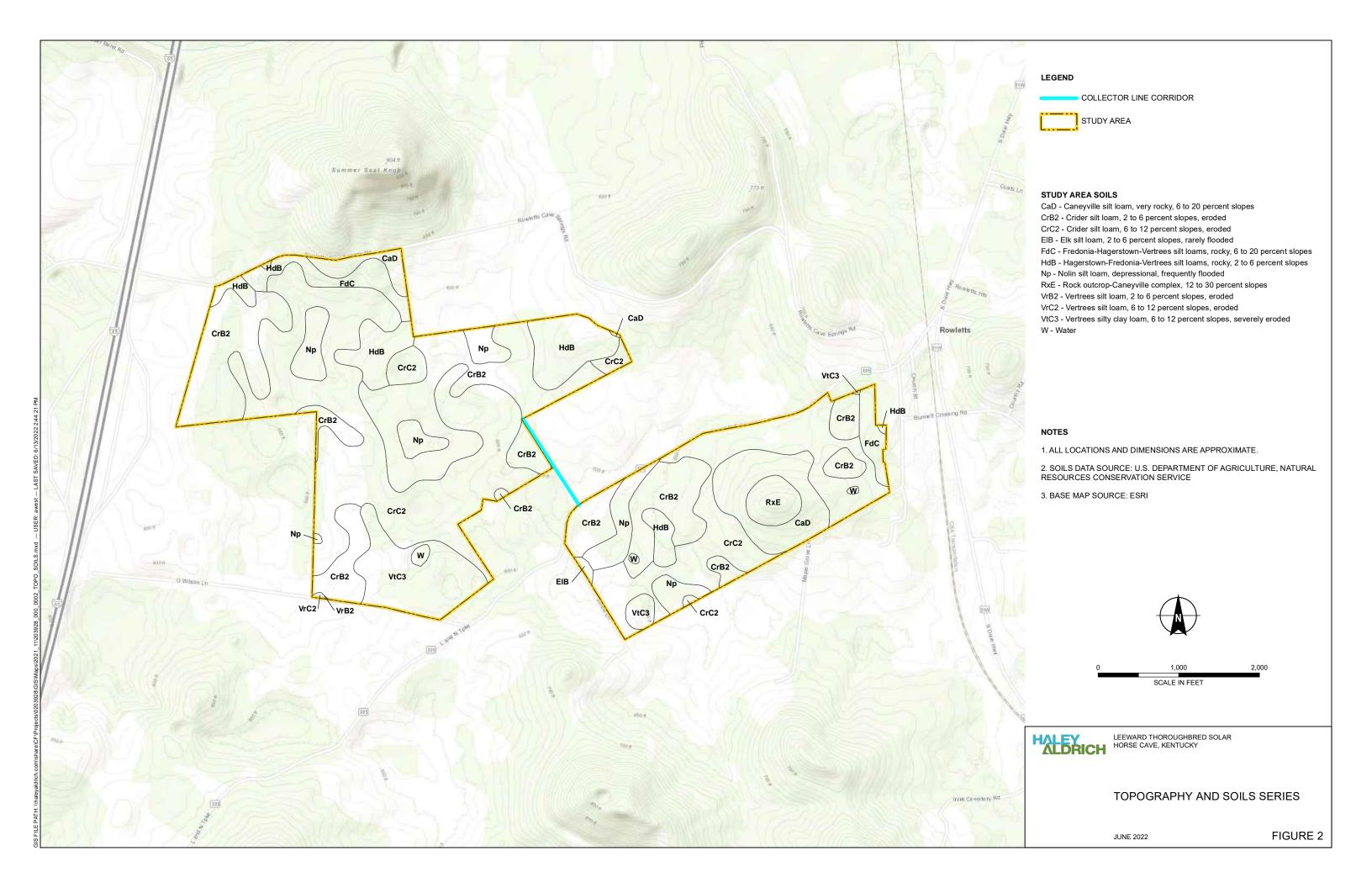
- 1. Cowardin, L.M., et al. 1979. *Classification of wetlands and deepwater habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C. 131 pp.
- 2. Kentucky Energy and Environment Cabinet. 2021. 401 Water Quality Certification. Accessed at: §401 Water Quality Certification Kentucky Energy and Environment Cabinet
- 3. Kentucky Energy and Environment Cabinet. March 2016. *Guidance Manual for KY-WRAM, Version* 3.0.
- 4. Munsell Color (Firm). Munsell Soil Color Charts. Grand Rapids, MI: Munsell Color, 2010.
- 5. U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual*. Environmental Laboratory, Vicksburg, MS, 92 pp.
- 6. U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*. U.S. Army Engineer Research and Development Center, Vicksburg, MS, 162 pp.
- 7. U.S. Army Corps of Engineers. 2016. *National Wetland Plant List*. Accessed at: https://www.lrp.usace.army.mil/Portals/72/2016%20National%20Wetland%20Plant%20List.pdf?ver=2016-06-16-094823-560.
- 8. USDA Natural Resources Conservation Service. 2016. *Field Indicators of Hydric Soils in the United States,* Version 8.0.

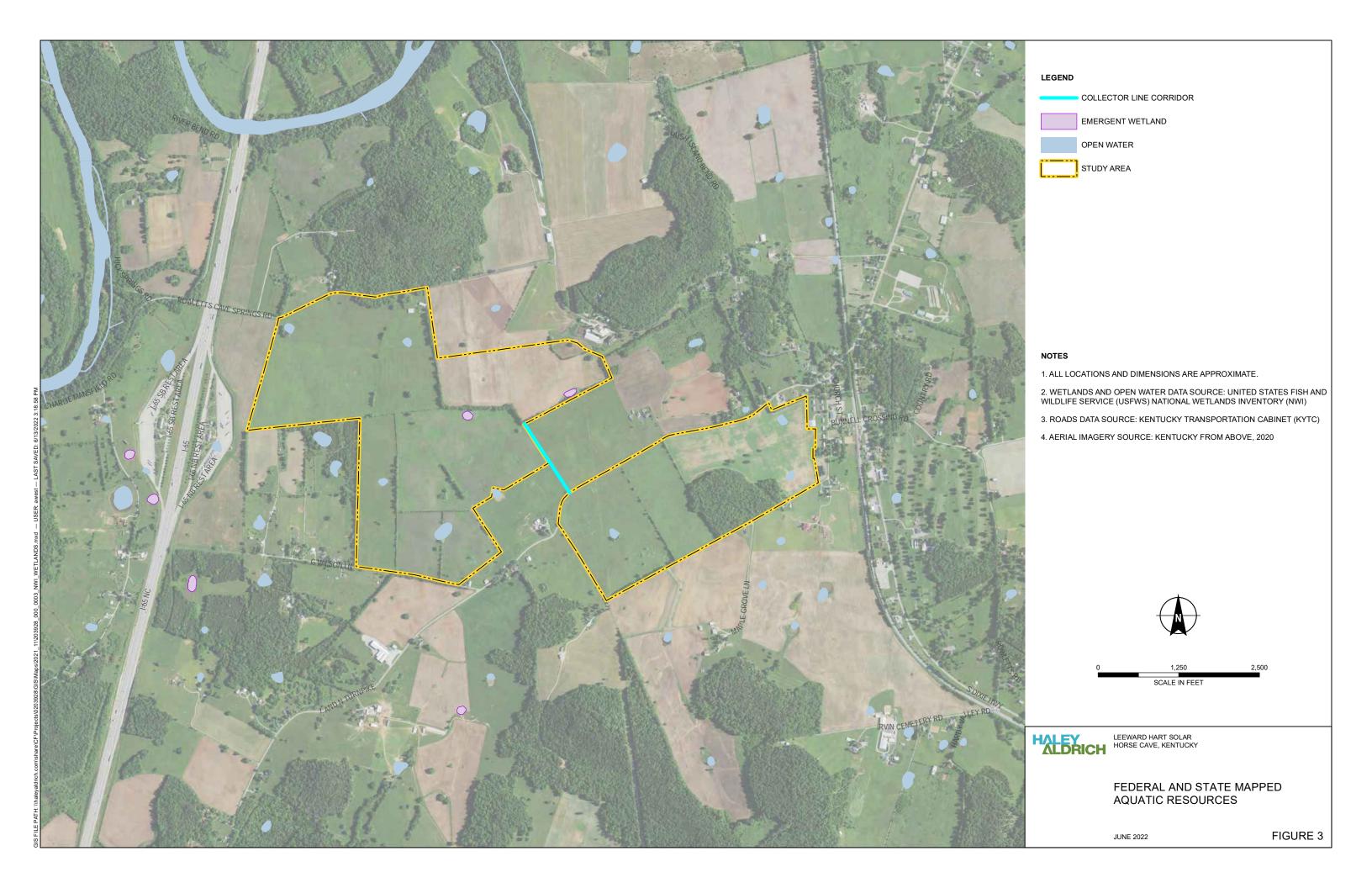
\haleyaldrich\share\CF\Projects\0203928\Wetlands\2022-0103-HAI-Wetland and Stream Delineation Formal Report-DF_6-13-22.docx

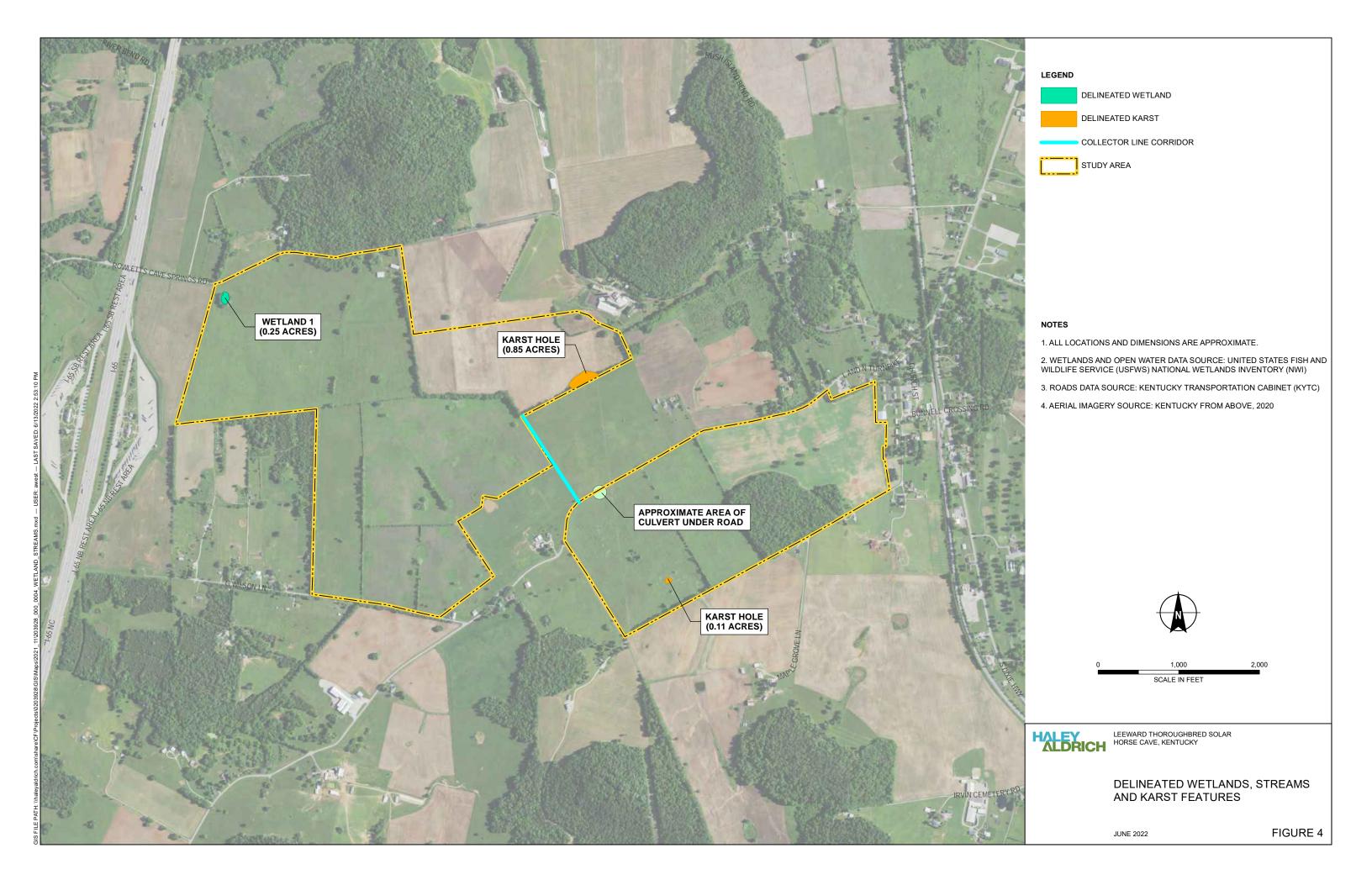












APPENDIX A

Photo Log

Date Photographs Taken: 8 and 9 November 2021



Photo 1: Forested (PFO) Wetland W-1 near Flag 5: View looking west.



Photo 2: Forested (PFO Wetland W-1 near Flag 11: View looking north.

Haley & Aldrich Page 1 of 2

Date Photographs Taken: 8 and 9 November 2021



Photo 3: Karst feature 1 with walls 10-15 feet high. Located within northern parcel in the Study Area



Photo 4: Karst feature 2. Located within southern parcel in the Study Area.

Haley & Aldrich Page 2 of 3

Hart Solar Project Hart County, Kentucky File No. 0203928-000

Date Photographs Taken: 8 and 9 November 2021



Photo 5: Wetland W-1 Upland Sample Plot 1 – hayed field looking north.



Photo 6: Wetland W-1 Upland Sample Plot 2 – old field looking east.

Haley & Aldrich Page 3 of 4

Hart Solar Project Hart County, Kentucky File No. 0203928-000

Date Photographs Taken: 8 and 9 November 2021



Photo 7: Upland soils at Upland Sample Plot 2.



Photo 8: Upland Sample Plot 11 – newly planted area, upland soils looking south

Haley & Aldrich Page 4 of 5

Date Photographs Taken: 8 and 9 November 2021



Photo 9: Upland Sample Plot 10 within bottom of Karst feature looking north.



Photo 10: Upland roadside drainage swale along L and N Turnpike Road looking southwest.

Haley & Aldrich Page 5 of 5

APPENDIX B Routine Wetland Determination and Stream Inventory Data Forms

Project/Site: Hail Solar				ains and Pledmont Region Hart
Applicant/Owner: Leaung	14	City	County: 1/0/ Se CIPA	Sampling Date: 67/04/0
Investigator(s): T. Wa H		12 x 10 5 1		State: KY Sampling Point: 5P/
Landform (hillslope, lemace, etc.):			tion, Township, Range:_	
from the second control of	14.8.1		elief (concave, convex, no	
	(1)	Lat: 3/.63 909	470 Long:	85,91880910 Datum:
Soil Map Unit Name:	Ser y	7.14.117.6	1 1	NWI classification:
Are climatic / hydrologic conditions or			Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil,			urbed? Are "Norma	al Circumstances" present? Yes No
Are Vegetation Soil	or Hydrology	naturally probler	natic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS -	Attach sit	e map showing sa	mpling point location	ons, transects, important features, etc
Hydrophytic Vegetation Present?	Yes	No X		- 10 7
Hydric Soil Present?	Yes _	No_X	is the Sampled Area	Yes No
Wetland Hydrology Present?	Yes	No X	within a Wetland?	162 110
Remarks:				
4 9				
AND THE RESERVE				The same of the same of
HYDROLOGY	-			
Wetland Hydrology Indicators:		4V 7 1		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	s required: c	heck all that apply)		Surface Soil Cracks (86)
Surface Water (A1)		True Aquatic Plants	1.1.000001	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	=	Hydrogen Sulfide Od		Drainage Patterns (B10)
Saturation (A3)			es on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)		Presence of Reduce		Dry-Season Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burrows (C8)
Drift Deposits (B3)		Thin Muck Surface (0 Other (Explain in Rer		Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	-	Other (Explain in Net	naiks)	Geomorphic Position (D2)
Iron Deposits (B5) Inundation Visible on Aerial Imag	ery (87)		-	Shallow Aquitard (D3)
Water-Stained Leaves (89)	.,, (0.,			Microtopographic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral Test (D5)
ield Observations:	27 K	75. x 5 (G =	DM =	2 Y ,
Surface Water Present? Yes _	No	Depth (inches):	- o 37 - o 75	
Vater Table Present? Yes	No	Depth (inches):		Y
Saturation Present? Yes	No	Depth (inches):	Wetland H	ydralogy Present? Yes No
includes capillary fringe) Describe Recorded Data (stream gaug	je, monitoring	well, aerial photos, pre-	vious inspections), if avail	lable:
Remarks: No hydrology				
, (/				
				1
)

Tree Stratum (Plot size:)	200000	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant Species Across All Strata: (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
	= Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by:
50% of total cover:)	20% of total cover:	OBL species x 1 = FACW species x 2 = FAC species x 3 =
		FACU species x 4 = UPL species x 5 =
		Trevalence mack
		Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.01
50% of total covers	= Total Cover	4 - Morphological Adaptations¹ (Provide supporting
	20% of total cover:	data in Remarks or on a separate sheet)
Schodonufus praferois	30 V FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
Plantago lancellatis		Indicators of hydric coil and watland hydrology must
Trifulium repeno Poa pratunsis	= 10 FACU 40 FAC	be present, unless disturbed or problematic.
		Definitions of Four Vegetation Strata:
		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of height.
		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 4	85 = Total Cover 2 20% of total cover: 16	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
oody Vine Stratum (Plot size:)		height.
		Hydrophytic
		Vegetation Present? Yes No
50% of total cover:	= Total Cover 20% of total cover:	Presenti les
30% of total cover		

Profile Descrip	otion: (Describe to the de	pth needed to docur	nent the indicator or confi	rm the absence of indi	Sampling Point:	
nebru _	Matrix	Redo	x Features			
(inches)	Color (moist)%	Color (maist)	% Type Loc²	Texture	Remarks	_ 3
0-76	59R 4/4			- clay loam		
	(m) =		<u> </u>	<u> </u>		
57	8-18	0				
					-	
				84		
	77 2					
						
76 57	A 1 1997 A4	-		18	-	
4 -		8 0 B) 80		S (N ACC)		i.
<u> </u>		<u> </u>			7 1	
pe: C=Conce	entration, D=Depletion, RM	=Reduced Matrix, MS	=Masked Sand Grains.	² Location: PL=Pore I	ining, M=Matrix.	
dric Soil Indi	cators:	la l	P. R. of 18	Indicators for	Problematic Hydric So	ils³:
Histosol (A1	•	Dark Surface			k (A10) (MLRA 147)	
Histic Epipe			ow Surface (S8) (MLRA 147		irie Redox (A16)	
Black Histic Hydrogen St			face (S9) (MLRA 147, 148)		147, 148) Floodplain Soils (F19)	
Stratified La		Loamy Gleyer Depleted Mate			136, 147)	
	A10) (LRR N)	Redox Dark S			low Dark Surface (TF12)	
	low Dark Surface (A11)	Depleted Dark	Surface (F7)	Other (Exp	olain in Remarks)	
	Surface (A12)	Redox Depres		(e' = 1	181 12 11	
	y Mineral (S1) (LRR N,		se Masses (F12) (LRR N,	10		
MLRA 14	7, 146) ed Matrix (S4)	MLRA 136	/ se (F13) (MLRA 136, 122)	3Indicators of	hydrophytic vegetation a	and
Sandy Redo:			odplain Soils (F19) (MLRA 1		trology must be present,	
Stripped Mat		Red Parent Ma	aterial (F21) (MLRA 127, 14	7) untess distu	rbed or problematic.	
	r (if observed):	-				
strictive Laye		_				×
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No	<u>×</u>
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes <u>No </u>	<u>×</u>
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No_	<u>×</u>
trictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No	<u>×</u>
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No	<u>×</u>
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
trictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	<u>×</u>
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	<u>×</u>
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No	×
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No	×
trictive Laye ype:)epth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
trictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No_	×
trictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
trictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
trictive Laye ype: epth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	×
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No _	<u>×</u>
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No	<u>×</u>
strictive Laye Type: Depth (inches)	r (if observed):			Hydric Soil Present	? Yes No	×
	r (if observed):			Hydric Soil Present	? Yes No _	×

Projecusine Hty 1 Solar	C			Sampling Date & Nov 2
Applicant/Owner	- 2			Sampling Point: 3P2
Investigator(s)		ection, Township, Ronge		
Landform (hillslope, terraco, etc.):				
Subregion (ERR or MERA):				
Soll Map Unit Name	market de 1	a libeli cer	NWI classifi	cation: Up 5/2 de -
Are climatic / hydrologic conditions on the site typi	cal for this time of year	7 Yes No	_ (If no, explain in F	Remarks.)
are Vegetation, Soil, or Hydrology				
ire Vegetation, Soil, or Hydrology			, explain any answe	
Service for disputely a service control		No. of Concession, Name of Street, or other		
SUMMARY OF FINDINGS - Attach sit	e map snowing s	ampling point locat	ions, transects	i, important leatures, et
Hydrophytic Vegetation Present? Yes	NoX	4	_	\
Hydric Soil Present? Yes		Is the Sampled Area within a Wetland?		No.
Wetland Hydrology Present? Yes	No_ <u>_X</u>	Willing a vietning:	103	
Remarks:		 		
YDROLUGY				
BARY TO A A LAND ST. C.			444.1	
The state of the s	8 7 7 7 7 7		1	
YDROLOGY	5 W F	3000	VI G (0)	7. (3)
Vetland Hydrology Indicators:	9 11 52	/141	_	tors (minimum of two required)
Primary Indicators (minimum of one is required; cl		154.41	Surface Soil (
_ Surface Water (A1)	True Aquatic Plants			etated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide C	eres on Living Roots (C3)	Drainage Pati Moss Trim Lir	
Saturation (A3) Water Marks (B1)	Presence of Reduc	- · · · ·		Vater Table (C2)
Sediment Deposits (B2)	_	ion in Tilled Soils (C6)	Crayfish Burre	
Drift Deposits (B3)	Thin Muck Surface			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain In Re	emarks)	Stunted or Str	ressed Plants (D1)
Iron Deposits (85)			Geomorphic F	Position (D2)
Inundation Visible on Aerial Imagery (B7)	~		Shallow Aquit	ard (D3)
_ Water-Stained Leaves (B9)				phic Relief (D4)
_ Aquatic Fauna (B13)	15.00		FAC-Neutral	Test (D5)
eld Observations:	, W			10 ILIV
ırface Water Present? Yes No	Depth (inches):			
ater Table Present? Yes NoX	Depth (inches):	2 2		\sim
turation Present? Yes No	Depth (inches):	Wetland H	łydrology Present	? Yes No
cludes capillary fringe) scribe Recorded Data (stream gauge, monitoring	well serial photos or	evious inspections), if ava	nilable:	
service recorded bata (stream gauge, maritoring	Trong dones priores pri	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
marks:			<u> </u>	
Ala I I Jacob				
No nyonolary				
No hydrology				
VV				

METAL STORES AND A STORE STORE

	nmos of plants.	Sampling Point: 5PZ
ree Stratum (Plot size:	Absolute Dominant Indicator	Dominance Test worksheet:
The second secon	TA DAME - STRICTS - STRICTS	Number of Dominant Species That Are OBL, FACW, or FAC:
		Total Number of Dominant 2 Species Across All Strata: (B)
		Percent of Dominant Species
1 C 50 D 11 E	- 50002	Prevalence Index worksheet:
	Total Cover	Total % Cover of: Multiply by
50% of total cover:	20% of total cover:	OBL species x 1 =
aplina/Shrub Stratum (Plot size:)		FACW species x 2 *
<u> </u>		FAC species × 3 =
		FACU species x 4 *
		UPL species x 5 =
		Column Totals: (A) (B
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
·		2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.0'
7.00	= Total Cover	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:	20% of total cover:	data in Remarks or on a separate sheet)
Solidazor altisina	30 V FACU	Problematic Hydrophytic Vegetation¹ (Explain)
Surghum halenense	40 V Incu	No Kina a s
Juneus tenuis	1 - Frico	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Andopmen gerardii	10 FAC	Definitions of Four Vegetation Strata:
Panian Vicantin	10 FAC	Jenninghia di Four Fegeranon Strata.
Par an lesse	10 FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
The prosper		more in diameter at breast height (DBH), regardless of height.
		4
		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
o	22 P. 10m	m) tall.
ACT THE		Harb All bashagania (and monda) alogte conselled
1	101 - Total Cover	Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.
50% of lotal cover:	20% of total cover: 70	Woody vine - All woody vines greater than 3.28 ft in
Voody Vine Stratum (Plot size:)		height.
	· · <u> </u>	13 Ar
		12.5
		Hydrophytlc
		Vegetation
the second second second	- Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	
Remarks: (Include photo numbers here or on a separate s	heet \	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features (Inches) Color (moist) % Color (moist) 44 Type Loc Texture Remarks O - 17 . I DYR 4/4 Lto Clay (Cx profile to the depth needed Matrix, MS-Masked Sand Grains PL-Pore Lining, M-Matrix Indicators for Problematic Hydric Soils*: Polyvalue Below Surface (SB) (MLRA 147, 148) Histosol (A1) Dark Surface (S9) (MLRA 147, 148) Polyvalue Below Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (F8) Pedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (T12) Other (Explain in Remarks) Indicators for Problematic (F12) Indicators for Problematic (F12) Indicators of Problematic (F12) Other (Explain in Remarks) Indicators of Problematic (F12) Indicators of Problematic (F13) Indicators of Problematic (F12) Indicators of Problematic (F13) Indicators of Problematic (F14) Indicators of Problematic (F15) Indicators of Problematic (F1	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators:) Depth Matrix Redox Features Texture Remarks Color (moist) 96 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks Indicators for Problematic Hydric Soit: Indicators for Problematic Hydric Soit: Indicators for Problematic Hydric Soit: O - 17 - 10 TR 4/4 160 Color (moist) 96 Tupe Texture Remarks Indicators for Problematic Hydric Soit: Indicators for Problematic Hydric Soit: O - 17 - 10 Tupe Texture Remarks Indicators for Problematic Hydric Soit: O - 17 - 10 Tupe Texture Remarks Indicators for Problematic Hydric Soit: O - 17 - 10 Tupe Texture Remarks Indicators for Problematic Hydric Soit: O - 17 - 10 Tupe Texture Remarks Indicators for Problematic Hydric Soit: O - 17 - 10 Tupe Texture Remarks O - 17		A. P. Charles	931 P. F. 1 3 36	5000a 10 F 10	127 2221 73
Depth (inches) Color (moist) 96 Color (moist) 96 Type Lee Texture Remarks O - 17	Depth (inches) Color (moist) 96 Color (moist) 96 Type Location: PL-Pore Lining, M-Matrix Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: Indicators of problematic Matrix (Sh) Type: C-Concentration, D-Depletion, RM-Ra 127, 147) Type:	SOIL	15.80	2 0.00		Sampling Point: <u>S</u>
Type: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains Type: C-Concentration, D=Depletion, RM=Reduced Sand Grains Type: C-Concentration, D=Depletion RM=Reduced Sand Grains Type: C-Concentration, D=Depletion RM=Reduced Sand Grains Type: C-Concentration, M=Reduced Sand Grains Type: C-Concentration, M=Reduced Sand Grains Type: C-Concentration, D=Depletion R	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thype: Indicators for Problematic Matrix Indicators for Problematic Midicators for Problematic Hydric Solls Indicators for Problematic Midicators (A16) (MLRA 147, 148) (MLRA 147, 148) Peledon (A2) Peledon Matrix (F3) Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: Indicators for Problematic Matrix (A1) Type: C-Concentration, D-Peletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: Indicators for Problematic Matrix (A1) Type: Depth (Inches): Hydric Soil Present? Yes	-	cription: (Describe to th			irm the absence of indicators.)
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grams Hydric Soil Indicators: Histosoi (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Sarafied Layers (A5) 2 cm Muck (A10) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) 2 cm Muck (A10) (LRR N) Depleted Dark Surface (F6) Sarafy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 147, 148) MLRA 136, 147) Other (Explain in Remarks) Jandicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (T12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problemating of the problematic of the problemating of the problematic of the problematic of the problematic of the problematic of the prob	Type: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grams			Rede	ox Features	- Tout as Pomarks
"Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Hydric Soil Indicators: Histosol (A1)	"Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains		12.10 411.			
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:	0-1/	10 114 -11	<u> </u>		Clay loam
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:			190000		
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:					
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:					
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:					
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:	199-7180	VE 1			
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:			-		
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 147, 148) MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic (S1) (MLRA 127, 147) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Histosol (A1) Bark Surface (S7) Histosol (A2) Black Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Hydric Soil Present? Yes					
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains Thistosol Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S7) Deplyvalue Below Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Zem Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (S7) Restrictive Layer (if observed): Type: Type:	Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS+Masked Sand Grains Hydric Soil Indicators:					·
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MLRA 147, 148) Sandy Gleyed Matrix (S4) Straped Matrix (S4) Straped Matrix (S6) Malra 147, 148) Loamy Gleyed Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Malra 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jandicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Malra 147, 148) Malra 136, Sandy Gleyed Matrix (S4) Sendy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, of the control of the present of the control of the control of the present, unless disturbed or problematic, of the control of the control of the present, unless disturbed or problematic, of the control of the	Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (F3) Red Ox Depressions (F8) Sandy Redox (S5) Depleted Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depleted Soil Present (A12) Dark Surface (S7) Depleted Soil MLRA 147, 148) Loamy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Red Parent Material (F21) (MLRA 127, 147) Hydric Soil Present (A12) Were Soil Present (A12) Loamy Gleyed Matrix (B4) Sandy Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Jindicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic.		made William P. Ad.	1 1 3 days 1 1	Contact Samuel No.	
Hydric Soil Indicators: Histosol (A1) Black Histic Epipedon (A2) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 136, 122) Type: Type: Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ³ : 1 deficit Soils (F19) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, or p	Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 147, 148) MLRA 147, 148) MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Coast Prairie Redox (A10) (MLRA 147, 148) Coast Prairie Redox (A16) MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, and the present, unless disturbed or problematic, and the present of the present of the problematic of the present of the pres					7 16 5 3 11 5 1 5 5 5 5 5 1 7
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MLRA 147, 148) Sandy Gleyed Matrix (S4) Straped Matrix (S4) Straped Matrix (S6) Malra 147, 148) Loamy Gleyed Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Malra 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jandicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147) Malra 147, 148) Malra 136, Sandy Gleyed Matrix (S4) Sendy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, of the control of the present of the control of the control of the present, unless disturbed or problematic, of the control of the control of the present, unless disturbed or problematic, of the control of the	Hydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F12) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A13) Sandy Redox Oark Surface (F7) MLRA 147, 148) Sandy Redox (S5) Piedmont Floodplain Soils (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) Sandy Redox (S5) Piedmont Floodplain Soils (F12) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Hydric Soil Present? Yes	Type: C=C	oncentration, D=Depletion	n, RM=Reduced Matrix, M	S=Masked Sand Grains	² Location: PL=Pore Lining, M=Matrix
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sendy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Type: Coast Prairie Redox (A16) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Thick Dark Surface (F12) (MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type:	Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) (MLRA 127, 147) Red NLRA 127, 147) Red NLRA 127, 147 Red Parent Material (F21) (MLRA 127, 147) Red NLRA 127, 147 Red NLRA 127, 147 Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	Hydric Soil	Indicators:	10.77		Indicators for Problematic Hydric Soils ³ :
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Red NLRA 127, 147) Red Parent Material (F21) (MLRA 127, 147) Red NLRA 127, 147) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed):	Black Histic (A3)			Dark Surfac	e (S7)	2 cm Muck (A10) (MLRA 147)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Com Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Redox Depressions (F13) (MLRA 136, 122) Stripped Matrix (S6) Redox Depressions (F13) (MLRA 136, 122) Indicators of hydrophytic vegetation and wetland hydrology must be present. Unless disturbed or problematic, Type: Type: Type:	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Murch (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sitripped Matrix (S6) Stripped Matrix (S6) Redox Dark Surface (F13) (MLRA 136, 122) Sitripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Redox Depleted Dark Surface (F19) Murch Surface (F19) Murch Matrix (F2) Piedmont Floodplain Soils (F19) Murch Matrix (F2) Piedmont Floodplain Soils (F19) Murch Matrix (F2) Piedmont Floodplain Soils (F19) Murch Matrix (F19) Piedmont Floodplain Soils (F19) Murch Murch Matrix (F19) Murch					
	Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depleted Matrix (F3) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Toher (Explain in Remarks) Lendox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes					
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Umbric Surface (F13) (MLRA 136, 122) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic						· · · · · · · · · · · · · · · · · · ·
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Sedox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, Umbric Surface (F13) (MLRA 136, 122) Sindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, Type: Type:	Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Depleted Dark Surface (F7) Other (Explain in Remarks) Remarks And Control of Remarks A					
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type:	Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Jandicators of hydrophytic vegetation and surface (F13) (MLRA 136, 122) Jandicators of hydrophytic vegetation and surface (F13) (MLRA 148) Wetland hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) Hydric Soil Present? Yes					
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) MLRA 136, 122) Jandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic, with the present of the p	MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Jendicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) Wetland hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) MLRA 136) Jendicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) MLRA 136) Jendicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) MLRA 136) Jendicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) MLRA 136) Jendicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic (F21) (MLRA 127, 147) MLRA 136) Jendicators of hydrophytic vegetation and hydrology must be present. Matrix (S6) Hydric Soil Present? Yes					
Sandy Gleyed Matrix (\$4) Sandy Redox (\$5) Stripped Matrix (\$6) Restrictive Layer (if observed): Sandy Gleyed Matrix (\$4) Dimensional Surface (\$F13) (MLRA 136, 122) Piedmont Floodplain Soils (\$F19) (MLRA 148) Wetland hydrology must be present. unless disturbed or problematic, unless disturbed or	Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)	Sandy N	Mucky Mineral (S1) (LRR	N, Iron-Mangar	nese Masses (F12) (LRR N,	81 Mar
Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) wetland hydrology must be present, unless disturbed or problematic	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic, wetland hydrology must be present, unless disturbed or problematic, wetland hydrology must be present, unless disturbed or problematic, wetland hydrology must be present, unless disturbed or problematic, wetland hydrology must be present, unless disturbed or problematic, wetland hydrology must be present, unless disturbed or problematic, wetland hydrology must be present. Type:					
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic Y	Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic \ \ \ \ \ \ _					
Restrictive Layer (if observed): Type:	Restrictive Layer (if observed): Type: Depth (inches): Hydric Soit Present? Yes					
Туре:	Type: Hydric Soit Present? Yes				indicator (C 2) (tillian C 12);	unicas distances of problemating
	Depth (inches): Hydric Soil Present? Yes	40.7	•			
Death (inches):						Hydric Soil Present? Ves
	renars.		G1C07.			

form from the company

Project/Site: Hey 1	ALC: NO AND DESCRIPTION OF THE PARTY OF THE	NTION DATA FOR	M - Eastern Mount	ains and Pledmont Region
the same of the sa	Sular	C	Mountain Horse C	14/ Hwt Sampling Date: 8Nov 8
			ty/Cotinty. 17070 = -	State: KY Sampling Point: 383
1	WALD	D. miller La		The state of the s
nvestigator(s):	walters		nction, Township, Ranger	The state of the s
andform (hillslope, terrace,	etc.):	Local	relief (concave, convex,	none): Slope (%):
Subregion (LRR or MLRA): _	100	Lnt: 37, 233/	14243 Long: _	- 85,91309430 Datum:
Soil Map Unit Name:		· · · · · · · · · · · · · · · · · · ·		NWI classification:
Are climatic / hydrologic cond	litions on the site typic	al for this time of year?	Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil _		TO THE REAL PROPERTY AND ADDRESS OF THE		nal Circumstances" present? Yes X No
Are Vegetation, Soil _				, explain any answers in Remarks.)
			The second secon	
SUMMART OF PINUIT		e map snowing sa	ampling point locat	ions, transects, important features, et
Hydrophytic Vegetation Pres	sent? Yes	No X		
Hydric Soil Present?	Yes		Is the Sampled Area within a Wetland?	Yes No
Welland Hydrology Present	? Yes	NoX	Tricini d Trettalio	
Remarks:			<u> </u>	
Y HOLGEN				
and in the property of				secret the latest the steel as
Acres 22 de 20 de 10 de 10	CA THAT US	A 100 A 11 A 11		7 - 473 324 355
YDROLOGY		513.00,000.00		Table 1 Mary September 4 (198)
Wetland Hydrology Indicat	ors:		2.00	Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is required; ch	the second of the last	EDG BLOOK DON'THE PA	Surface Soil Cracks (B6)
_ Surface Water (A1)	· 1	_ True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	2	_ Hydrogen Sulfide O		Drainage Patterns (B10)
Saturation (A3)	_	Andrew Programme and the first	eres on Living Roots (C3)	A. Carlotte Manager Company of the C
Water Morks (B1) Sediment Deposits (B2)	_	Presence of Reduce	on in Tilled Soils (C6)	Dry-Season Water Table (C2) Crayfish Burrows (C8)
Drift Deposits (B3)	Material ACT	Thin Muck Surface (Saturation Visible on Aerial Imagery (C9)
Algai Mat or Crust (84)	4	Other (Explain in Re	•	Stunted or Stressed Plants (D1)
_ Iron Deposits (B5)	_			Geomorphic Position (D2)
_ Inundation Visible on Aer	ial Imagery (B7)			Shallow Aquitard (D3)
_ Water-Stained Leaves (B	9)	10 place 10 place		Microtopographic Relief (D4)
_ Aquatic Fauna (B13)	100 1-0	3416.767607	- 1	FAC-Neutral Test (D5)
eld Observations:	W	14 3 363	3685-90-015	Composition Co P.
urface Water Present?	Yes No	_ Depth (inches):	American Cale No.	ALL CONTRACTOR OF THE PARTY OF
	Yes No	Depth (inches):		
ater Table Present?	Yes No	_ Depth (inches):	Wetland H	lydrology Present? Yes No X
turation Present?		(1.1)	unava manastrana) da sa	* ship*
ater Table Present? aturation Present? voludes capillary finage) escribe Recorded Data (stres	ากา กลุ่มตก เกากก่อกกลา	well, aerus nhoine no		

Service County of The Land County States of Land County Services and Transferred Services (Services Services County)

of the water agency

ee Stratum (Plot size:)		nant Indicator	Dominance Test worksheet:
ee Onaton (For Size.	% Cover Spec	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata: (B)
	<u> </u>	1-	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/I
Military many ik en			Prevalence Index worksheet:
Marine College of the	= Total	Cover	Total % Cover of: Multiply by:
50% of total cover:	20% of total co		OBL species x 1 =
pling/Shrub Stratum (Plot size:)			FACW species x 2 =
Kebus allegheniensis	10 V	FACY	FAC species x 3 =
			FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (E
		-	Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
- 100		_	1 - Rapid Test for Hydrophytic Vegetation
1 16 - 2			2 - Dominance Test is >50%
		_	3 - Prevalence Index is ≤3.0¹
0 10 10 10 10 10 10 10 10 10 10 10 10 10	= Total		4 - Morphological Adaptations1 (Provide supporti
50% of total cover:	20% of total co	over:	data in Remarks or on a separate sheet)
erb Stratum (Plot size:)			Problematic Hydrophytic Vegetation ¹ (Explain)
Conium Macdatum	15	FACW	The first of the DATA And
Solidage canadensis	40 -	Fred	Indicators of hydric soil and wetland hydrology must
Scrahim halepense	70 V	FACU	be present, unless disturbed or problematic.
Por prateuse	<u> </u>	FAC	Definitions of Four Vegetation Strata:
		_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
			more in diameter at breast height (DBH), regardless
			height.
			Sapling/Shrub - Woody plants, excluding vines, les
	<u> </u>	_	than 3 in. DBH and greater than or equal to 3.28 ft (1
No selection of the sel	-M M		m) tall.
1. 1. 2. L. O. L.			Herb - All herbaceous (non-woody) plants, regardles
TO A STATE OF THE COLUMN TWO IS NOT THE COLUMN TO STATE OF THE COLUMN TWO IS NOT THE COL	= Total		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 40	20% of total co	over: <u> 16</u>	Woody vine - All woody vines greater than 3.28 ft in
oody Vine Stratum (Plot size:)	_	/	height.
Lonicera japanica	<u>50 V</u>	FACU	Lawrence or a
71			Fig. and To
·	7	Tag .	Since an Arra
Such the Art Sub-	100		
marter access with the service of the	(A)	_	Hydrophytic Vegetation
	5 ^(g) - Total	Cover	Present? Yes No
50% of total cover: <u>25</u>	20% of total co		/ `
SON DI LOLLI COTCI	_ 20,0 0, 1012, 2,		

TW DESCRIPTION OF THE PROPERTY OF THE PROPERTY

rofile Description: (Describe to the de	pth needed to document the indicator or con	Sampling Point: Simpling Point:
- Iylatrix	Redox Features	
inches) Color (moist) % 5-16 540 414 01	Color (moist) % Type' Loc	Texture Remarks
3112119 95	5 YR 4/6 - 5	- Clay loam
	4 E - 1	
* * * * ·		
V		
1980	<u> </u>	E
- · · · · · · · · · · · · · · · · · · ·		
3 5 5		
200		
pe: C=Concentration, D=Depletion, RM	I=Reduced Matrix, MS≃Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators:	4	Indicators for Problematic Hydric Soils
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (\$8) (MLRA 14	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N,	Redox Depressions (F8)Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148)	MLRA 136)	
	Umbric Surface (F13) (MLRA 136, 122)	³ Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4) Sandy Redox (S5)		
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA Red Parent Material (F21) (MLRA 127, 1	148) wetland hydrology must be present.
Sandy Redox (S5) Stripped Matrix (S6)	Piedmont Floodplain Soils (F19) (MLRA	148) wetland hydrology must be present.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed):	Piedmont Floodplain Soils (F19) (MLRA	148) wetland hydrology must be present.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype:	Piedmont Floodplain Soils (F19) (MLRA	148) wetland hydrology must be present.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present, unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): type:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): type:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): type:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): type:	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) trictive Layer (if observed): ype: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present, unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present, unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6)	Piedmont Floodplain Soils (F19) (MLRA	 wetland hydrology must be present. unless disturbed or problematic.

	White and the principle	ing the property of the control of t	
		ns and Piedmont Region	
City	County: Horse C.	4 Hart Sampling Date: 6 Nov 2	
		State: Sampling Point: 394	
The same of the sa			
101: 37 73366	2443 Long: -	85,91499214 Datum	
		NWI classification:	
	_ 3		
		Il Circumstances" present? Yes No	
ogy naturally proble	matic? (If needed,	explain any answers in Remarks.)	
site map showing sa	impling point locati	ons, transects, important features, et	
- N. X			
	Is the Sampled Area		
	within a Wetland?	Yes No	
		(0.50)	
		- A M + A A M - N - N - N - N - N - N - N - N - N -	
200 AV	- 4	1 10 10 11 11 15 15	
0.00		Secondary Indicators (minimum of two required	
ed; check all that apply)		Surface Soil Cracks (B6)	
		Sparsely Vegetated Concave Surface (B8)	
		Drainage Patterns (B10)	
The second of the second of		Moss Trim Lines (B16) Dry-Season Water Table (C2)	
19 FM 10 MM 17 MM 17		Crayfish Burrows (C8)	
		Saturation Visible on Aerial Imagery (C9)	
		Stunted or Stressed Plants (D1)	
		Geomorphic Position (D2)	
) =		Shallow Aquitard (D3)	
S. V		Microtopographic Relief (D4)	
		FAC-Neutral Test (D5)	
a <i>n</i> (111.	a file of	See Visualis	
· · · · · · · · · · · · · · · · · · ·		Wetland Hydrology Present? Yes No	
o Depth (inches)	wettand	myurology Present 1 Tes NO V	
	Sec	Section, Township, Range: Local relief (concave, convex, note) Lot: 37, 233 Co443 Long: significantly disturbed? Are 'Normal and site map showing sampling point locations in the sampled Area within a Wetland? No	

manufacture (manufacture)	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:) 1. Celtis leavisata	70	Species?	Status FACW	Number of Dominant Species That Are OBL, FACW, or FAC:
duniperus virginianus	20		FACU	Total Number of Dominant Species Across All Strata:
				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/E
			-	Prevalence Index worksheet:
	90	= Total Cov	er ,	Total % Cover of: Multiply by:
50% of total cover:				OBL species x 1 =
apling/Shrub Stratum (Plot size:)			- 177	FACW species x 2 =
Rosa multiflera	10	V	FACU	FAC species x 3 =
				FACU species x 4 =
			7-6	UPL species x 5 =
				Column Totals: (A) (B)
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.01
	10 -	Total Cove	er	4 - Morphological Adaptations (Provide supporting
50% of total cover:	20% of t	total cover:_		data in Remarks or on a separate sheet)
erb Stratum (Plot size:)			o J-V	Problematic Hydrophytic Vegetation ¹ (Explain)
Carina macada tum	3_		FACW	Floblematic Hydrophysis 1 vg
Arction minus	10		FACU	¹ Indicators of hydric soil and wetland hydrology must
RICHUM MIMOS	2		FACU	be present, unless disturbed or problematic.
Rubus alleghiensis Passifloral incarnata	10	7	UPL	Definitions of Four Vegetation Strata:
Passiflora incarnata			7 7 7 7 7	
	-		-	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) o
				more in diameter at breast height (DBH), regardless of height.
			_	Sapling/Shrub - Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
				Herb - All herbaceous (non-woody) plants, regardless
	27 =	Total Cove	r- ,,	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of to	otal cover:_	5: 4	Woody vine - All woody vines greater than 3.28 ft in
				height.
ody Vine Stratum (Plot size:)				
				Hydrophytic Vegetation
		- 200	_	Present? Yes No
	_	Total Cover		
50% of total cover:	20% of to	tal cover:_		
emarks: (Include photo numbers here or on a separate s	sheet.)			
emarks: (include prioto numbers here or on a ser				
				•

Profile Desc	cription: (Describe t	to the dent	h pended to doo	mand the L			Sampling Point:
m olonii	XIIIIX	_44_	Rode	x Features	aicator or confi	m the absence	of indicators.)
(inches)	Color (moist)	- %	Color (molst)		Type¹ Loc²	<u>Texture</u>	Remarks
0-10	107R4/3	85	104R 5/8	15		Clay leas	
10-16	10112 44	100				clay lea	_
						- City ion	
- 2		_					
				_			
	-						
_							
إعلله	THE R. P. LEWIS CO., LANSING	0.50	Street Street	Principal A	a 9-1	1000	monable street.
e kirikila	3,700 E. L.					7-3	extension products butter
Γype: C≖Co	ncentration, D-Depte	<u>etion, RM=</u>	Reduced Matrix, MS	S=Masked S	and Grains	²Location: PL	=Pore Lining, M=Matrix.
lydric Soil li	ndicators:		1 10 100		-	Indica	tors for Problematic Hydric So
_ Histosol (Dark Surface		225711256		cm Muck (A10) (MLRA 147)
	ipedon (A2)				(S8) (MLRA 147		past Prairie Redox (A16)
Black His	n Sulfide (A4)		Thin Dark Su Loamy Gleye		MLRA 147, 148)		(MLRA 147, 148) edmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		I .		(MLRA 136, 147)
			Redox Dark S				ry Shallow Dark Surface (TF12)
_ 2 cm Mud	k (A10) (LRR N)						
	ck (A10) (LRR N) Below Dark Surface	(A11)	Depleted Dark		7)	Oti	her (Explain in Remarks)
_ Depleted _ Thick Dar	Below Dark Surface rk Surface (A12)		Depleted Dark Redox Depre	k Surface (F ssions (F8)	1115 2	Ott	her (Explain in Remarks)
_ Depleted _ Thick Dar _ Sandy Mu	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF		Depleted Dark Redox Depre	k Surface (F ssions (F8) ese Masses (7) (F12) (LRR N,	Oti	
_ Depleted _ Thick Dar _ Sandy Mu _ MLRA	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148)		Depleted Dari Redox Depre Iron-Mangane MLRA 136	k Surface (F ssions (F8) ese Masses (6)	(F12) (LRR N,	T san	en e di signification de la companie
Depleted Thick Dar Sandy Mu MLRA Sandy Gle	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4)		Depleted Daries Redox Depression Iron-Mangane MLRA 136	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML	1115 2	³ Indic	
Depleted Thick Dar Sandy Mu MLRA Sandy Gle Sandy Re Stripped M	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6)		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122)	³Indic 48) wetl	ators of hydrophytic vegetation a
Depleted Thick Dar Sandy Mu MLRA Sandy Gle Sandy Re Stripped M	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5)		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³Indic 48) wetl	alors of hydrophylic vegetation a and hydrology must be present,
Depleted Thick Dar Sandy Mu MLRA Sandy Gle Sandy Re Stripped M	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6)		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³Indic 48) wetl	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mu MLRA Sandy Gle Sandy Re Stripped Mestrictive La	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, ess disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, less disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, less disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, less disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, less disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, less disturbed or problematic.
Depleted Thick Dar Sandy Mc MLRA Sandy Gle Sandy Re Stripped Mestrictive La Type: Depth (inch	Below Dark Surface rk Surface (A12) ucky Mineral (S1) (LF 147, 148) eyed Matrix (S4) edox (S5) Matrix (S6) ayer (if observed):		Depleted Dari Redox Depre Iron-Mangane MLRA 136 Umbric Surfac	k Surface (F ssions (F8) ese Masses (6) ce (F13) (ML odplain Soils	(F12) (LRR N, _RA 136, 122) s (F19) (MLRA 1	³ Indic 48) wetl 7} unle	ators of hydrophytic vegetation a land hydrology must be present, less disturbed or problematic.

586.65

Applicant/Owner:	INC		Only		14 / Hart Sampling Date: 9 Nov 2
nvestigator(s):					State: KY Sampling Point: SP5
andform (hillstone tower-	VITTE		Sec	tion, Township, Range:	
andionn (missope, terrace, e	etc.): Ker	st dem	reso ica Local re	elief (concave, convex, r	none):Slope (%):
Subregion (LRR or MLRA): _		La	1: 37.235 8	7020 Long: -	85.91459015 Datum
Soil Map Unit Name:				20.191	NWI classification: Open water
re climatic / hydrologic cond	itions on the	site typical	for this time of year?	Von / No	(If no, explain in Remarks.)
re Vegetation, Soil _					
re Vegetation, Soil _					nal Circumstances* present? Yes No
				Company of the Compan	, explain any answers in Remarks.)
SUMMARY OF FINDIN	IGS – Atta	ich site r	map showing sa	mpling point locat	ions, transects, important features, etc
Hydrophytic Vegetation Pres	sent?	Yes	No.		
Hydric Soil Present?	zene.	Yes		Is the Sampled Area	Yes No V
Wetland Hydrology Present	?	Yes_	No	within a Wetland?	Yes NoV
Remarks:	_			1	
YDROLOGY					
Wetland Hydrology Indica	ors:	7. · ·	editor.		Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is red	quired; chec	ck all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		_	True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)			Hydrogen Sulfide O		Drainage Patterns (B10)
Saturation (A3)		-		res on Living Roots (C3)	
Water Marks (B1)		_	Presence of Reduce		Dry-Season Water Table (C2)
Sediment Deposits (B2)		-	Thin Muck Surface (on in Tilled Soils (C6)	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		-	Other (Explain in Re		Stunted or Stressed Plants (D1)
AL Mal Count (DA)		-	Other (Explain in ric	marksy	Geomorphic Position (D2)
Algal Mat or Crust (B4)		(B7)			Shallow Aquitard (D3)
Iron Deposits (B5)	rial Imaganu				Microtopographic Relief (D4)
Iron Deposits (B5) Inundation Visible on Ae		(5.7			Wild olopographic Neller (D4)
Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I		(5.7			FAC-Neutral Test (D5)
Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I Aquatic Fauna (B13)		(0.7			
Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I Aquatic Fauna (B13)	B9)		Depth (inches):		
Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I Aquatic Fauna (B13) Field Observations: Surface Water Present?	Yes	_ No			
Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present?	Yes Yes	_ No _ No	Depth (inches):	Wetland	
Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I Aquatic Fauna (B13)	Yes Yes Yes	No No No	Depth (inches): Depth (inches):		FAC-Neutral Test (D5) Hydrology Present? Yes No

Pavinia torentosa	Absolute Dominant Indicator % Cover Species? Status 40 V UPL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
bizie Julibrissin	20 VPL	Total Number of Dominant Species Across All Strata: (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
V 97		Prevalence Index worksheet:
	70 - Total Cover	Total % Cover of: Multiply by:
50% of total cover:	20% of total cover: 14	OBL species x 1 =
pling/Shrub Stratum (Plot size:)		FACW species x 2 =
Rubus allerheringis	90 V FACU	FAC species x 3 =
		FACU species x 4 =
=======================================		UPL species x 5 =
	4.6	Column Totals: (A) (B)
		7
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
- W. Au T		3 - Prevalence Index is ≤3.0¹
	= Total Cover	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:	20% of total cover:	data in Remarks or on a separate sheet)
erb Stratum (Plot size:)		Problematic Hydrophytic Vegetation' (Explain)
		Problematic Hydrophytic Vegetation (Expan)
Table 1		1
9 20 (E) E =		'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
-		
		Definitions of Four Vegetation Strata:
		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of the control of
		height.
		Sapling/Shrub - Woody plants, excluding vines, less than 3 in, DBH and greater than or equal to 3 28 ft (1 m) tall.
0		the second second second
	■ Total Cover	 Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3 28 ft tail.
F004 - 64-1-1 - 2010	20% of total cover:	or see, and modely period resolvent and
50% of total cover:)	20% 01 total color.	Woody vine – All woody vines greater than 3.28 ft in height.
		2.2
71		11 to 27
INVLSE	U 7.66	Hydrophytic
		Vegetation
		Present? Yes No
50% of total cover:	20% of total cover:	_
Remarks: (Include pholo numbers here or on a separa		
	•	

		Sampling Point: SP
Depth Matrix	epth needed to document the indicator or conf	firm the absence of indicators.)
(inches) Color (moist) %	Redox Features Color (moist) % Type Loc'	Texture Remarks
0-10 10484/4	THE LINE	
10+		- loany clus
<u> </u>	· —————	1 Rock
		<u> </u>
		·
		
W 10 19 W		
Type: C=Concentration D=Depletion RI	M=Reduced Matrix, MS=Masked Sand Grains.	2) Di Di Di Alabatata
Tydric Soil Indicators:	A=Reduced Mainx, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dade Curlana (CZ)	
Histic Epipedon (A2)	Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 14	2 cm Muck (A10) (MLRA 147) 7, 148) Coast Prairie Redox (A16)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	The Real Property Control
MLRA 147, 148)	MLRA 136)	8.47 8 8
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 1	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 14	unless disturbed or problematic
Restrictive Layer (if observed):		=
Type:		11.1.0.10.10.10.10
Depth (inches):		Hydric Soil Present? Yes
lemarks:		

by Hart

pplicant/Owner:		The state of the s	County: Horse Ci	
AP 7 (1) (4) (1)			St	ate: Sampling Point: \underline{SPc}
vestigator(s):	2	Sect	tion, Township, Range:	
andform (hillslope, terrace, etc.):	-	Local re	elief (concave, convex, none):	Slope (%):
ubregion (LRR or MLRA):		at: 37, 239°	72185 Long: - 85	.9131859/ Datum:
oil Map Unit Name:				NWI classification:
re climatic / hydrologic conditions on t	he site typica	al for this time of year?	Vos V No (II no	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW
re Vegetation, Soil, or	7 1 11	2.0		, explain in Remarks.)
				umstances" present? Yes No _
re Vegetation, Soil, or				in any answers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site	map showing sar	mpling point locations,	transects, important features,
hydrophytic Vegetation Present?	Von	11.	-	
Hydric Soil Present?	Yes Yes	No	Is the Sampled Area	
Welland Hydrology Present?	Yes		within a Wetland?	Yes No
Remarks:				
1 4 .				
VIVE TO THE			-	The self-self-self-self-self-self-self-self-
and the same of the same	9 16	S (6)(4)		· · · · · · · · · · · · · · · · · · ·
YDROLOGY		. 888 TE	. 1	the second of the grant of
Vetland Hydrology Indicators:			Seco	endary Indicators (minimum of two require
Primary Indicators (minimum of one is	s required; ch	neck all that apply		Surface Soil Cracks (B6)
Surface Water (A1)		True Aquatic Plants	(B14) :	Sparsely Vegetaled Concave Surface (Bl
High Water Table (A2)		Hydrogen Sulfide O	the state of the s	Drainage Patterns (810)
Saturation (A3)		Oxidized Rhizosphe	res on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	-	Presence of Reduce	ed Iron (C4)	Dry-Season Water Table (C2)
Water Marks (D1)		Doennt Iron Roducti	on in Tilled Solls (C6)	Crayfish Burrows (C8)
Sediment Deposits (B2)		veceur iron vegocu		
		Thin Muck Surface (Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)			C7) <u>==</u> :	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Sediment Deposits (B2) Drift Deposits (B3)		Thin Muck Surface (C7)	Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image	- - ery (B7)	Thin Muck Surface (C7) : emarks) :	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9)	- - ery (B7)	Thin Muck Surface (C7) emarks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9)	- ery (B7)	Thin Muck Surface (C7) emarks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13)	V #	Thin Muck Surface (Other (Explain in Re	C7) emarks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes	No	Thin Muck Surface (Other (Explain in Re	C7) emarks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves Vater Table Present?	No	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Teld Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present? Ves Saturation Present? Ves Ves Ves Ves Ves Ves Ves Ve	No	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Vater Table Present? Ves_ Saturation Present? Yes_ Includes capillary fringe)	No No No	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Vater Table Present? Ves_ Saturation Present? Yes_ Includes capillary fringe)	No No No	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Vater Table Present? Vater Table Present? Saturation Present? Secribe Recorded Data (Stream gauge	No No No No ge, monitorin	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Ves includes capillary fringe) Describe Recorded Data (stream gauge	No No No No ge, monitorin	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	No No No No ge, monitorin	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge	No No No No ge, monitorin	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Ves Saturation Present? Ves includes capillary fringe) Describe Recorded Data (stream gauge	No No No No ge, monitorin	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	No N	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves Water Table Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	No N	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	No N	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Ves includes capillary fringe) Describe Recorded Data (stream gauge	No N	Thin Muck Surface (Other (Explain in Re Depth (inches): Depth (inches):	C7) Principle of the control o	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)

	AND THE PARTY OF THE	
EGETATION (Four Strata) - Use scie	entific names of plants.	Sampling Point: 5PG
Tree Stratum (Plot size:	Absolute Dominant Indicator	Dominance Test worksheet:
	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A
		Total Number of Dominant Species Across All Strata:
** ** CM (5)	Service Indian	Percent of Dominant Species That Are OBL, FACW, or FAC: (A
Lie Francisco Ceres L		Prevalence Index worksheet: Total % Cover of: Multiply by:
50% of total cove	= Total Cover	OBL species x1 =
apling/Shrub Stratum (Plot size:	20% of total cover:	FACW species × 2 =
Ligostan vulgare		FAC species x 3 =
Ů.		FACU species x 4 =
		UPL species x 5 =
		Column Totals: (A) (E
		Prevalence Index = B/A =
	202 N	Hydrophytic Vegetation Indicators:
1 2 4		1 - Rapid Test for Hydrophytic Vegetation
Automatic transport	20 202	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
- T	= Total Cover	
50% of total cove	r: 20% of total cover:	4 - Morphological Adaptations ¹ (Provide supporting
erb Stratum (Plot size:		data in Remarks or on a separate sheet)
	- 10 V FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
		Problematic Hydrophytic Vegetation ¹ (Explain) Indicators of hydric soil and wetland hydrology must
Selapit taber		Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Verbena urticitulia.		Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
Setaple Jabent Verbena urticitulia.		Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
Setapia Inbent Verbena virticitulia.		Problematic Hydrophytic Vegetation ¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height.
Setapia labori Verbena virticitulia.		Problematic Hydrophytic Vegetation ¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height.
Setapia Labori Verbena urticitulia.		Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Setapia Labori Verbena virticitulia.	-2	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
Verbena verticitulia. 50% of total cover:	= Total Cover	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Setapia Labori Verbena virticitulia. 50% of total cover: ody Vine Stratum (Plot size: Every Mus Fintine	= Total Cover	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
Setaple to bent Verbena urticitulia. 50% of total cover: Sody Vine Stratum (Plot size: Every Mus towner	= Total Cover	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
Setapet to ben Verbena verticitulia. 50% of total cover: Econymus two e	= Total Cover = 20% of total cover: 40 VR VPL	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
Setapa Labori Verbena urticitulia. 50% of total cover: Sody Vine Stratum (Plot size: Evanymus turtue	= Total Cover = 20% of total cover:	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
Setapia Labori Verbena virticitulia. 50% of total cover: ody Vine Stratum (Plot size: Every Mus Fintine	= Total Cover = 20% of total cover: 	Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.

Profile Description: (Describe to the	depth needed to document the	indicator or con	firm the absence of indi	cators.)
Depth Matrix	Redo_Featu e	es	_ 85_m	
(inches) Color (moist) %	Color (moist) %	Type' Loc	Texture	Remarks
0-7 164/24/3			- Silly lean	
7-17 104R414 -		-	- Sily learn	
			- 2.1. / /00///	
			- <u> </u>	
• -		·	-	
(S)				
			- # :	
yp p	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			
36 M			-0	4 4 3 4 4
T e: C=Concentration, D≖De letion, R	M=Reduced Matrix, MS=Masked	Sand Grains.	² Location: PL=Pore L	ining, M=Matrix
ydric Soil Indicators:	_ 363 11 - 2	it dige	Indicators for	Problematic Hydric Soils
_ Histosol (A1)	Dark Surface (\$7)		2 cm Muck	(A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surfac	e (S8) (MLRA 14		rie Redox (A16)
Black Histic (A3)	Thin Dark Surface (S9)		· —	147, 148)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F			loodplain Soils (F19)
_ Stratified Layers (A5)	Depleted Matrix (F3)		(MLRA	136, 147)
_ 2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6	6)		w Dark Surface (TF12)
_ Depleted Below Dark Surface (A11)	Depleted Dark Surface	(F7)	Other (Expl	ain in Remarks)
_ Thick Dark Surface (A12)	Redox Depressions (F8))	* 1 2 2	
Sandy Mucky Mineral (\$1) (LRR N,	Iron-Manganese Masse:	s (F12) (LRR N,	100	
MLRA 147, 148)	MLRA 136)		() () ()	
0 4 01 4 4 44 4 40 40 40	Umbric Surface (F13) (N	MLRA 136, 122)		hydrophytic vegetation and
Sandy Gleyed Matrix (S4)				alaan must ka araaant
Sandy Redox (S5)	Piedmont Floodplain So			ology must be present,
Sandy Redox (S5) Stripped Matrix (S6)				bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6)	Piedmont Floodplain So			
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type:	Piedmont Floodplain So			bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type:	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain So		7) unless distur	bed or problematic.

	Hart
WETLAND DETERMINATION DATA FORM - Easte	Maurialia a St De Amont Rogion
	Herse C. 70 Sampling Date: 9NW 20
Investigator(s): T. Walter Section, Towns	
Landform (hillslope, terrace, etc.): Local relief (conca	ve, convex, none): Slope (%):
Subregion (LRR or MLRA): Lat: 37. 2430545	9 Long: 85, 92 301 8 76 Datum;
Soit Map Unit Name:	NWI classification:
Are chmatic / hydrologic conditions on the site typical for this time of year? Yes	
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrotogy naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling p	oint locations, transects, important features, etc
I fivanc Soil Present/ Voe // No I	ampled Area Wetland? Yes No
Remarks:	1.01/-
	welland)
A STANDER OF THE STANDARD	9 N N N 6
HYDROLOGY	A
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (86)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled S Drift Deposits (B3) Thin Muck Surface (C7)	Soils (C6) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Algal mat of Crost (64) Strict (Explain in vertical strict)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	✓ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches)	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ctions), if available:
Remarks:	
	1
ATOM NO BELLIA	

THE SHAROTH LEAD RESIDENT ACCULATE A BOOK A	Absolute D	Dominant	Indicator	Sampling Point: SP"/ Dominance Test worksheet:
1CP DS		Species?	Status	Number of Dominent Species That Are OBL, FACW, or FAC:(A)
2. braxiaus	40		FACU	Total Number of Dominant
3 4				Species Across All Strata: (B)
5	-			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6	- 2			
	-		10.0	Prevalence Index worksheet: Total % Cover of: Multiply by:
50% of total cover:		olal Cove		Total % Cover of: Multiply by: OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)	20% of tol	al cover:_	70	FACW species x 2 =
Querius impricara	5	/	Englis	FAC species x3 =
Celtis occidentalis		V	Fac	FACU species x 4 =
Faxinus pennsylanca	5 =	7	FACUL	UPL species x 5 =
				Column Totals: (Ā) (B)
				Prevalence Index = B/A =
	_		 	Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
·		_	19	2 · Dominance Test is >50%
GAL	. ت سیما			3 - Prevalence Index is \$3.01
disteri 50% of total cover:	20% of lote	tal Cover	3	4 - Morphological Adaptations ¹ (Provide supporting
erb Stratum (Plot size:)	_ 20,00,000	-	*	data in Remarks or on a separate sheet)
	25	/_ :	FAC .	Problematic Hydrophytic Vegetation ¹ (Explain)
Sun trichem lancedahm	50	Z_{-1}	FAC .	
Poly longisula -	70			Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.
	-			Definitions of Four Vegetation Strate:
	_			6
				Tree – Woody plants, excluding vines, 3 in, (7.6 cm) or more in diameter at breast height (DBH), regardless of
1991 19			- I	neight.
			s	Sapling/Shrub - Woody plants, excluding vines, less
				han 3 in. DBH and greater than or equal to 3.28 ft (1
			1 1	n) tall.
	95 - Tota	al Cover		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of lotal		1 2 v	Voody vine - All woody vines greater than 3.28 ft in
ody Vine Stratum (Plot size:)			The second second	oight.
				8
015 65 90 15 EM				ii 5 (68) 1
		-r		lydrophytic
				egetation V No No No
	20% of total c	l Cover		
6004 of total course				
	rt.)			
50% of total cover:marks: (Include photo numbers here or on a separate shee	t. <i>)</i>			5
	:c. _I			5
	и.,			5
				8

OIL	Different to the late	Sampling Point: $\frac{\sum_{i=1}^{n}}{\sum_{i=1}^{n}}$
rofile Description: (Describe to the dep	Its needed to document the Indicator or cor	
Depth Matrix	Redox Features	
0-6 7.5 4R 5/2 90	Color (moist) % Type Loc	Texture Remarks
	104R 3/6 10 -	- Clay loam
6-18 7.546 5/4 -	104R 3/4 -5	Clay loam
		- X
	4	
BRITISH WAS DONE OF BUILDING	The second of the second	STREET, SHITTING SERVICES
		hand the second second second
File of a Control of the Control of	BUL Aviat 20.)	Company of the party of the par
Type: C-Concentration, D-Depletion, RM	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL≠Pore Lining, M=Matrix.
lydric Soil Indicators:	Table 11 No see that Market County is for the second of the County is	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2) Black Histic (A3)	Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 148	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Sandy Mucky Mineral (S1) (LRR N,	Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N,	ha emonitoro montarso co
MLRA 147, 148)	MLRA 136)	The same of the contract of th
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)	 Piedmont Floodplain Soils (F19) (MLRA Red Parent Material (F21) (MLRA 127, 	
Stripped Matrix (S6) Restrictive Layer (if observed):	Red Parent Material (P21) (MENA 121,	diless distanced of precientatic.
Type:		
Depth (inches):		H dric Soil Present? Yes
Remarks:		
terrorra.		

There I am His	NOTAL PROPERTY	DATA FORS	- Essue, 14.		×	
WILL ARID FOR	TERMANATION	-	K. Laber Marin	ales and Diadena	at Parion I	
Propochale: Her's Sola			1 – Eastern Mount County <i>Morse C</i> .		Sampling Date	Nol
AMAHOMHINDOWN. LECUND	C4		Codiny 2-1-1	/ State: 157	Sampling Point.	5P ?
himmelymicates): To CUA	12115	Po-	tine Terrebia Pagas			
	(.77		lion, Township, Range:		Slope (241
Landhum (Indskyn), tarrace, etc.): (ARIJM и MRI):	PERSON NAMED		elief (concave, convex, r			<u></u> الح <i>ر</i>
		166461	35 02 Long:			-2
Stort Map Unit Name:				NWI classificati		
Are climatic / hydrologic conditions on t	•	•		(If no, explain in Ren		/
Are Vegetation, Soil, or	Hydrology:	significantly distu	irbed? Are "Norm	al Circumstances* pre	sent? Yes 1/	No
Are Vegelation, Soil, or	Hydrologyi	naturally problem	natic? (If needed,	, explain any answers i	n Remarks.)	
SUMMARY OF FINDINGS - A	ttach site map	showing sai	mpling point locati	ions, transects, i	mportant featu	ıres, el
M. A. W. W. W. H. W. D.		/-	. The second second			
Hydrophytic Vegetation Present? Hydroc Soil Present?		0	Is the Sampled Area			
Welland Hydrology Present?		·	within a Wetland?	Yes	No /	
Remarks:	163	<u></u>				•
CA						
D-					1.1	i
				72 BK 5 "	10	S. Table
IYDROLOGY	367					
Wetland Hydrology Indicators:	I le			Secondary Indicators	(minimum of two r	eguired)
Primary Indicators (minimum of one is	required; check all ti	hat apply)		Surface Soil Crac	:ks (B6)	
Surface Water (A1)	True	Aquatic Plants (B14)	Sparsely Vegetat	ed Concave Surface	ce (B8)
High Water Table (A2)		ogen Sulfide Odo		Drainage Pattern		
Saturation (A3)			es on Living Roots (C3)	Moss Trim Lines		
Water Marks (B1)		ence of Reduced		Dry-Season Water		
Sediment Deposits (B2)	•		n in Tilled Soils (C6)	Crayfish Burrows		(00)
Drift Deposits (B3)	TO SERVICE STATE OF THE PERSON NAMED IN COLUMN TO SERVICE STATE OF THE PERSON NAMED	Muck Surface (C r (Explain in Rem		Stunted or Stress	on Aerial Imagery	(Ca)
Algal Mat or Crust (84)	Other	(Explain in Neil	iaiksj	Geomorphic Posi		
Iron Deposits (B5) Irondation Visible on Aerial Imager	v (B7)			Shallow Aquitard		
Water-Stained Leaves (B9)	y (B1)			Microtopographic		
Aquatic Fauna (B13)				FAC-Neutral Test		
ield Observations:						100
Surface Water Present? Yes	No V Depti	h (inches):	=			10
Vater Table Present? Yes	_ No // Depti	n (inches):	<u> </u>			
Saturation Present? Yes	_ No <u>/</u> Depti	n (inches):	Wetland H	ydrology Present?	Yes No_	<u>/</u>
includes capillary fringe) Describe Recorded Data (stream gauge,	monitoring well as	rial photos, previ	ious inspections) if avai	lable:		
reserve necolued Data (Stream gauge,	monitoring well, ae	itai priotosi presi	ious inspections), it urai	100101		
Remarks:	-					
110 hydrolog	-01					
No hydrolog	_					
· V	V					
Addition to the State of the St					50	201
				leader No. sales and	Huarrence vurste	# 21 _c

VEGETATION (Four Strata) - Use scienti	Absolute Dominant Indicate	Sampling Point: 51-6
Tree Stratum (Plot size:)	% Cover Species? Status	
		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant Species Across All Strata:
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/
2.5		Prevalence Index worksheet:
	= Total Cover	Total % Cover of: Multiply by:
50% of total cover:	20% of total cover:	OBL species x 1 =
pling/Shrub Stratum (Plot size:)		FACW species x 2 =
		FAC species x 3 =
		FACU species x 4 =
		UPL species x 5 =
		Column Totals: (A) (B)
		D. Love Law DA
	-	Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
9.90.2	7 77	1 - Rapid Test for Hydrophytic Vegetation
		2 · Dominance Test is >50%
	= Total Cover	3 - Prevalence Index is ≤3.0¹
50% of total cover:	20% of total cover:	4 - Morphological Adaptations (Provide supporting
Stratum, (Plot size:)		data in Remarks or on a separate sheet)
Solidager canadensis	60 - FREU	Problematic Hydrophytic Vegetation (Explain)
erchine halocase	30 / FACU	Mr. 150 years and
Halarca americana		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
siffer incorato	10 UPL	Definitions of Four Vegetation Strata:
a pretensis	TU FAL	
tache faber	5 Fred	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
JAN 16: 1		height.
E E E E		
		Sapting/Shrub - Woody plants, excluding vines, loss than 3 in. DBH and greater than or equal to 3.28 ft (1
		m) tall.
		Herb - All herbaceous (non-woody) plants, regardless
1 1 1 1 1	120 - Total Cover	of size, and woody plants lass than 3.28 ft tall.
50% of total cover:	24	
		Woody vine – All woody vines greater than 3.28 ft in height.
/ine Stratum (Plot size:)		reigra.
		A STATE OF THE STA
na rafi di rawan		lydrophytic
and the state of t		/egetation Present? Yos No
	= Total Cover	
50% of total cover:	20% of total cover:	
s: (Include photo numbers here or on a separate st	neel.)	}
		у.
		The second secon
		game and a restrict of the

Profile Describe to the	depth needed to document the indicator or conf	irm the absence of indicators)
Depth Matrix	Redox Features	The description of missission,
(inches) Color (moist) —%	Color (moist) 96 Type Loc	- Texture Remarks
0-16 544-		Clay loam
		-
		- <u></u>
=		
THE LOCK THE PARTY OF THE PARTY	NOT THE REAL PROPERTY OF THE PARTY OF THE PA	ALL A DE PROPERTY
		Maria de la compania del compania del compania de la compania del la compania de
Type: C=Concentration D=Depletion I	RM=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL-Pore Lining, M-Matrix
lydric Soil Indicators:	NW-Neduced Matrix, MS-Masked Sand Grains.	Indicators for Problematic Hydric Soils
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 14)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	· · · —
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soits (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
_ 2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
_ Depleted Below Dark Surface (A11)		Other (Explain in Remarks)
_ Thick Dark Surface (A12)	Redox Depressions (F8)	Samuel Carlotte Co. 1
_ Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	A LONG THE CONT.
MLRA 147, 148)	MLRA 136)	Hadisalam of hudsophidis vocatation and
_ Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 1	Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Redox (S5) Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 14	
estrictive Layer (if observed):		
Type:		
1 ype		Hydric Soil Present? Yes No
• •		
Depth (inches):		Tryulic don't resent.
Depth (inches):		Tryunic don't resent.
Depth (inches):		ityulic doili Tesetti. Tes ito
Depth (inches):		Tryslic doi: 103
Depth (inches):		Tryslic don't resent.
Depth (inches):		*
Depth (inches):		The section of the se
Depth (inches):		*
Depth (inches):		*
Depth (inches):		The second reserve to

* IL

WETLAND DETERM	INATION DATA FORM	l – Eastern Mountai	ns and Piedmont Region
Project/Sile: Hryt Solar	C'h l	14-30 Com	19 Hey F Sampling Date: 9Nov 20
Applicant/Owner: LODWOY d	City/	County: 1/0/ VC CM	Sampling Date: 775 C
			State: KY Sampling Point: 5P9
Investigator(s): T. Walters.	Sect	tion, Township, Range:	
Landform (hillslope, terrace, etc.):	Local re	elief (concave, convex, no	ne): Slope (%):
Subregion (LRR or MLRA):	_ Lat: <u>37. 2424</u>	3830 Long: —	85, 916 58 681 Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site t	ypical for this time of year?	Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrold			Circumstances* present? YesNo
Are Vegetation, Soil, or Hydrold		estic? (If ponded a	explain any answers in Remarks.)
SOMMANT OF PHODINGS - Attach	site map showing san	npling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No		
Hydric Soil Present? Yes		Is the Sampled Area	Yes No
Welland Hydrology Present? Yes		within a Wetland?	Yes No
Remarks:		l <u> </u>	
			21 A
9 6			
			_0
HYDROLOGY	T =		
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required	d; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (I	B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odd	or (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced	I Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C	.7)	Saturation Visible on Aerial Imagery (C9)
Algai Mat or Crust (B4)	Other (Explain in Rem	narks) _	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	_		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		=	Shallow Aquitard (D3)
Water-Stained Leaves (B9)		_	Microtopographic Relief (D4)
Aquatic Fauna (B13)	9	_	FAC-Neutral Test (D5)
Field Observations:			
	Depth (inches):		
	Depth (inches):		
	Depth (inches):		drology Present? Yes No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, manifo	ling well, aerial photos, prev	ious inspections), if availa	ible:
Pomode:			
Remarks:			
No hydre			
· /			
ι			
			i

/EGETATION (Four Strata) - Use scientif		Sampling Point: 399
Tree Stratum (Plot size:)	Absolute Dominant Indicator	Dominance Test worksheet:
	% Cover Species? Status	Number of Dominari Spacies /
		That Are OBL, FACW, or FAC:(A)
		Total Number of Dominant
	_	Species Across All Strata: (B)
S		Percent of Dominant Species That Are OBL, FACW, or FAC: (Ar
		Prevalence Index worksheet:
and the same of th		Total % Cover of: Multiply by:
50% of total cover:	≃ Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Ptot size:	20% of total cover:	FACW species x 2
(FIOL SIZE		FAC species x3 =
		FACU species x 4
		UPL species x5 =
		Column Totals: (A) (B
		Colonia Totals.
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
7 17 3 3		2 - Dominance Test is >50%
sp -		3 - Prevalence Index is ≤3.0¹
So om halepense	Total Cover	4 - Morphological Adaptations (Provide supporting
Verbascun this 50% of total cover:	20% of total cover:	data in Remarks or on a separate sheet)
erb Stratum (Plot zer)	- 20 / FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
Setaux taper	_ <u> </u>	10.0
home devatage	$=\frac{15}{10}$	Indicators of hydric soil and wetland hydrology must
onion	- 10 UPL 5. FACU	be present, unless disturbed or problematic.
		Definitions of Four Vegetation Strata:
Citer he	50 FACU	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
5 chedenurus pratenais		more in diameter at breast height (DBH), regardless of
Sutiday canadensis	10 = FACW	height.
		Sapling/Shrub - Woody plants, excluding vines, less
		than 3 in. OBH and greater than or equal to 3.28 ft (1
		m) tall.
		Herb - All herbaceous (non-woody) plants, regardless
Transfer of the second	Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of total cover: 25	Woody vine - All woody vines greater than 3.28 ft in
ody Vine Stratum (Plot size:)		height.
		Prof. Commission of the Commis
362		The Market of Street
		Hydrophytic
		Vegetation
or overlighted that the latest the second	= Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	
marks: (Include photo numbers here or on a separate	sheet.)	
·		

Profile Description: (Descripe to the	inth pooded to do si	Sampling Point: 5P
Depth Matrix	pth needed to document the indicator or confirm	m the absence of Indicators.)
finches) Color (moist) %	Redox Features —	. I S
	Color (moist) % Type' Loc'	Texture Remarks
0-4 104R 4/2		loam_
4/3		Rock
		KOCK
		(F)
vpe:		
ype.		1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
A STATE OF THE STA		The state of the s
T C=Concentration, D=Depletion RM	=Reduced Matrix, MS=Masked Sand Grains	² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators:	I-reduced Matrix, MS=Masked Sarid Grains	Indicators for Problematic Hydric Solls ³ :
Histosol (A1)	Supplied the second sec	
	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (\$8) (MLRA 147,	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	(4) 0 at 5 CS
Sandy Mucky Mineral (S1) (LRR N.	Iron-Manganese Masses (F12) (LRR N.	
MLRA 147, 148)	MLRA 136)	이 그 그래요 하는 이 학교 여러 그는
Sandy Gleved Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodalain Soils (F19) (MLRA 148	 Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,
Sandy Redox (S5) Stripped Matrix (S6)		8) wetland hydrology must be present,
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,
Sandy Redox (S5) Stripped Matrix (S6)	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) estrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type:	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.
Sandy Redox (S5) Stripped Matrix (S6) lestrictive Layer (if observed): Type: Depth (inches):	Piedmont Floodplain Soils (F19) (MLRA 148	8) wetland hydrology must be present,) unless disturbed or problematic.

11 1 ~ 1 -	ION DATA FORM	- Eastern Mounta	Ins and Piedmont Region (+4 //w/ Sampling Date: 9 New 202)
Project/Site: HW1 SULC	City/ C	ounly: 77678 C	Sampling Date.
Applicant/Owner: Lewyd			State: K J Sampling Point: S P10
Investigator(s): T. Walters	Section	on, Township, Range	
Landform (hillslope, terrace, etc.):	Local rell	ef (concave, convex, no	one): Slope (%):
Subregion (LRR or MLRA):	11: 37, 234 Z	(3 4 9 Long: —)	85 90 55 9613 Datum:
Soil Map Unit Name:	\ <u></u>		NWI classification:
Are climatic / hydrologic conditions on the site typical	for this time of year? V	os No	
		- 49 Are #Norms	al Circumstances present? Yes No
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology			explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sam	pling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No	Is the Sampled Area within a Wetland?	Yes No
Remarks:	I.		
IN Karst Hole			
1 × 200	O .		
HYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; che	ck all that apply)		Surface Soil Cracks (86)
Surface Water (A1)	True Aquatic Plants (E		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odo		Drainage Patterns (B10)
Saturation (A3)		s on Living Roots (C3)	· · · · · · · · · · · · · · · · · · ·
Water Marks (B1) Sediment Deposits (B2)	Presence of Reduced Recent Iron Reduction		Dry-Season Water Table (C2)
Sediment Deposits (B2)	Thin Muck Surface (C)		Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rem		Stunted or Stressed Plants (D1)
Iron Deposits (B5)	, , , , , , , , , , , , , , , , , , , ,	,	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitard (D3)
Water-Steined Leaves (B9)	(4 <u>-</u>		Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present? Yes No	∠ Depth (inches)·		\$ ====
Water Table Present? Yes No	Depth (inches):	<u> </u>	
Saturation Present? Yes No V	Depth (inches):	į.	Hydrology Present? Yes No 1/
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, prev	ious inspections), if ava	illable:
Remarks:			
rvernaiks.			

A MARKETTO CHILDREN TO

Sampling Point: VEGETATION (Four Strata) - Use scientific names of plants. Dominance Test worksheet: Absolute Dominant Indicator Tree Stratum (Plot size:_____) % Cover Species? Status Number of Dominant Species 1 Prinus autum 30 / FACU That Are OBL, FACW, or FAC: (A) Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: = Total Cover OBL species _____ x 1 = ___ 50% of total cover: 20% of total cover: FACW species _____ x 2 = ____ Sapling/Shrub Stratum (Plot size:_____) x 3 = ____ FAC species FACU species _____ x 4 = ____ x 5 = ____ UPL species ___ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% _ 3 - Prevalence Index is ≤3.01 = Total Cover ___ 4 - Morphological Adaptations¹ (Provide supporting __ 20% of total cover:_ 50% of total cover: ____ data in Remarks or on a separate sheet) Herb Stratum (Plot size: _ Problematic Hydrophytic Vegetation (Explain) 1. Phytolagga amonicana 70 edonurus materiors ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Sympho who lancedahin 5 FACW Definitions of Four Vegetation Strata: 5. Sulidalar canaders 10 FACU Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 10. Herb - All herbaceous (non-woody) plants, regardless 135 = Total Cover of size, and woody plants less than 3.28 ft tall. 20% of total cover: 27 50% of total cover: Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: _____) 1. Lanicera japonica. Hydrophytic Vegetation Present? = Total Cover 50% of total cover: ___ _ 20% of total cover:__ Remarks: (Include photo numbers here or on a separate sheet.)

		Sampling Point:
Prome Description: [Describe to the de	pth needed to document the Indicator or con	firm the absence of indicators.)
Depth 7.5 Tr Mobix 2	Redox Features	8 9 9
(inches) %	Color (moist) % Type Loc	Texture Remarks
<u>0-/-</u> —	10485/1 -5	- loam
7-1/-	11/20 5/1 5	
	<u> </u>	- clay learn
	<u> </u>	
	-	
		<u> </u>
an a room of the		8 = x ===4 15 m
	 -	
<u> </u>		
pe: C=Concentration, D=Depletion, RM	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators:		Indicators for Problematic Hydric Soils
Histosol (A1)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 14	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	· · —
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A11)	Depleted Dark Surface (F7) Redox Depressions (F8)	Other (Explain in Heritaria)
	Iron-Manganese Masses (F12) (LRR N,	En 1967 - 100 to to to
Sandy Mucky Mineral (S1) (LRR N,		2 W W 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
MLRA 147, 148)	MLRA 136)	31-diseases of hydrophydic vegetation and
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 1	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 14	(7) unless disturbed or problematic.
A saling I many (if above 104);		
ctive Layer (it observed).		
The state of the s		
уре:	_	Hydric Sail Present? Yes No
ype: Pepth (inches):	-	Hydric Sail Present? Yes No
Type:		Hydric Sail Present? Yes No
ype:epth (inches):	- 	Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Soil Present? Yes No
ype:epth (inches):		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Sail Present? Yes No
/pe:epth (inches):		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
rpe:epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Sail Present? Yes No
ype:epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Sail Present? Yes No
ype:epth (inches):e		Hydric Sail Present? Yes No
ype:epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):epth (inches):		Hydric Sail Present? Yes No
ype:epth (inches):		Hydric Sail Present? Yes No
Type:		Hydric Sail Present? Yes No
st ctive Layer (if observed): Type: Depth (inches): narks:		Hydric Soil Present? Yes No

Applicant/Owner: Location of State: Sampling Point: JP/ Investigator(s): T UN HUS Section, Township, Range: Leadform (hillisticpe, terrace, etc.): Local relief (concave, convex, none): Slope (%): Subregion (LRR or MLRA): Lat: 37, 238 % 95				ins and Piedmont Region
Investigator(s): Tun / Hurs Section, Township, Range: Landform (hillstope, terrace, etc.): Local relief (conceve, convex, none): Slope (%): Subregion (LRR or ML RA): Lat: 37, 238 % 95		City/	County: HUGE CA	W / Hir T Sampling Date: TIVEJE
Landform (Initistope, terrace, etc.): Local rollef (concave, convex, none): Slope (%): Subregion (LRR or MLRA): Lat: 37, 23894958 Long: 85, 8948160 Datum: NWI classification: Are climatic / hydrologic conditions on the site typical for this time of yeer? Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are Vegetation Soil or Hydrology naturally problematic? SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Prignary Indicators (minimum of one is required: check all that apply) Surface Water (A1) True Aquatic Plaints (B14) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Drib Deposits (B3) Algal Mat or Crust (B4) Find Water Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Local rollef (concave, convex, none): Nol (If no, explain in Remarks.) Secondary Indicators (innimum of interactions, transects, important features, explain in Remarks.) Surface Soil Cracks (B6) Surface Soil Cra	Applicant/Owner: Louind	3 4 7 7 7 7		
Landform (hillstope, terrace, etc.): Local relief (concave, convex, none): Slope (%): Subregion (LRR or MLRA): Lal: 37,2389958 Long: \$5,89481600 Datum: Soil Map Unit Name: NWI classification: Nee climatic / hydrologic conditions on the site typical for this time of year? Yes No. (If no, explain in Remarks.) Are Vegetation Soil or Hydrology and significantly disturbed? Are "Normal Circumstances" present? Yes No. Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrocopy Present? Yes No. Welland Hydrology Indicators: Prignary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) Surface Water (A1) True Aquatic Plains (814) Sparsely Vegetated Concave Surface (88) High Water Table (A2) Hydrogen Surfide Odor (C1) Drainage Patterns (810) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Shoss Trim Lines (816) Water Marks (81) Presence of Reduced fron (C4) Drainage Patterns (810) Sediment Deposits (83) Thin Muck Surface (C7) Sultration Visible on Aerial Imagery (C9) Augal Mat or Crust (84) Other (Explain in Remarks) Sultrated Stressed Plants (D1) Geomorphic Position (D2) Shallow Aqualtard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):	Investigator(s): T Walters	Sect	ion, Township, Range	1
Soil Map Unit Name:	Landform (hillslope, terrace, etc.):	Local re	elief (concave, convex, no	one): Slope (%):
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (if needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Yes No	Subregion (LRR or MLRA):	Lat: 37, 2389	6958 Long: -	85, 89 6 86 6 60 Datum:
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No No Welland Hydrology Present? Yes No	Soil Map Unit Name:	a for a fed	tell like st	432 11 11 11
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No No Welland Hydrology Present? Yes No	Are climatic / hydrologic conditions on the site	e typical for this time of year?	Yes No No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, ethydrophytic Vegetation Present? Yes				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, ethydrophytic Vegetation Present? Yes				
Hydrophylic Vegetation Present? Hydric Soil Present? Welland Hydrology Present? Welland Hydrology Present? Wettand Hydrology Indicators: Prigary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Secondary Indicators (minimum of two required plants (B14) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Panna (B13) Field Observations: Surface Water Present? No Depth (inches): Is the Sampled Area within a Wettand? Yes No No Is the Sampled Area within a Wettand? Yes No No No Secondary Indicators (minimum of two required plants (B14) Sparsety Vegetated Concave Surface (B8) Sparsety Vegetated Concave Surface (B8) Drainage Patterns (B10) Shallow Routing Roots (C3) Shoss Trim Lines (B16) Dry. Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):			10 mg	
Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Prigary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Surface Water (B1) Aquatic Fauna (B13) Water Fauna (B13) Presence of Reduced (C7) Algal Mat or Crust (B4) Water Marks (B1) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Is the Sampled Area within a Wetland? Yes No No Depth (inches): Secondary Indicators (minimum of two required within a Wetland? Yes No Depth (inches): Secondary Indicators (minimum of two required within a Wetland? Yes No Depth (inches): Secondary Indicators (minimum of two required on Inches Sampled Area within a Wetland? Yes No Depth (inches):	SOMMAN OF PROPINGS - Attach	1 site map snowing san	npling point location	ons, transects, important leadiles, e
Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Prigary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (81) Secondary Indicators (minimum of two required concave Surface (88) Presence of Reduced fron (C1) Sediment Deposits (82) Drift Deposits (83) Agal Mat or Crust (84) Iron Deposits (85) Iron Deposits (85) Iron Deposits (85) Iron Deposits (85) Mater-Stained Leaves (89) Aquatic Fauna (813) Mater-Stained Leaves (89) Aquatic Fauna (813) Field Observations: Surface Water Present? No within a Wetland? No No No No No No No No No N	Hydrophytic Vegetation Present? Ye	es NoV	In the Country Asso	
Wetland Hydrology Present? Wetland Hydrology Indicators: Prignary Indicators (minimum of one Is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Secondary Indicators (minimum of two required; check all that apply) Saturation (A3) Sourface Water (A1) Free Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Shoss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) attraction Visible on Aerial Imagery (C9) Mater Stained Leaves (B5) Water-Stained Leaves (B9) Aquatic Fauna (B13) Feld Observations: Surface Water Present? Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Footnote (B10) Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (B8) Footnote (B10) Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (B8) Footnote (B10) Sparsely Vegetated Concave Surface (B8) Spa	Hydric Soil Present? Ye	es No	ľ ,	Yes No/
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Sulface Water (B9) Aquatic Fauna (B13) Field Observations: Surface Water (A1) True Aquatic Plants (B14) Foundation Plants (B14) Sparsely Vegetated Concave Surface (B8) Prainage Patterns (B10) Shoss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):		es / No		
Wetland Hydrology Indicators: Primary Indicators (minimum of one Is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Wetland Hydrology Indicators: Secondary Indicators (minimum of two required and two re	Remarks:			
Wetland Hydrology Indicators: Primary Indicators (minimum of one Is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Wetland Hydrology Indicators: Secondary Indicators (minimum of two required and two re				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) Surface Soil Cracks (86) Surface Soil Cracks (86) Surface Soil Cracks (86) Sparsely Vegetated Concave Surface (88) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (81) Presence of Reduced Iron (C4) Sediment Deposits (82) Prift Deposits (83) Algal Mat or Crust (84) Iron Deposits (85) Iron Deposits (85) Inundation Visible on Aerial Imagery (87) Water-Stained Leaves (89) Aquatic Fauna (813) Feld Observations: Surface Water Present? Secondary Indicators (minimum of two required contents of the variation of two required contents of two required	12.5			
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) Surface Soil Cracks (86) Surface Soil Cracks (86) Sparsely Vegetated Concave Surface (88) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (81) Presence of Reduced Iron (C4) Sediment Deposits (82) Drift Deposits (83) Algal Mat or Crust (84) Iron Deposits (85) Iron Deposits (85) Inundation Visible on Aerial Imagery (87) Water-Stained Leaves (89) Aquatic Fauna (813) Field Observations: Surface Water (A1) Surface Soil Cracks (86) Surface Soil Cracks (86) Surface Soil Cracks (86) Sparsely Vegetated Concave Surface (88) Drainage Patterns (810) Shoss Trim Lines (816) Dry-Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Factorial Test (D5)	Maria Maria de Cara de			Land A sea of Salament
Wetland Hydrology Indicators: Primary Indicators (minimum of one Is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Wetland Hydrology Indicators: Secondary Indicators (minimum of two required was required; check all that apply) Secondary Indicators (minimum of two required was required. Secondary Indicators (minimum of two required. Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Factory Factory Factory FAC-Neutral Test (D5)	IVDBOLOGY	Carlot Carlotter	120	
Primary Indicators (minimum of one Is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Pres_ No Depth (inches):	50	17.00 4.7	100	Secondary Indicators (minimum of hun enquired
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water (A1) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Drainage Patterns (B10) Moss Trim Lines (B16) Drainage Patterns (B10) Drainage Patterns (B10) Moss Trim Lines (B16) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)		ed: check all that anniv)		
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) Shoss Trim Lines (B16) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)			B14)	
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Retief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Crayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Retief (D4) FAC-Neutral Test (D5)			W. Carlotte State of the Control of	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Other (Explain in Remarks) Other (Explain in Remarks) Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):	2.4			
Drift Deposits (B3) Thin Muck Surface (C7) aturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):	Water Marks (B1)			Dry-Season Water Table (C2)
Algal Mat or Crust (B4)		Recent Iron Reduction	n in Tilled Soils (C6)	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)				
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):	Drift Deposits (83)			
Water-Stained Leaves (B9) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):	Drift Deposits (B3) Algal Mat or Crust (B4)		arks)	Slunted or Stressed Plants (D1)
Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Rem	arks)	Slunted or Stressed Plants (D1) Geomorphic Position (D2)
Field Observations: Surface Water Present? Yes No Depth (inches):	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	arks)	Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3)
	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Other (Explain in Rem	arks)	Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Nator Table Present? Ves No Denth (inches):	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Other (Explain in Rem	arks)	Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
react rame tresent: 163 ito behit (moreo)	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Other (Explain in Rem	arks)	Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes V No	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: surface Water Present? Yes No	Other (Explain in Rem	arks)	Slunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Vater Table Present? Vater Table Present? Ves Notaturation Present?	Other (Explain in Rem	arks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
	Sediment Deposits (B2)			
potulation resent 165 10 Deput (inches). The training report 165 100 100 100 100 100 100 100 100 100 10	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves No	Other (Explain in Rem Depth (inches): Depth (inches):	arks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe)	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: ourface Water Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
ncludes capillary fringe)	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: ourface Water Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe) Describe Recorded Data (stream gauge, moni	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Cincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe) Describe Recorded Data (stream gauge, moni	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) ield Observations: Surface Water Present? Yes No Vater Table Present? Yes No isturation Present? Yes No includes capillary fringe)	Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	Wetland H	Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)

Tree Stratum (Plot size:)	Absolute Dominant Indicator % Cover Species? Slatus	Number of Dominant Species
S* 75		Total Number of Dominant
E 10		Species Across All Strata:(B)
	_====	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
		Prevalence Index worksheet: Total % Cover of: Multiply by:
50% of total cover:	= Total Cover 20% of total cover:	OBL species x 1 =
epling/Shrub Stratum (Plot size:)	2070 OI TOTAL COVEL	FACW species x 2 =
3 = 3		FAC species x 3 =
7		FACU species × 4 =
	7045	UPL species x5 =
		Column Totals: (A) (B
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
-		1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
	= Total Cover	3 - Prevalence Index is ≤3.0¹
50% of total cover:	20% of total cover:	4 - Morphological Adaptations ¹ (Provide supporting
erb Stratum (Plot size:)		data in Remarks or on a separate sheet)
	5 / UPL	Problematic Hydrophytic Vegetation¹ (Explain)
Medicago Sativum	5 V UPL	to the state of buddle sail and walland hydrology must
0		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Definitions of Four Vegetation Strata:
		B. M. A. TACON T. F. A. C.
		Tree – Woody plants, excluding vines, 3 In. (7.6 cm) of more in diameter at breast height (DBH), regardless of height.
		Sapling/Shrub - Woody plants, excluding vines, less
		than 3 in. DBH and greater than or equal to 3.28 ft (1
		m) tall.
100 CF 31	= Total Cover	Herb - All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.
50% of total cover:)	20% of total cover:	Woody vine – All woody vines greater than 3.28 ft in
youy vine giratum (r iot size,		height.
		November 2
		AP 5
		Hydrophytic
50 20		Vegetation Present? Yes No
50% of total cover:	= Total Cover 20% of total cover	Flesenci 100
emarks: (Include photo numbers here or on a separate		l
newly planted as	Fie 1	
0	110.0	

SOIL	e ji Walanga sala	Sampling Point:
Profile Description: (Describe to the dep	th needed to document the indicator or con	firm the absence of Indicators.)
Cinches Matrix	Redox Features	Clay loan
0 7 7 - 1/2 2/	Color (moist) % Type Loc	Texture Remarks
0-1 1.5 76 314 100	<u> </u>	Clayloan
1-16 7.548 9/4 100		/
16-18 7.542 4/4 80	104124/6 20	
LE P. PRINCIPALINA LA	To the same	W
-t. D. Cak		19 1 - 1 21 21
AD (4)		10 10 10 10 10 10 10 10 10 10 10 10 10 1
Type: C=Concentration, D=Deptetion, RM=I Hydric Soil Indicators:	Reduced Malrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M≠Matrix
e : X X -7 -5 - 1	A PERSON OF A CO.	Indicators for Problematic Hydric Soils ³ :
Hislosol (A1) Histic Epipedon (A2)	Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Black Histic (A3)	Polyvalue Below Surface (S8) (MLRA 14 Thin Dark Surface (S9) (MLRA 147, 148)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	the state of the second contract of the secon
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,	A MARK AND THE
MLRA 147, 148) Sandy Gleyed Matrix (S4)	MLRA 136) Umbric Surface (F13) (MLRA 136, 122)	3Indicators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 1	
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 14	
Stripped Matrix (S6) lestrictive Layer (if observed):		
estrictive Layer (if observed):		
lestrictive Layer (if observed): Type:		47) unless disturbed or problematic.
Restrictive Layer (if observed):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
estrictive Layer (if observed): Type: Depth (inches):		47) unless disturbed or problematic.
Restrictive Layer (if observed): Type:		47) unless disturbed or problematic.

APPENDIX C

Kentucky Wetland Rapid Assessment Method Forms

KY-WRAM Rating Form Version 3.0

Kentucky Wetland Rapid Assessment Method (KY-WRAM)

Kentucky Division of Water

Instructions:

The Kentucky Wetland Rapid Assessment Method is intended for use as a tool for functional assessment. The method supplements, but does not replace information used in the existing regulatory process for wetlands, such as delineation. It is intended for use on all types of wetland in Kentucky. This is a rapid assessment method with combined field and office prep time (GIS) of no more than 8 hours. This method does not replace quantitative assessments such as Indices of Biotic Integrity.

The Rater is STRONGLY URGED to read the Guidance Manual for using the Kentucky Wetland Rapid Assessment Method (KY-WRAM) for further elaboration and discussion of the questions below prior to using the rating forms. It is VERY IMPORTANT to properly and thoroughly answer each of the questions in the KY-WRAM in order to properly categorize a wetland. To properly answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to the Scoring Boundary section in the Guidance Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

The KY-WRAM was developed by a Technical Working Group of state and federal agencies and Eastern Kentucky University. This method is modeled off of the Ohio Rapid Assessment Method (ORAM) with modifications influenced by North Carolina and Michigan's wetland rapid assessment methods.

The total score has been shown to be consistent year round; however, the ideal timeframe for use of this method is during the plant growing season when plant species can be reliably identified. It should be noted that the individual metrics may be scored differently between the seasons because certain metrics are easier to evaluate during the growing season (e.g., highly-invasive plant species coverage, special wetlands, vegetation components) and non-growing season (e.g., substrate/soil disturbance, hydrology).

Although the form may be filled out in a linear manner it is expected that the Rater will make note of wetland characteristics throughout the entire field evaluation. For example, alterations to the hydrology, substrate, or habitat, plant species encountered, and the amount of microtopography features present. This is an important step in evaluating the method properly.

Name of wetland: Wetland	Evaluator name:
Date of evaluation: Nov 2021	Tim Walters
at/Long coordinates: decimal degrees)	Phone number: 419-367-14ZZ Email:
County: Hart	twalters @hart crowser, com
USACE/WQC Project ID:	Hart Crowsen / Haley + Aldrich
Precipitation within the last 48 hours? Circle: Yes (No)	Portland, OR

Attach color photographs of wetland including landscape shot of entire wetland (if possible), vegetation components, habitat types, hydrologic features, and other relevant site features. Attach prints of satellite imagery used for buffer and connectivity metrics. This should include multiple prints at appropriate scales. Prints should include labeled marks of the following: site location, Wetland Assessment Area, plant communities within the wetland, streams, 100 year floodplains, ponds, patches of open water, relevant upland features, and location of modification to wetland. Also include north arrow and scale of each print. Wetland Sketch (include north arrow, hydrologic features, plant communities and other habitat features) Hay field surrounds_ Treed Border (upland)

Actual Wetland Size (indicate units):

Wetland Type (indicate NWI & HGM classifications):

Background	Information	(continued)
Duckbioulia	millormation	Continuca

Narrative Discussion: L wetland. See Guidance M placed on page 13.	lanual for the types of	information that should	he included here	coring comments should be	е
According to exist on-site	2,	Teat Movement	CNG		

Narrative Rating

1. U.S	5. Fish and Wildlife Service (USFWS) Critical Habitat		
•	Is any part of the wetland located within the same HUC-12 watershed designated as Critical Habitat? (see Narrative	☑Yes □ No	
	Discussion)	Acco.	
	Does any federal (G1/G2) or state-listed T/E plant or animal species (S or S2) occur within the wetland's HUC-12 watershed? (see Narrative Discussion)	V Yes □ No	
•	Does any S3 (state species of concern) species occur within the wetland's HUC-12 watershed? (see Narrative Discussion)	ØYes □ No	
2. Rare	e Wetland Community Type		T
	Does the wetland include a KSNPC rare wetland community? If YES, list the community type, the size of the rare community, and the percent of the wetland area.	□ Yes ☑ No	
3. Scer	nic, Recreational, and Cultural Value Does the wetland have scenic, recreational, or cultural value? (see Narrative Discussion)	□ Yes ☑ No	
Comm	ents:		

Site: Hart County	Rater(s): T. Walters	Date: New 2021
1		

Metric 1. Wetland Size and Distribution - Maximum 9 points.

Using GIS, estimate the size of the wetland (i.e., Wetland Assessment Area). Select one size class.				
Sources/assumptions for size estimate (list):	≥ 50 acres	6 pts		
	25 acres to <50 acres	5 pts		
Actual Watland Size Estimate: 0.24	10 acres to <25 acres	4 pts		
Actual Wetland Size Estimate: 0.67 acres	3 acres to <10 acres	3 pts	1	
2	0.3 acre to <3 acres	2 pts		
Wetland area proposed to be impacted:%	0.1 to 0.3 acre	1 pts		
	< 0.1 acre	0 pts		

1b. Wetland Scarcity – Maximum 3 points. Use USFWS National Wetlands Inventory (NWI) maps, aerial imagery, and other information of wetland area remaining within a 2-mile radius from the wetland's center (use ArcGIS or by submetric, areas of open water within lakes, streams, rivers, and ponds (PUBX), etc. should be most appropriate category below.	visual estimate). For this	Score
0 to 5% of surrounding 2-mile radius is wetland	3 pts	
o to 5% of surrounding 2-fille radius is wetland		
6 to 20% of surrounding 2-mile radius is wetland	2 pts	2

	+0	11
Metric 1 Total: add 1a & 1b (9 points max.)		14

acres	hectare	feet ²	ft on side	yard ²	yd on side	m²	m on side
50	20.2	2,177,983	1,476	241,998	492	202,000	449
25	10.1	1,088,992	1,044	120,999	348	101,000	318
10	4.1	435,596	660	48,340	220	41,000	203
3	1.2	130,679	362	14,520	121	12,000	110
0.3	0.12	13,067	114	1,452	38	1,200	35
0.1	0.04	4,356	66	484	22	400	20

Site: Hw	t County	Rater(s): 7	. Walters	Date: /Vol 2	021	
	Metric 2. Buffers a	nd Intensity of	Surrounding Land Use –	Maximum 12 poir	nts.	
	**	Use color map	s for all metric 2 sub-met	rics.		
2a. Average	Buffer Width around th	e Wetland's Pe	rimeter – Maximum 4 point	ts.		
Draw the care	dinal and ordinal lines fron	the centroid of t	he wetland and calculate avera	ge buffer width. Sele	ct only one	score.
bullers inclu	ue:		Non-Buffers Include:			+
□ shrubland	, forest of any age, natural	grassland,	☐ lawns, golf courses, mani	cured parkland		
natural ro	ck outcrops and cobble ba	rs	☐ residential, commercial, i	ndustrial		
□ abandone	d row crop field (vegetate	d & naturalizing)	☐ roadways (including shou	lders), parking lots		
	non-row crop)		☐ railroad tracks/beds			
□ lightly ma	naged forest (selectively lo naged parkland	gged)	☐ active agriculture: row cr			
	land, lake, or river		☐ conservation tillage, graz			
	ck dirt roads (non-motorize	od vobiala kasita	☐ clear-cutting or heavily m	anaged forest, minin	Β,	
that are n	ot sources of sediment)	ed venicie trails	construction activity			
	Width: 150 feet around th	e nerimeter	gravel or double-track dir	t roads (includes ATV		Score
Medium Buf	fer Width: 75 to <150 feet	around the nerim	actor		4 pts	
Narrow Buffe	er Width: 25 to <75 feet ar	ound the perimet	ter		3 pts	-13
Very Narrow	Buffer Width: 0 (no buffe	to <25 feet arou	and the perimeter		2 pts 0 pts	-
					O pts	
2b. Intensit	y of Surrounding Land L	lse within 1,000	feet of the Wetland – Maxi	mum 4 points.		
ir a land use	type in not listed, use the	examples below	to determine the category. Wr	ite in additional land	use types h	ere and
indicate the	land use category you assi	gnea:				
Land Use	Estimate the percent cov	erage comprised	by each of the four categories of	of land use below. Su	m the point	ts from
Category	all dominant land use ca	tegories (i.e., dom	ninant is ≥25% total per categor	y) and then average t	he score.	
	Land Use Types:			h category here \downarrow		Score
Very Low:	mature growth forest		wetland, lake, stream, river	1	4 pts	
	☐ shrubland/young fore					
Low:	hay field (non-row cro		track and two track dirt roads	7	O 2 pts	
LOW.	☐ lightly managed parkl☐ residential & lawns		ne paved road			
	manicured parkland		rvation tillage			
	☐ golf course	☐ two-la	logging and clear-cut (<5 years)		2
Moderately	grazed pasture	□ railroa		O 1 pts	12	
High:	utility right-of-way		nade lake			
	☐ commercial, industria		ane paved roadway			4
	☐ high-density residenti		uction activity		$A \square A \square$	
	☐ heavily grazed pasture) 0 pts	
High:	☐ row crop field	the second secon	dous areas (mining, landfills, bro			
			(in the second of the second		in = i = 0.5	
				For scores end	ing in 0.5, r	ound up
2c. Connect	ivity to Other Natural A	reas – Maximur	n 4 points.			
Use GIS with	field adjustment if necessa	ry. Evaluate the v	vetland's connectivity to habita	t patches in the great	er landscap	e either
	or via a corridor (> 30 ft wi	de) of natural veg	retation. Habitat natches and c	arridare must be not	1 4 1	
contiguously	haubland form		ble bars, wetlands, and etc.) I	arge streams and rive	rc roads -	nd "non
habitat (i.e.,	shrubland, forest, natural r	ock outcrops, cob	-t-b	are streams and me	is, roads, al	nu non-
habitat (i.e., s natural" habi	tat such as grassland are b	arriers that end p	atches and corridors.			nd non-
habitat (i.e., s natural" habi	tat such as grassland are b	ircle all categor	atches and corridors. ries that apply but report or			Score
habitat (i.e., s natural" habi	tat such as grassland are b at: (can be more)	ircle all categor 50% of area is pa	atches and corridors. ries that apply but report or	ly the highest poin		

>25% of area is patch

<25% of area is patch

Metric 2 Total: add 2a - 2c (12 points max.)

Up to 1000 ft.

2 pts

2 pts

0 pts

Sub-total:

Site: Hart County Rater(s):	T. Walters Date: NOV 2	021	
Q	logy – Maximum of 29 points.		
3a. Input of Water From an Outside Source – Maxi			Score
Surface Water: Inundation from a lake, pond, or stream		4 pts	
Groundwater: Score only if you observe direct evidence spring or seep)		4 pts	2
Precipitation: All wetlands receive some portion of their	hydrological budget from this	2 pt	177
3b. Hydrological Connectivity – Maximum 6 points	Select all that apply		Score
100-Year Floodplain or abutting a smaller stream/creek		2000	000.0
FEMA maps are unavailable.	TAS defined in February maps of three enables of the	2 pts	
Between a Stream/Lake/Pond and Human Land Use. The wetland is located between a surface waterbody and		2 pts	(°)
adjacent land use could flow through the wetland before Wetland Complex. The wetland is part of a large scale (1	it discharges into the surface waterbody. 1.0+ acres) complex of other wetlands within 2500' of	2 pts	
the assessment area boundary, with small areas of unma		2 pts	
defined as comprising at least 25% of the wetland area. I characteristics, select all that apply and average the poin	nant hydrologic characteristic of the wetland. "Dominant' f separate areas have distinctly different hydrologic ts. Use US ACE hydrology indicators for assistance. Use NF length for the county the wetland is in. If the wetland is i	RCS	Score
	5 – 100% of growing season)	4 pts	Score
	5 – 75% of growing season)	3 pts	12.1
	2.5 – 25% of growing season)	2 pts	2
Seasonally Saturated in the Upper 12 Inches of Soil (12	2.5 – 25% of growing season)	1 pt	,
3d. Alterations to Natural Hydrologic Regime – Ma Evaluate the intactness of the natural hydrologic regime are potentially influencing the wetland (e.g. alteration m not need to be actively maintained to have permanent not hydrologic alteration may also impact the Substrate/S	of the wetland. Check all forms of observed hydrologic alt ay be outside of the wetland). Keep in mind that some alt egative effects.	eration(ernation	s) that is do
Low High Alteration	Low High Alteration		
L L Little Co, in St. Heat and	stormwater inputs (addition of water)		
	non-stormwater discharge(s)		
	road bed(s)/RR grades(s) in or near the we	etland	4 1
	dredging activities in or near the wetland		
	filling/grading activities in or near the wet		
other(s) (specify)	**only consider anthropogenic alterations (e.g. exclude	beaver a	ctivity)
Select an option below that best describes the extent of options and average the points when appropriate.	wetland hydrology alteration. You may select adjoining		Score
No Hydrologic Alterations Apparent		9 pts	
The wetland hydrology appears to have been altered, but	1 1 1 1	7 pts)	_
	on young to be natural.	\subseteq	7
The wetland hydrology was altered but appears to retain Alterations are severely impacting the hydrology of the w		3 pts	/
Actions are severely impacting the hydrology of the w	Cuana	1 pt	
Metric 3 Total: add 3a – 3d (29 points max.)	Subtotal //	22	

Site:	He	rt C	anta		Ra	ter(s):	T. Walters	Da	te: /	Vov Z	1505	
• A sut	N ostrate	Metric 4.	() Habitat	Altera	tion	and H	abitat Structure Developme	nt – N	/laximu	ım 20 Po	ints.	- 4a/4h)
4a. Su	bstrat	e/Soil Di	sturbance	- Mar	vimu	m A no	inte	a) unu s	ubstrutt	, mubitut (5	dometri	- 40/40/.
Evalua	te whe	ther a phy	sical distu	rbance	has o	ccurred	to the soil and surface substrates	of the	wetland	Check all I	oossible	forms of
observ	ved sub	strate/soi	l disturban	ces wit	hin th	e wetla	and below.					
Low	High	Alteration				Alteratio		Low	High	Alteratio	n	
		filling			t	numan-i	nduced erosion or exposure			plowing,	disking	
		grading			t	numan-i	nduced sedimentation or burial			intensive	grazing ((hooves)
		logging				dredging	g (includes excavating)			off-road v	ehicle u	se
		construc	tion 🔲		1	vehicle u	ise			other(s) (specify)	
Select	an ont	ion below	that hest	describ	oc th	a avtan	t of wetland soil alteration. You n		et adiai	ning ontion	s and	
averag	ge the	oints whe	n appropr	iate.	es til				rente		is allu	Score
			sturbance .		nt	WE	and looks to be 5	+CAT II	will C	× 111	4 pts	1
The w	etland	substrate	or soil app	ears to	have	been al	tered, but the wetland was resilie	nt to alt	erations	5 (3 pts	33
The w	etland	substrate	or soil wa	altere	d but	was sor	mewhat resilient to alterations				2 pts	
The w	etland	substrate	or soil was	altered	and	was not	resilient to alterations				1 pt	
4b H	ahitat	Alteration	n – Maxi	mum 0	noin	tc						
							ck all possible observed habitat al	toration	c within	the wetla	nd holos	
Utilize	aerial	photogra	phy and fie	ld evide	ence t	o deter	mine if any habitat alteration has	occurre	d Deter	mine the a	nroxima	ate nre-
distur	bance	extent of	vertical and	horizo	ntal h	abitat a	ttributes (e.g., large woody debris	, plant	species o	diversity, hu	ımmock	5.
patch	iness, r	iche diver	sity, etc.).	Disrega	rd cha	anges at	tributable to wetland community	success	ion or o	ther natura	proces	ses.
Low	High	Alterat	ion	L	.ow	High	Alteration	Low	High	Alteratio		
			s (e.g. road]		large woody debris (LWD)		Ø	sediment	ation	
			RR grades		1		removal					
			antation	1 2			grazing			dredging		
			ve cutting		2		rutting			filling/gra		Selection of
		clearcu	7 1 1 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]		Herbicide or chemical treatment		Ø	plowing/	disking/f	arming
			g or shrub				nutrient enrichment, e.g., nuisance algae			other(s)	specify)	
Select	an on	remova		describ	es th	e exten	t of wetland habitat alteration. Yo	ni mav	select a	dioining on	tions	
			when app			- cate		ou may	Jeicet a	ajoiiiiig op	LIOIIS	Score
			Apparent	19.000							9 pts	Deore
				ave bee	n alte	ered, bu	t the wetland was resilient to alte	rations	and the	functions		
		near optir									7 pts	3
							some degree of functions				3 pts	
The a	teratio	ns are sev	erely limiti	ng habi	tat fu	nction o	of the wetland				1 pt	
4c. Ha	bitat R	eference	Compariso	n – Ma	ximur	m 7 poir	nts.					
							habitat quality in comparison to	he best	of its ty	pe remaini	ng (i.e., a	any
							nd habitat). Do not consider the					
							ergent riverine wetlands). For inst					
							evelopment, the Rater may doub	le-checl	k non-ad	joining opt	ions, but	
							litional assistance.	A 16	laan 13	ab aft	_11-	
							nd habitat structure developmen age the points.	t. if unc	iear whi	ch of two o	ptions	Scare
Excell							t of its type.				7 pts	Score
EXCELL	ent:	Wettan	io appears	to rem.			L UI ILS LVDE.				/ nrc	

Subtotal

5 pts

3 pts

1 pt

Wetland appears to be a good example of its type

Wetland appears to be a fair example of its type.

Wetland is a poor example of its type

Metric 4 Total: add 4a - 4c (20 points max.)

Good:

Fair:

Poor:

Site:	Hart County	Rater(s):	T	Walter	3	Date:	Nov	7021	
	Met	ric 5: Special	Wetla	ands — Max	imum of 10	pts.			
Metric Check a	5: Special Wetlands — Maxill that apply and score as indicate	mum of 10 pt	s.						
Numbe	rs in brackets [] indicate point va	alues.							
Provide etc).	documentation for each selecti	on (photos, che	cklists,	maps, resourc	e specialist co	ncurrence	, data sour	ces, referer	nces,
5a. Re	gulatory Protection / Critical	Habitat							Score
	Known occurrence of federally watershed [10]. Known occurrence of other ramixed ranks or qualifiers (i.e., thave documented that the specific control of the	e species with s 51/S2 [10] and s	state ra 52/53 [5	nk S1 *[10], S2 5)]. Exclude re	*[5], S3*[3]; cords which ar	*use high	er rank if th	nere are	10
5b. Hig	h Ecological Value / Ranked	Communities	(See m	anual and key	for ranked list	of comm	inities)		Score
	Appalachian seep/bog (S1S2) [8] Bottomland marsh (S1S2) [8] Bottomland slough OR Coastal Calcareous seep/bog (S1) [10] Coastal Plain forested acid see Cypress (tupelo) swamp (S1) [3 Sinkhole/depression marsh (S2 Sinkhole/depression pond (S2) Wet depression/sinkhole fores Wet bottomland hardwood for Wet meadow (S1) [10] Wet prairie (S1) [10]	Plain Slough (S. p (S1) [10] [10] [15] [15] [15] [17] [15] [17] [17]		oley ? ver	y Shall	low			0
	w-Quality Wetland								Score
	all that apply, but maximum >7< Wetland is < 1 acre and has			ants [_10]					-
		egetated mine	d/excav	ated land [-10					0
	: 5 Total: add 5a – 5c (10 p	oints max.)*	4		ubtotal		10	4	4

*Score can be negative

57 67

Site:	Host Country	Rater(s): T. Walters	Date: NW 2021	
-------	--------------	----------------------	---------------	--

Metric 6. Vegetation, Interspersion, and Habitat Features – Maximum 20 points.

**For each Metric 6 sub-metric, do NOT consider the wetland type being assessed, especially for plant species diversity in 6a.

6a. Wetland Vegetation Components – Maximum 9 points.

Determine the Qualitative Cover Score of each Vegetation Component. Using the Scoring Table below, start on the left and proceed to the right, until a point value is obtained for each Component. Vegetation Components may exist in overlapping layers, e.g., significant areas of shrub/sapling and/or herbaceous may exist under a forest canopy. Only groups of trees, clusters of shrubs, or dense patches of herbaceous stems may count toward area coverage. Do not include lone trees, shrub/saplings, or sparse patches of herbaceous stems. See Submetric 6c for list of Kentucky's most invasive wetland species. Check the box on the right to indicate how the score was determined for each Vegetation Component (i.e., F, S or H).

Qualitative Cover Scoring Table

Habitat component - Check all that apply →			F	S	H		
	wetland area Invasive or non-na	Native species dominate the coverage	High native diversity	3 pts		100	
			Moderate to low native diversity	2 pts		1	2
Vegetation Component		Invasive or non-native species	Moderate to high native diversity	2 pts			
		dominate the coverage	Low native diversity	1 pt		1	1
The state of the s	vetland coverage	Native species dominate the	Moderate to high native diversity	2 pts		180	
Component is >0.1 acre Vegetation Component is		coverage	Low native diversity	1 pt		1	1
		area Invasive or non-native species	Moderate native diversity	1 pt	1		0.00
			Low native diversity	0 pts			0
Vegetation Component is <0.1 acre	wetland coverage	Native species dominate the	Moderate to high native diversity	2 pts			1
		coverage	Low native diversity	1 pt	10	•	P
	area	Invasive or non-native species dominate the coverage 0 pts					
	<25% of we	tland area		0 pts			

Write in "absent" (don't score it a zero) if habitat is not present.		
Forest Overstory Component (F) – Maximum 3 points. Qualitative cover score derived from table. Forested wetland areas are characterized by a group of trees at least 3 inches in DBH, regardless of height.		Score
	absent	_
Shrub/Sapling Component (S) — Maximum 3 points. Qualitative cover score derived from table. Shrub/Sapling wetland areas are dominated by clusters of woody plants less than 3 inches in DBH and greater the		Score
3.28 feet in height. Species include true shrubs, young trees, and stunted trees.		3
Herbaceous Component (H) – Maximum 3 points. Qualitative cover score derived from table. Herbaceous wetland areas are dominated by dense patches of erect, non-woody plants, regardless of size, and woody plants less than 3.28 feet in height. This component includes the robust-stemmed yellow pond lily (Nuphar advena) and American lotus (Nelumbo lutea). All floating-leaf species (including Nymphaea spp.) are excluded from the herbaceous component, and are instead included within the open water component (see Submetric 6b).		Score
		4
	6a. Vegetative Components Score	7
	Subtotal 48	7

	021	
o. Open Water, Mudflat, and Aquatic Bed Habitats – Maximum 3 points. Den water is an unobstructed, inundated area of water with few or no rooted emergent or non-tree woody precies. For KY-WRAM, mudflats are considered areas with exposed mud substrate with little to no vegetation etric is designed to evaluate habitat for waterfowl, shorebirds, fish, and other wildlife.		
 Shabitat Component includes combined acreage from any of the following areas: Small ponds (including farm ponds), streams and/or their floodwaters, pools, saturated sandbars, on atural or constructed waters Seasonal standing water areas (e.g., mudflats and dried-down yernal pools) that were inundated lon during the growing season to support aquatic life. This includes the "understory" below a forest cance. Aquatic bed areas (submerged aquatic vegetation). Aquatic bed is dominated by plants growing at or surface of the water for most of the growing season in most years. The KY WRAM includes aquatic be the definition of open water, due to the potential difficulty in differentiating the two entities. For the of the KY-WRAM, all floating-leaf aquatic taxa (e.g. water lilles, Nymphace spp.), are included in the daquatic bed (therefore, are included in the definition of open water). 100-foot wide strip of open water along a lake or river (see Wetland Assessment Area guidelines in the Guidelines). Divide the linear feet of shoreline length by 400. For example, if the vegetated portion of wetland interfaces with 200 linear feet of a lake, then the extent of the lake's open water included with Wetland would be calculated as: 200/400 = 0.5 acre. Open water ends where water depth is > 6.6 ft; may use depth charts to establish this, when available. Shallow pools free of densely-packed herbaceous vegetation (e.g., open area within a marsh or bog. The indicators below are intended to provide guidance to determine if open water was present where wetland is currently dry. If the wetland is currently dry, use the appropriate USACE Wetland Delineation Regional Supplen determine if indicators of open water are present (appropriate indicators are listed below). One primary indicator OR two secondary indicators must be present to consider presence of open the section indicated below, describe how you used indicators	g enough opy. below the ed within purposes lefinition of the 100-foot Boundary the thin the the Rater the nent to n water. In	
Estimate the total coverage. Choose only 1 category.		Score
Estimate the total coverage. Choose only 1 category. High: 2.5 acres or more	3 pts	Score
Estimate the total coverage. Choose only 1 category. High: 2.5 acres or more Moderate: 1.0 acre to ≤2,5 acres	2 pts	Score
Estimate the total coverage. Choose only 1 category. High: 2.5 acres or more Moderate: 1.0 acre to <2.5 acres	2 pts 1 pt	Score
Estimate the total coverage. Choose only 1 category. High: 2.5 acres or more Moderate: 1.0 acre to <2.5 acres Low: 0.25 acre to <1.0 acre Virtually Absent: < 0.25 acre Open Water Hydrology Indicators − Information in parentheses represents US ACE Wetland Delineation Region Hydrology Indicators that should be consulted for Indicators of open water for the purposes of KY-WRAM. Check Indicators present below: Primary Indicators (must have 1) OR → Secondary Indicators (must have 2)	2 pts 1 pt 0 pts onal Supplen	0
Estimate the total coverage. Choose only 1 category. High: 2.5 acres or more Moderate: 1.0 acre to <2.5 acres Low: 0.25 acre to <1.0 acre Virtually Absent: <0.25 acre Open Water Hydrology Indicators – Information in parentheses represents US ACE Wetland Delineation Region Hydrology Indicators that should be consulted for Indicators of open water for the purposes of KY-WRAM. Check Indicators present below:	2 pts 1 pt 0 pts onal Supplen	0

10

Site: Count Date: Nov 2021 Rater(s): T. Walters Coverage of Highly-<u>Invasive</u> Plant Species – Maximum 1 point. Estimate the combined total coverage of any invasive species present in the wetland. Selected invasive plant species. Remember to include any species found on the KY-EPPC list that is within the assessment area. (Print the complete KY-EPPC list and take into the field) *These native invasive plants are being included for the purposes of the KY-WRAM (i.e., everything on the KY-EPPC list are exotics) Alliaria petiolata (Garlic Mustard) Microstegium vimineum (Japanese Stilt Grass) ☐ Alternanthera philoxeroides (Alligator Weed) Myriophyllum aquaticum, M. spicatum (parrotfeather Conium maculatum (Poison Hemlock) and Eurasion watermilfoil) ☐ Euonymus fortunei (Winter Creeper) ☑ Phalaris arundianacea (Reed Canary Grass)* Lespedeza cuneata, L. bicolor, L. stipulacea, L. striata, ☐ Phragmites australis (Common Reed) L. thunbergii (non-native Lespedeza) □ Polygonum cuspidatum (Japanese knotweed) Ligustrum sinense, L. vulgare (Privet) ☐ Rhamnus cathartica (Common Buckthorn) ☐ Lonicera japonica (Japanese Honeysuckle) ☐ Rosa multiflora (Multiflora Rose) ☐ Lonicera maackii (Bush Honeysuckle) ☐ Typha ssp. (Cattail species)* Lythrum salicaria (Purple Loosestrife) Other(s): specify below Estimate the total coverage. Choose only 1 category. Score Virtually Absent: <1% aerial coverage of invasive species 1 pt **Nearly Absent:** 1% to <5% aerial coverage of invasive species 0 pts Low: 5% to <25% aerial coverage of invasive species -1 pt Moderate: 25% to <75% aerial coverage of invasive species -3 pts Extensive: >75% aerial coverage of invasive species -5 pts Additional invasive plant species present (list here): 6d. Horizontal (plan view) Interspersion -Maximum 5 points Evaluate the wetland from a "plan view," i.e., imagine as if you are hovering above the wetland looking down upon it . The figure shows hypothetical wetlands for estimating the amount of habitat interspersion NONE LOW LOW including growing season vegetation communities and open water. Only include open water that is 6.6 feet deep or less and does not include inundated areas below herbaceous and shrub vegetation. If unclear, select adjoining options and average the points. MODERATE MODERATE HIGH Wetland has a high degree of interspersion Score Wetland has a moderate degree of interspersion 5 pts Wetland has a low degree of interspersion 3 pts Wetland has no interspersion 1 pt 0 pts Subtotal

Metric 6 Total: add 6a - 6e (20 points max.)

Site:	Rater(s):		Date:	
6e. Microtopographic	: Features – Maximum 12 poi	nts (i.e., 3 points per feature).	Choose only one category for each	1,
	s), etc. Percent coverage is based	tussocks, decayed nursery logs (re on total area of the wetland and i		Score
Absent: 0 pt No features present	Low: 1 pt Present but <1% of the area	Moderate: 2 pts 1% to 5% of the area	High: 3 pts >5% of the area	0
2. Large Woody Debris	(LWD). per log, average width ≥6	inches (e.g., fallen trees and/or la	rge branches, etc.)	Score
Virtually Absent: 0 pt < 1 per acre	Low: 1 pt 1 to 5 per acre	Moderate: 2 pts 6 to 10 per acre	High: 3 pts >10 per acre	0
3. Large Snags (≥12 inc	hes DBH).			Score
Absent: 0 pt No snags present	Low: 1 pt Present but <1 per acre	Moderate: 2 pts 1 to 5 per acre	High: 3 pts >5 per acre	0
support frog and/or sal	lamander reproduction. Permane	ry pools with standing water of suff ent areas of vegetated standing wat t (see Manual for description of ha	er along the edges of ponds,	Score
Virtually Absent: 0 pt < 5% of the area	Low: 1 pt Present in small amounts (5% to 10% of the area) but of low to moderate quality	Moderate: 2 pts Present in moderate or greater amounts (>10% of the area) but of low to moderate quality OR Present in small amounts (5% to 10% of the area) but of highest quality	High: 3 pts Present in moderate or greater amounts (>10% of the area) and of highest quality	0
		6e. Mic	crotopographic Features Score	0

KY-WRAM Summary

Total Score

rrative Rating		Circle One	
Question 1: USFWS Critical Habitat, Federal T/E Species, or State-ranked (S1, S2, or S species present? Question 2: KSNPC Rare Wetland Community Type Present? Question 3: Wetland has Scenic, Cultural, or Recreational Value?	(3) YE: YE: YE:	s No	
Quantitative Rating	Sco		ım
Metric 1: Wetland Size and Distribution	300	9	
Metric 2: Upland Buffers and Intensity of Surrounding Land Use	C ************************************	12	
Metric 3: Hydrology	1.	29	
Metric 4: Habitat Alteration and Habitat Structure Development	Q 	20	
Metric 5: Special Situations		10	
Metric 6: Vegetation, Interspersion, and Habitat Features		20	
Tota	l Score =	100 pts.	

Site:	Rater(s):	Date:	

Scoring C	comments:
-----------	-----------

Flat-Inside possible Karst Feature - now filled? in

HGM definitions:

RIVERINE: Occur in flood plains and riparian corridors in association with stream channels of any flow regime. Dominant water sources are overbank flow or subsurface hydraulic connections.

DEPRESSIONAL: Occur in topographic depressions. Dominant water sources are precipitation, ground water discharge, and water from adjacent uplands. Water moves vertically.

SLOPE: Occur where there is a discharge of ground water to the land surface. Normally occur on sloping land; gradient may be slight to steep. Water does not pool but flows downslope in one direction.

FLAT: Occur most commonly on historic flood plain terraces - where the channel has incised so deeply that it rarely or never floods onto the flood plain. Main source of water is precipitation, and they have poor vertical drainage. They receive no groundwater discharge, which distinguishes them from depressional and slope wetlands.





30 August 2022 File No. 0203928

Thoroughbred Solar, LLC 6688 N. Central Expressway, Suite 500 Dallas, Texas 75206

Attention: Rob Kalbouss

Subject: Wetland and Stream Delineation Report Addendum for

Thoroughbred Solar Project Hart County, Kentucky

Dear Mr. Kalbouss:

This Wetland and Stream Delineation Report Addendum summarizes the results of field work performed by Haley & Aldrich, Inc. (Haley & Aldrich) to locate and identify wetlands and streams in support of Thoroughbred Solar, LLC's proposed Thoroughbred Solar Project (Project).

The Project site is located west of Rowletts in Hart County, Kentucky (see Figure 1). A wetland and stream delineation was originally completed on approximately 450 acres in 2021. This addendum documents an additional field delineation effort conducted in August 2022 for approximately 80 acres that have been added to the Project site. The additional 80 acres is the Study Area that is the subject of this report and is highlighted in yellow on Figure 1.

Site Setting

PHYSIOGRAPHY AND SOILS

The Study Area is located in the Mississippian Plateau of Kentucky which consists of karst terrain, a limestone plain characterized by sink holes, sinking streams, streamless valleys, springs, and caverns. The Study Area itself is typical of this physiographic province and had been cleared and primarily planted with hay or row-crops. Elevations within the Study Area range from 600 to 640 feet above mean sea level (ft amsl). A topographic map of the Study Area and surrounding region is provided as Figure 2.

Soil series units mapped by the NRCS web soil survey are listed in Table 1 and provided as Figure 2. Soil units, drainage class, and whether the soil unit is classified as hydric are also summarized in Table 1 below. Six soil types occur within the Study Area; none of them are hydric.

Table 1. Study Area Soils

Soil Map Unit Symbol	Soil Map Unit Name	Drainage Class	Hydric Conditions ¹
CaD	Caneyville silt loam, very rocky, 6 to 20 percent slopes	Well-drained	Non-hydric
CrB2	Crider silt loam, 2 to 12 percent slopes, eroded	Well-drained	Non-hydric
CrC2	Crider silt loam, 6 to 6 percent slopes, eroded	Well-drained	Non-hydric
FdC	Fredonia- Hagerstown- Vertrees silt Ioams, rocky, 6 to 20 percent slopes	Well-drained	Non-hydric
HdB	Hagerstown- Fredonia- Vertrees silt loams, rocky, 2 to 6 percent slopes	Well-drained	Non-hydric
Np	Nolin silt loam, depressional, frequently flooded	Well-drained	Non-hydric

Notes:

HYDROLOGY

The Study Area is located in the northern portion of the Lower Kentucky Region Watershed (Hydrologic Unit Code [HUC] 05100205). Most of the surface hydrology within the Study Area is generated by precipitation with some surface flow from neighboring areas. Total average annual precipitation is 52 inches of rain and 8 inches of snow (Source: http://usclimatedata.com as measured in nearby Horse Cave, Kentucky).

The National Wetlands Inventory (NWI) map identifies one aquatic feature mapped within the Study Area, as shown on Figure 3. The NWI aquatic feature was mapped as open water. No streams were indicated in the NWI mapping.



¹ Soils mapping source: USDA, Natural Resource Conservation Service (NRCS) web soil survey.

Thoroughbred Solar, LLC 30 August 2022 Page 3

Results

A wetland and stream delineation was conducted within the additional Study Area by two Haley & Aldrich wetland scientists on 22 August 2022. No streams, wetlands, or ponds were identified.

The northern parcel was an active corn field during the site visit. One small stand of trees and upland herbaceous vegetation were located within the agricultural field. This upland vegetation stand within the agricultural field was hackberry (*Celtis occidentalis*), red maple (*Acer rubrum*), Canada wild rye (*Elymus canadensis*), Kentucky blue grass (*Poa pratensis*), and white clover (*Trifolium repens*). The southern parcel was an active hayfield dominated by Kentucky blue grass, white clover, tall redtop (*Tridens flavus*), and tall rye grass (*Schedonorus arundinaceus*). Representative photos of the upland areas are included as Attachment A. During the site visit, the NWI-mapped open water feature was not observed and determined to not be present, as it was currently an active corn field.

Conclusions

No streams, wetlands, or ponds were observed or delineated during the August 2022 wetland and stream delineation. A total of one Palustrine Forested (PFO) wetland was delineated during November 2021 as part of an on-site wetland and stream delineation. The wetland scored a 46 using the Kentucky Wetlands Rapid Assessment Method (KY-WRAM). The wetland had no visible outlet to jurisdictional Waters of the United States and would be considered non-jurisdictional by the USACE. No streams or other waterways were observed during the November 2021 site visit. If needed, a final determination of jurisdictional status can only be made through consultation with the USACE.

Sincerely yours,

HALEY & ALDRICH, INC.

Audrey West

Assistant Project Manager

Lynn Gresock

Principal Consultant

Enclosures:

References

Figure 1 – Study Area Overview

Figure 2 – Topography and Soils Series

Figure 3 – Federal and State Mapped Aquatic Resources

Figure 4 – Delineated Features, Photo Location, and Land Cover

Attachment A - Photo Log

\haleyaldrich.com\share\CF\Projects\0203928\Wetlands\Addendum\report\2022-0906-HAI-0203928 Thoroughbred Addendum F.docx

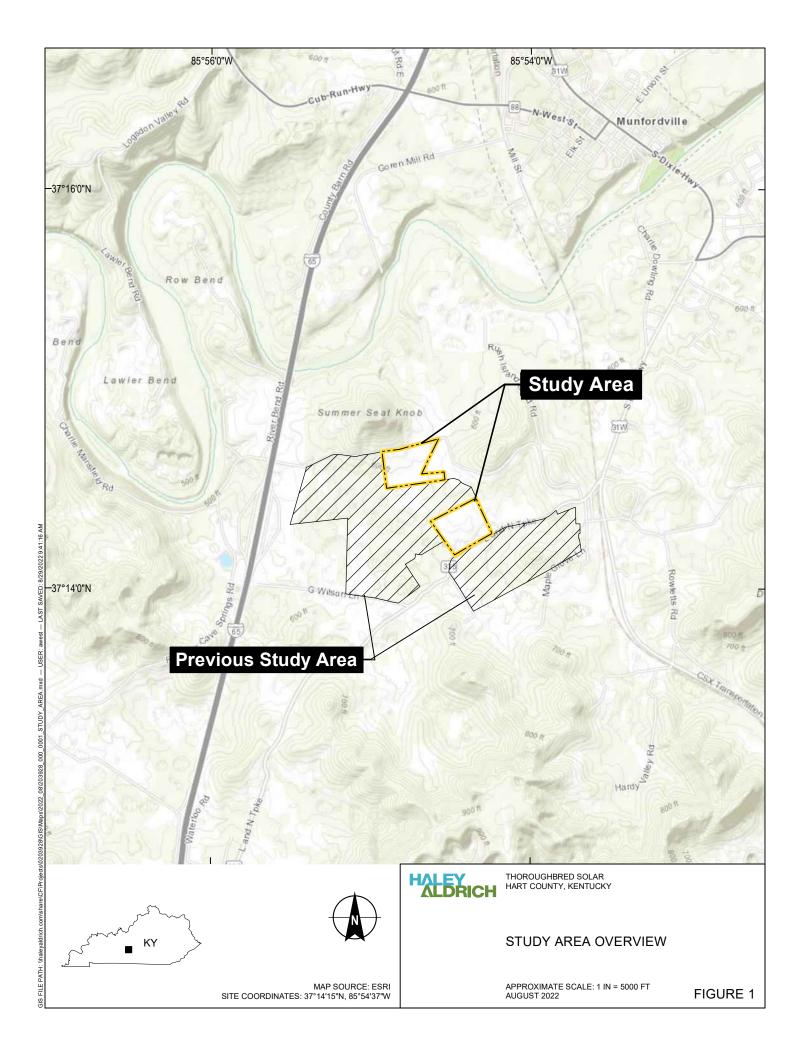


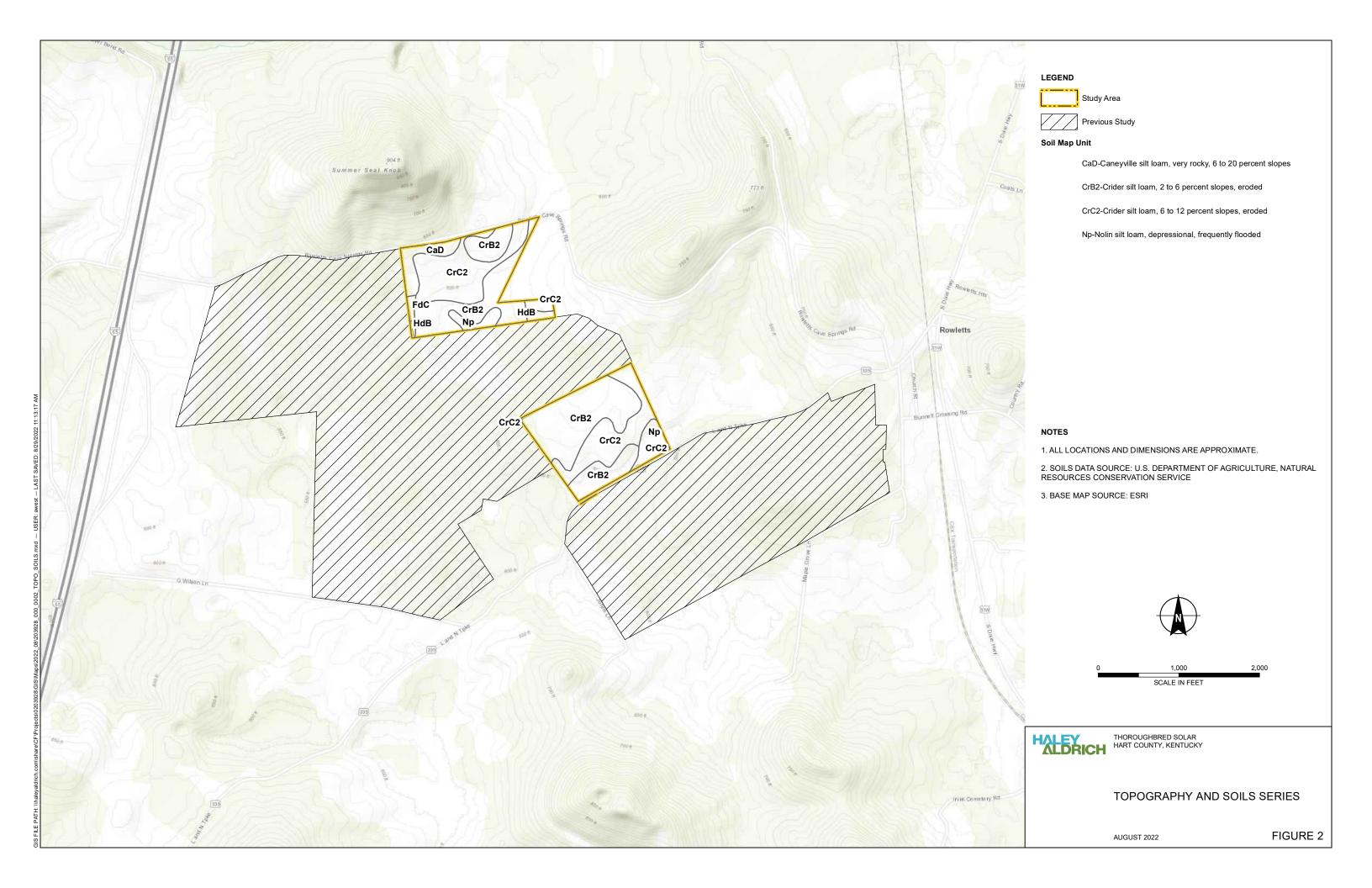
References

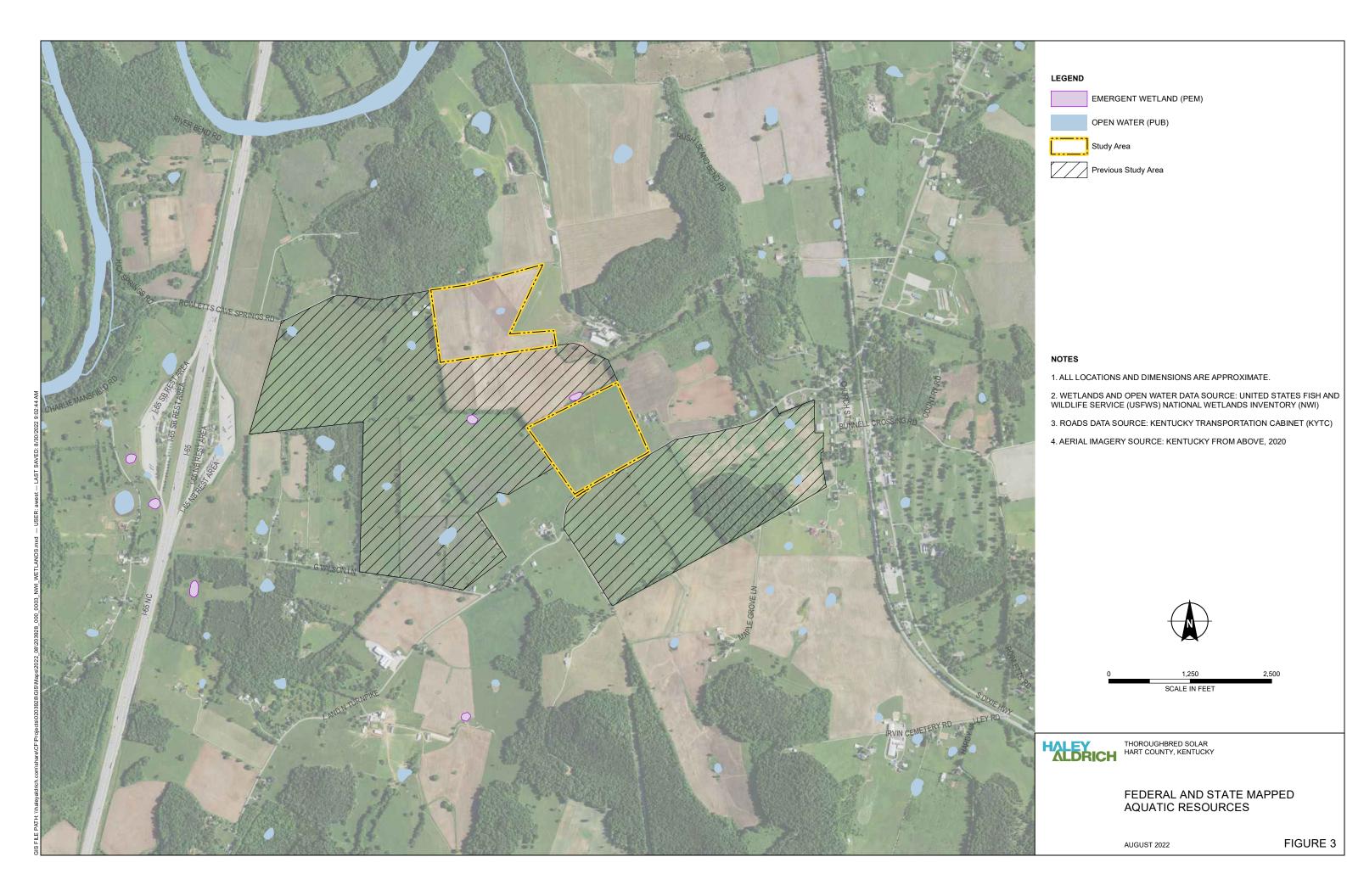
- 1. Cowardin, L.M., et al. 1979. *Classification of wetlands and deepwater habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C. 131 pp.
- 2. Kentucky Energy and Environment Cabinet. 2021. 401 Water Quality Certification. Accessed at: §401 Water Quality Certification Kentucky Energy and Environment Cabinet
- 3. Kentucky Energy and Environment Cabinet. March 2016. *Guidance Manual for KY-WRAM, Version* 3.0.
- 4. Munsell Color (Firm). Munsell Soil Color Charts. Grand Rapids, MI: Munsell Color, 2010.
- 5. U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual*. Environmental Laboratory, Vicksburg, MS, 92 pp.
- 6. U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*. U.S. Army Engineer Research and Development Center, Vicksburg, MS, 162 pp.
- 7. U.S. Army Corps of Engineers. 2016. *National Wetland Plant List*. Accessed at: https://www.lrp.usace.army.mil/Portals/72/2016%20National%20Wetland%20Plant%20List.pdf?ver=2016-06-16-094823-560.
- 8. USDA Natural Resources Conservation Service. 2016. *Field Indicators of Hydric Soils in the United States,* Version 8.0.

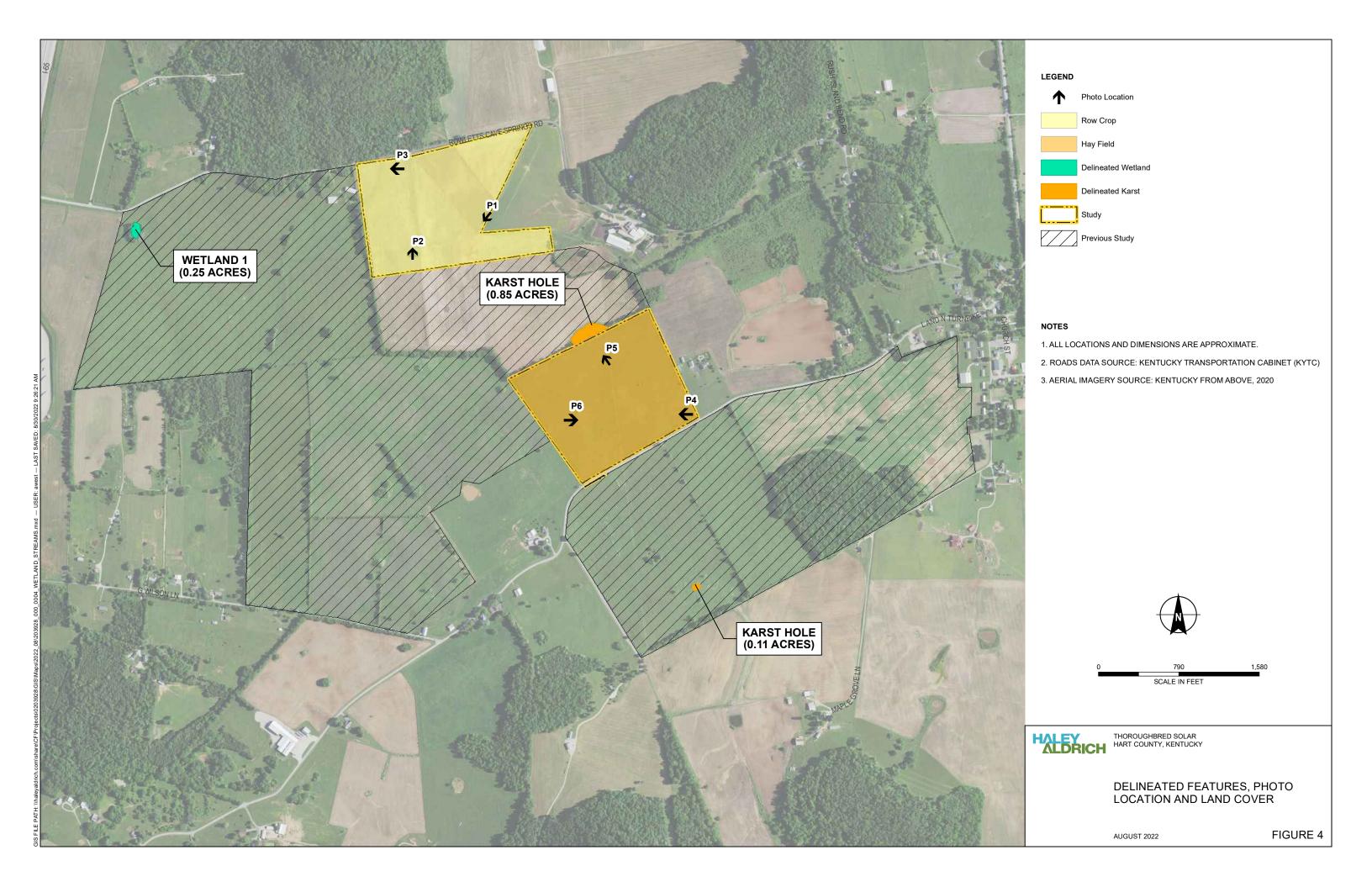












ATTACHMENT A

Photo Log

Thoroughbred Solar Project Hart County, Kentucky File No. 0203928

Date Photographs Taken: 22 August 2022



Photo 1: Agricultural field: View looking southwest.



Photo 2: Upland vegetation within agricultural field: View looking north.

Haley & Aldrich Page 1 of 3

Thoroughbred Solar Project Hart County, Kentucky File No. 0203928

Date Photographs Taken: 22 August 2022



Photo 3: Agricultural field: View looking west.



Photo 4: Hay field: View looking west.

Haley & Aldrich Page 2 of 3

Thoroughbred Solar Project Hart County, Kentucky File No. 0203928

Date Photographs Taken: 22 August 2022



Photo 5: Hay field: View looking northwest.



Photo 6: Hay field: View looking east.

Haley & Aldrich Page 3 of 3