#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County: Wa	arren	Sa	mpling Date:	05-Dec-17
Applicant/Owner: AEP		State: OH	Sampling Po	pint: w-jbl-1	20517-02
Investigator(s): _JBL, PJR	Section, Township	o, Range: S 16 T	4E	r <u>3N</u>	
Landform (hillslope, terrace, etc.): Swale	Loca	al relief (concave, convex, no	one): conca	ive	
Slope: 0.0% / 0.0 ° Lat.: 39.415163	Long.: -84.	.257070		Datum: NAD 8	3
Soil Map Unit Name: MrC2		NWI cla	ssification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? $\ \ Y$	res 💿 No 🔿	(If no, explain in Remarks.)			
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significant	ly disturbed?	Are "Normal Circumstance	s" present?	Yes 🖲	No $\bigcirc$
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any ar	swers in Ren	narks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes () Yes () Yes ()	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bullet$ No $\bigcirc$
Remarks: mixed veg swale				

Dominant

## **VEGETATION -** Use scientific names of plants.

		— Species? ·		
_Tree Stratum_(Plot size: )	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:3(B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL_EACW_or EAC· 66.7% (A/B)
	0	= Total Cove	r	That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)		_		Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species <u>15</u> x 1 = <u>15</u>
3	0	0.0%		FACW species $35$ x 2 = $70$
4	0	0.0%		FAC species $30 \times 3 = 90$
5.	0	0.0%		FACU species $20 \times 4 = 80$
Herb Stratum (Plot size:)	0	= Total Cove	r	UPL species $0$ x 5 = $0$
1, Agrostis gigantea	15	15.0%	FACW	Column Totals: <u>100</u> (A) <u>255</u> (B)
2. Poa pratensis	30	30.0%	FAC	Prevalence Index = $B/A = 2.550$
3. Leersia virginica	20	20.0%	FACW	
4. Schoenoplectus tabernaemontani	15	15.0%	OBL	Hydrophytic Vegetation Indicators:
5. Festuca arundinacea	20	20.0%	FACU	
6	0	0.0%		✓ 2 - Dominance Test is > 50%
7.	0	0.0%		<b>✓</b> 3 - Prevalence Index is $\leq 3.0^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100	= Total Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
	0	= Total Cove		Vegetation Present? Yes I No
Remarks: (Include photo numbers here or on a separate she	eet.)			

SOIL						Sampling F	oint: w-ibl-120517-02
Profile Descri	ption: (Describe	to the depth	needed to document the	indicator or co	nfirm the	e absence of indicators.)	
Depth	Matri			Features		_	
(inches)	Color (moist)		-	% <u>Type</u> 1	Loc <sup>2</sup>	Texture	Remarks
0-11	10YR 4/1	90	7.5YR 4/6	10 C	Μ	Loam	
				· _ · ·			
<sup>1</sup> Type: C=Conce Hydric Soil In	•	etion, RM=Red	uced Matrix, CS=Covered or	Coated Sand Gra	ins.	Location: PL=Pore Lining. 1	
Histosol (A	.1)		Sandy Gleyed Mati	rix (S4)			5
Histic Epipe	edon (A2)		Sandy Redox (S5)			Coast Prairie Redox	(A16)
Black Histic			Stripped Matrix (Se	6)		Dark Surface (S7)	
	Sulfide (A4)		Loamy Mucky Mine	eral (F1)		Iron Manganese Mas	( )
Stratified L	5		Loamy Gleyed Mat			Very Shallow Dark Su	urface (TF12)
2 cm Muck	: (A10)		Depleted Matrix (F			Other (Explain in Rer	marks)
Depleted B	Below Dark Surface	(A11)	Redox Dark Surfac	e (F6)			
	Surface (A12)		Depleted Dark Sur	face (F7)		<sup>3</sup> Indicators of hydrophy	tic vegetation and
	k Mineral (S1)		Redox Depressions	s (F8)		wetland hydrology	must be present,
5 cm Muck	y Peat or Peat (S3	)				unless disturbed o	r problematic.
Restrictive La	yer (if observed)	):					
Туре:							Yes $\bullet$ No $\bigcirc$
Depth (inch	es):					Hydric Soil Present?	Yes   No
HYDROLO	GY						
Wetland Hydr	ology Indicators	:					
Primary Indicat	tors (minimum of c	ne is required	check all that apply)			Secondary Indicate	ors (minimum of two required)
Surface Wa	ater (A1)		Water-Stained Le	eaves (B9)		Surface Soil Cr	acks (B6)
	r Table (A2)		Aquatic Fauna (E	313)		Drainage Patte	
Saturation			True Aquatic Pla	. ,		Dry Season Wa	
Water Marl	. ,		Hydrogen Sulfide			Crayfish Burrov	
	Deposits (B2)			heres on Living R	oots (C3)		ole on Aerial Imagery (C9)
Drift Depos			Presence of Red				essed Plants (D1)
	or Crust (B4)			uction in Tilled Sc	ils (C6)	Geomorphic Po	
Iron Depos	NS (BS) Visible on Aerial I	magony (P7)	Thin Muck Surfa			FAC-Neutral Te	
	egetated Concave		Gauge or Well D				
Sparsely Ve	cyclated COIICAVE	JULIACE (DO)	Other (Explain in	i kemarks)			
Field Observa	tions						
Surface Water F		es O No	Depth (inches)	:			
		es  No	$\sim$ · · · ·		·		
Water Table Pre				:1	Wet	land Hydrology Present?	Yes 💿 No 🔿
Saturation Pres (includes capilla	V (	es 💿 No	Depth (inches)	:	_		
		im gauge, m	onitoring well, aerial pho	tos, previous in	spections	s), if available:	
Remarks:							

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County: War	rren	Sa	mpling Date:	05-Dec-17
Applicant/Owner: AEP		State: OH	Sampling Po	int: w-jbl-1	20517-01
Investigator(s): _JBL, PJR	Section, Township,	, Range: S 22 T	4E I	r <u>3N</u>	
Landform (hillslope, terrace, etc.): Lowland	Local	relief (concave, convex, no	one): flat		
Slope: 0.0% / 0.0 ° Lat.: 39.417381	Long.: -84.2	269777		Datum: NAD 8	3
Soil Map Unit Name: RvB2		NWI cla	assification:	PEM1ch	
Are climatic/hydrologic conditions on the site typical for this time of year? $\gamma$	'es ● No ○ (I	[If no, explain in Remarks.)			
Are Vegetation . Soil . , or Hydrology significant	ly disturbed?	Are "Normal Circumstance	s" present?	Yes 🖲	No 🔿
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any ar	swers in Rem	narks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes () Yes () Yes ()	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bullet$ No $\bigcirc$
Remarks: adjacent to pond				

Dominant

## **VEGETATION -** Use scientific names of plants.

		— Species?		
<u>Tree Stratum</u> (Plot size: )	Absolute % Cove	e Rel.Strat.	Indicator Status	Dominance Test worksheet:
			512103	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: <u>2</u> (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL_EACW_ or EAC: 100.0% (A/B)
	0	= Total Cove	er	That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1. Salix nigra	15	✔ 100.0%	OBL	Total % Cover of: Multiply by:
2	0	0.0%		OBL species 30 x 1 =30
3.	0	0.0%		FACW species $80$ x 2 = $160$
4.	0	0.0%		FAC species $0$ $x 3 = 0$
5.	0	0.0%		FACU species $0 \times 4 = 0$
Herb Stratum (Plot size:)	15	= Total Cove	er	UPL species $0 \times 5 = 0$
1. Phalaris arundinacea	80	✔ 84.2%	FACW	Column Totals: 110 (A) 190 (B)
2. Typha angustifolia	10	10.5%	OBL	Prevalence Index = $B/A = 1.727$
3. Scirpus atrovirens	5	5.3%	OBL	Hydrophytic Vegetation Indicators:
4	0	0.0%		✓ 1 - Rapid Test for Hydrophytic Vegetation
5	0	0.0%		$\checkmark$ 2 - Dominance Test is > 50%
6	0	0.0%		✓ 2 - Dominance rest is $> 50\%$ ✓ 3 - Prevalence Index is $\leq 3.0^{1}$
7.	0	0.0%		
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	95	= Total Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0	0.0%		
1 2.	0	0.0%		Hydrophytic
۷				Vegetation Present? Yes • No ·
	0	= Total Cove	er	Present? Yes VIO
Remarks: (Include photo numbers here or on a separate she	eet.)			

	tion: (Describe to t	the depth	needed to docun	nent the ind	icator or c	onfirm the	e absence of indicators.)		
Depth	Matrix Redox Features					_			
(inches)	Color (moist)	%	Color (moist	) %	Type <sup>1</sup>	Loc <sup>2</sup>	TextureRemark		
0-11	10YR 4/2	90	7.5YR 4/	6 10 	C				
ydric Soil Ind		n, RM=Red				  rains.	د درمان PL=Pore Lining. M=Matrix. Indicators for Problematic Hydric Soils		
Thick Dark S	don (A2) (A3) ulfide (A4) yers (A5)	1)	<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> </ul>				Coast Prairie Redox (A16) Dark Surface (S7) Iron Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Lay	er (if observed):						Hydric Soil Present? Yes • No		

Wetland Hydrology Indicat	ors:					
Primary Indicators (minimum	of one is required; c	neck all that apply)		Secondary Indicators (minimum of two required)		
□       Surface Water (A1)       □       Water-Stained Leaves (B9)         ✓       High Water Table (A2)       □       Aquatic Fauna (B13)         ✓       Saturation (A3)       □       True Aquatic Plants (B14)         □       Water Marks (B1)       □       Hydrogen Sulfide Odor (C1)         □       Sediment Deposits (B2)       □       Oxidized Rhizospheres on Living Roots (C1)				Surface Soil Cracks (B6) Drainage Patterns (B10) Dry Season Water Table (C2) Crayfish Burrows (C8) Surface Visible on Assiel Imagent (C0)		
Sediment Deposits (B2)     Drift Deposits (B3)     Algal Mat or Crust (B4)     Iron Deposits (B5)     Inundation Visible on Aeri     Sparsely Vegetated Conca	5 5 ( )	Oxidized Rhizospheres o     Presence of Reduced Iro     Recent Iron Reduction ir     Thin Muck Surface (C7)     Gauge or Well Data (D9)     Other (Explain in Remark)	n (C4) n Tilled Soils (C6)	<ul> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> <li>Geomorphic Position (D2)</li> <li>FAC-Neutral Test (D5)</li> </ul>		
Field Observations:	0 0					
Surface Water Present?	Yes O No 🖲	Depth (inches):				
Water Table Present?	Yes <ul> <li>No C</li> </ul>	Depth (inches):	4	tland Hydrology Present? Yes 💿 No 🔾		
Saturation Present? (includes capillary fringe)	Yes  No C	Depth (inches):	0			
Describe Recorded Data (st	ream gauge, mor	itoring well, aerial photos, pre	evious inspectior	is), if available:		
Remarks:						

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hillsboro-Hutchings 138kV	City/County	Highland County	Sar	mpling Date	e: (	06-Dec-17
Applicant/Owner AEP		State: OH	Sampling Poi	int: <b>up</b>	l-aeh-1	20617-02
Investigator(s)JTT, AEH	_ Section, Town	nship, Range:	T	R		
Landform (hillslope, terrace, etc.) Flat		Local relief (concave, con	vex, noneflat			
Slope: 0.0% / 0.0 ° Lat.: 39.1805035	Long.:	-83.694177		Datum:	NAD 83	
Soil Map Unit Nam <u>Clermont silt loam, 0 to 1 percent slopes, (Cle1A)</u>		۲ ۲	WI classification	N/A		
Are climatic/hydrologic conditions on the site typical for this time of ye	es 🖲 No 🔿	(If no, explain in Rem	arks.)			
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly	disturbed?	Are "Normal Circum	stances" present?	Ye	es 🖲	No 🔿
Are Vegetation, Soil, or Hydrology naturally pro	oblematic?	(If needed, explain	any answers in Rei	marks.)		

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

Hydrophytic Vegetation Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲		
Hydric Soil Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲	Is the Sampled Area	Yes 🔿 No 🖲
Wetland Hydrology Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲	within a Wotland?	
Remarks:				

Dominan

downslope of raised pond. Likely receives spillover from pond thus having mixed veg and near hyrdic soils

## **VEGETATION** - Use scientific names of plants.

	Absolut	Species?	Indicato	Dominance Test workshee
Tree Stratu (Plot size:)	е	Rel Strat	r	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species
5.	0	= Total Cove	r	That Are OBL, FACW, or 50.0% (A/B)
<u>Saplina/Shrub Stratu</u> (Plot size:)				Prevalence Index workshee
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species X 1 =
3	0	0.0%		FACW species $25$ x 2 = $50$
4	0	0.0%		FAC species $20 \times 3 = 60$
5	0	0.0%		FACU species $45$ x 4 = $180$
Herb Stratu (Plot size: )	0	= Total Cove	r	UPL species $0 \times 5 = 0$
	45	42.9%	FACU	Column Totals: <u>105</u> (A) <u>305</u> (B)
1. Solidago canadensis		_		
2. Phalaris arundinacea	25	23.8%	FACW	Prevalence Index = $B/A = 2.905$
3. Scirpus atrovirens	15		OBL	Hydrophytic Vegetation Indicato
4. Poa pratensis	20	19.0%	FAC	1 - Rapid Test for Hydrophytic Vegetati
5	0	0.0%		2 - Dominance Test is > 50
6	0	0.0%		✓ 3 - Prevalence Index is $\leq 3$ . <sup>1</sup>
7.	0	0.0%	·	4 - Morphological Adaptations <sup>1</sup> (Provide
8.	0	0.0%		supporting data in Remarks or on a separate
9	0	0.0%	·	Problematic Hydrophytic Vegetation <sup>1</sup> (Expla
10	0	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology
<u>Woody Vine Stratu</u> (Plot size:	105	= Total Cove	r	must
1	0	0.0%		
2.	0	0.0%		Hydrophyti
	0	= Total Cove	r	c Vegetation Yes No •
Remarks: (Include photo numbers here or on a separate sh	eet.)			
aster spp 15%, thistle 5%	- /			

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by US Army Corps of Engineer

Depth       Matrix       Redox Features         (inches       Color (moist       %       Type       Loc2       Texture       I         0-10       10YR       4/2       100       Silt Loam       Silt Loam         0-10       10YR       4/2       100       Silt Loam       Silt Loam         0-10       10YR       4/2       100       Silt Loam       Silt Loam         0	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       Location: PL=Pore Lining.         Hydric Soil Indicators:       Sandy Gleyed Matrix (S4)         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       Sandy Redox (S5)         Black Histic (A3)       Stripped Matrix (S6)         Hydrigen Sulfide (A4)       Loamy Mucky Mineral (F1)	
Hydric Soil Indicators:       Indicators for Problematic Hydr         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Optimizing A Lenger (A5)       Loamy Mucky Mineral (F1)       Vary Shalleny Dark Surface (TE1	
Hydric Soil Indicators:       Indicators for Problematic Hydr         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Commy Mucky Mineral (F1)       Very Shalleyy Dark Surface (TE1	
Hydric Soil Indicators:       Indicators for Problematic Hydr         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Vary Shallow Dark Surface (TE1	
Hydric Soil Indicators:       Indicators for Problematic Hydr         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Other Million       Loamy Mucky Mineral (F1)       Vary Shallow Dark Surface (TE1	
Hydric Soil Indicators:       Indicators for Problematic Hydr         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Other Million       Loamy Mucky Mineral (F1)       Vary Shallow Dark Surface (TE1	
Hydric Soil Indicators:       Indicators for Problematic Hydr         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Charty Field Lewrer (AE)       Loamy Mucky Mineral (F1)       Very Shalleyr Dark Surface (TE1	
Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A1         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F1         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Very Shellew Dark Surface (TE1	
2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remark         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetat and wetland hydrology must be         Sandy Muck Mineral (S1)       Redox Depressions (F8)       Indicators of hydrophytic vegetat and wetland hydrology must be	1 ation
Restrictive Layer (if observed     Type:	No 🖲
Depth (inches):     Hydric Soil Present     Yes	

Surface Water (A1)	Secondary Indicators (minimum of two requir
	d Leaves (B9) Surface Soil Cracks (B6)
High Water Table (A2)	a (B13) Drainage Patterns (B10)
Saturation (A3)	Plants (B14) Dry Season Water Table (C2)
Water Marks (B1)	fide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhiz	ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	educed Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	rface (C7) FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	I Data (D9)
Sparsely Vegetated Concave Surface (B8 Other (Explain	n in Remarks)
Field Observations:	
Surface Water Present? Yes O No O Depth (inch	es):
Water Table Present? Yes O No O Depth (inch	
Saturation Present? Yes O No O Depth (inch	
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if available:
Remarks:	

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hillsboro-Hutchings 138kV	City/County High	hland County	S	ampling Date	e: 06-Dec-17	
Applicant/Owner AEP		State: OH	Sampling P	oint: up	ol-aeh-120617-01	
Investigator(s)JTT, AEH	Section, Township	o, Range:	Т	R 9E		
Landform (hillslope, terrace, etc.) Flat	Loca	I relief (concave, convex,	none flat			
Slope: 0.0% / 0.0 ° Lat.: 39.18169644	Long.:83.6	69674353		Datum:	NAD 83	
Soil Map Unit Nam	es (WsS1A1)	NWI	classification	NA		
Are climatic/hydrologic conditions on the site typical for this time of ye	s 🔍 No 🔾	(If no, explain in Remarks	5.)			
Are Vegetation . , Soil , or Hydrology significantly	disturbed?	Are "Normal Circumstan	ces" present	? Y	es 💿 No 🔾	
Are Vegetation, Soil, or Hydrology naturally pro	oblematic?	(If needed, explain any	answers in R	Remarks.)		

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

Hydrophytic Vegetation Present?	Yes ○	No ()	Is the Sampled	Yes $\bigcirc$ No $\odot$
Hydric Soil Present?	Yes ○	No ()	Area	
Wetland Hydrology Present?	Yes ○	No ()	within a Wotland?	
Remarks:				

## **VEGETATION** - Use scientific names of plants.

Dominan	

	Absolut	Species?	Indicato	Dominance Test workshee
Tree Stratu (Plot size:)	е	Rel Strat	r	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:(B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL, FACW, or0.0% (A/B)
	0	= Total Cover	r	
<u>Sapling/Shrub Stratu</u> (Plot size:)				Prevalence Index workshee
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species $0 \times 1 = 0$
3	0	0.0%		FACW species x 2 =
4	0	0.0%		FAC species $0 \times 3 = 0$
5	0	0.0%		FACU species $35$ x 4 = 140
Herb Stratu (Plot size: 30 )	0	= Total Cover		UPL species $0 \times 5 = 0$
1. Solidago canadensis	20	57.1%	FACU	Column Totals: <u>35</u> (A) <u>140</u> (B)
2. Plantago lanceolata	10	28.6%	FACU	Prevalence Index = $B/A = 4.000$
3 Schizachyrium scoparium	5	14.3%	FACU	
4	0	0.0%		Hydrophytic Vegetation Indicato
5	0	0.0%		1 - Rapid Test for Hydrophytic Vegetati
ð:	0	0.0%		2 - Dominance Test is > 50
0.	0	0.0%		$\square$ 3 - Prevalence Index is ≤3. <sup>1</sup>
1.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide
8.	0	0.0%		supporting data in Remarks or on a separate
9.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Expla
10	35	= Total Cover	-	<sup>1</sup> . Indicators of hydric soil and wetland hydrology
<u>Woody Vine Stratu</u> (Plot size:)	-	_		must
1	0	0.0%		
2	0	0.0%		Hydrophyti c
	0	= Total Cover	-	Vegetation Yes No 💿
Remarks: (Include photo numbers here or on a separate sh	oot)			
	eet.)			
aster spp 15%, fescue spp 35%, poa spp 35%				

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by US Army Corps of Engineer

\_\_\_\_\_

U	р	land	02
_	- ·		

Profile Desci	iption: (Describe)	io ine aepth	needed to docum	ent the inc	licator or c	unfirm th	e absence of indic	
Depth	h <u>Matrix Redox Features</u>				_			
(inches	Color (moist	%	Color (moist	%	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 5/2	85	5YR 5/8	15	C	M	Silty Clay Loam	
Type: C=Con Hydric Soil I	centration, D=Deple	tion, RM=Red	uced Matrix, CS=Co	vered or Coa	ated Sand Gr	ains.	Location: PL=Pore Lining.	
Black Hist         Hydrogen         Stratified         2 cm Muc         Depleted         Thick Dar         Sandy Mu	bedon (A2) ic (A3) Sulfide (A4) Layers (A5)	(A11)	Sandy Red Stripped M Loamy Mu Loamy Gle Depleted M Redox Dar Depleted D	atrix (S6) cky Mineral yed Matrix (	(F1) F2) 6) (F7)		Indicators for Problem Coast Prairie Redox ( Dark Surface (S7 Iron Manganese Mas Very Shallow Dark Su Other (Explain in Rer  Indicators of hydroph and wetland hydrolo	(A1 ses (F1 urface (TF1 nark ytic vegetation
	ayer (if observed							
Type: Depth (inc	hes):						Hydric Soil Present	Yes O No 🖲
Remarks:							•	
dry soils								
HYDROLO	ΟGY							
3	rology Indicator ators (minimum of or	ne is required:	check all that apply	)			Secondary Indicato	ors (minimum of two

Wetland Hydrology Indicator							
Primary Indicators (minimum	of one is rec	quired; chec	k all that apply)		Secondary Indicators (minimum of two requir		
Surface Water (A1)			Water-Stained Leaves (B9)		Surface Soil Cracks (B6)		
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patt	erns (B10)	
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)		
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burro	ows (C8)	
Sediment Deposits (B2)			Oxidized Rhizospheres on Living	Roots (C3)	Saturation Vis	ible on Aerial Imagery (C9)	
Drift Deposits (B3)			Presence of Reduced Iron (C4)		Stunted or Str	ressed Plants (D1)	
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled S	ioils (C6)	Geomorphic P	Position (D2)	
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral T	est (D5)	
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)							
Sparsely Vegetated Conc	ave Surface (	(B8	Other (Explain in Remarks)				
Field Observations:							
Surface Water Present?	$_{ m Yes}$ $\bigcirc$	No 🖲	Depth (inches):	_			
Water Table Present?	$_{\rm Yes}$ $\bigcirc$	No 💿	Depth (inches):	_		Yes 🔿 No 🖲	
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland Hy	drology Presen	Yes 🔾 No 🖲	
Describe Recorded Data (s	tream gaug	ge, monito	ring well, aerial photos, previous ir	nspections), if ava	ailable:		
Remarks:							

## Upland 03/04

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings 138kV	City/County: H	lighland County	S	ampling Date:	07-Dec-17
Applicant/Owner: AEP		State: OH	Sampling P	oint: <b>upl-ae</b>	h-120717-04/05
Investigator(s): _JTT, AEH	Section, Townsh	nip, Range: S	T	R	
Landform (hillslope, terrace, etc.): Flat	Lo	cal relief (concave, co	onvex, none): <u>flat</u>		
Slope: 0.0% 0.0 ° Lat.: 39.19007017	Long.:83	3.7160597		Datum: NA	D 83
Soil Map Unit Name: _ Pits, quarry (Pq)			NWI classification:	NA	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 🖲 No 🔿	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology significantly	disturbed?	Are "Normal Circu	imstances" present?	Yes	● <sub>No</sub> ○
Are Vegetation, Soil, or Hydrology naturally pro	oblematic?	(If needed, expla	in any answers in Re	emarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ○ Yes ● Yes ○	No ● No ○ No ●	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $\odot$
Remarks:				

Dominant

		— Species?		
	Absolute	iten.otrat.		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)	% Cove	r Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: 1 (A)
2		0.0%		
2				Total Number of Dominant
3	0	0.0%		Species Across All Strata: 2 (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species
	0	= Total Cove		That Are OBL, FACW, or FAC:
			51	
<u>Sabling/Shrub_Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $0 x 1 = 0$
3.	0	0.0%		FACW species $45$ x 2 = 90
4.	0	0.0%		FAC species $0$ $x 3 = 0$
5.	0	0.0%		FACU species $40$ $x 4 = 160$
	0	= Total Cove		UPL species $0 \times 5 = 0$
Herb Stratum (Plot size:)				$0 \times 3 = 0$
1. Poa palustris	45	✓ 52.9%	FACW	Column Totals: <u>85</u> (A) <u>250</u> (B)
2. Schedonorus arundinaceus	40	✔ 47.1%	FACU	Prevalence Index = $B/A = 2.941$
3.	0	0.0%		
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		☐ 1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		✓ 3 - Prevalence Index is $\leq$ 3.0 <sup>1</sup>
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		$\Box$ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	85	= Total Cove		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
<u>Woody Vine Stratu</u> (Plot size:)		- 10181 0008	51	be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes O No O
Remarks: (Include photo numbers here or on a separate she	eet.)			

SOIL									Sampling F	oint: upl-aeh-120717-04/0
Profile Desci	ription: (De	scribe to t	he depth r	eeded to doc	ument t	he indi	cator or co	onfirm the	e absence of indicators.)	
Depth		Matrix			Redo	x Featu			_	
(inches)	Color (	moist)	%	Color (moi	st)	%	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-15	10YR	6/1	90	10YR	6/6	10	С	М	Silty Clay Loam	
									2	
51		=Depletion	i, RM=Redu	ced Matrix, CS=	Covered	or Coat	ed Sand Gr	ains.	Location: PL=Pore Lining.	
Hydric Soil I Histosol (				Sandy	Gleyed M	atrix (S/	1)		Indicators for Problem	natic Hydric Soils <sup>3</sup> :
`	pedon (A2)				Redox (S		+)		Coast Prairie Redox	(A16)
Black Hist					d Matrix				Dark Surface (S7)	
Hydrogen	n Sulfide (A4)				Mucky M		1)		Iron Manganese Mas	sses (F12)
Stratified	Layers (A5)				Gleyed N				Very Shallow Dark S	urface (TF12)
2 cm Muc	ck (A10)				ed Matrix		,		Other (Explain in Re	marks)
Depleted	Below Dark S	Surface (A1	1)		Dark Surf	• •	)			
Thick Dar	k Surface (A	12)		Deplete	ed Dark S	Surface (	(F7)		<sup>3</sup> Indicators of hydroph	rtic vegetation and
	uck Mineral (S			Redox	Depressio	ons (F8)			wetland hydrology	must be present,
	ky Peat or Pe								unless disturbed of	or problematic.
Restrictive L	ayer (if obs	erved):								
Туре:									Hydric Soil Present?	Yes 💿 No 🔿
Depth (inc	hes):									
IYDROLO	DGY									
Wetland Hyd	Irology Indi	cators:								
Primary Indic	ators (minimu	um of one i	s required;	check all that a	oply)				Secondary Indicate	ors (minimum of two required)
Surface V	Vater (A1)			U Wate	r-Stained	Leaves	(B9)		Surface Soil Cr	acks (B6)
_	er Table (A2)	)			tic Fauna				Drainage Patte	
Saturation					Aquatic F					ater Table (C2)
Water Ma	. ,				ogen Sulf				Crayfish Burro	
	Deposits (B2	<u>?)</u>				•	s on Living	Roots (C3)		ble on Aerial Imagery (C9)
Drift Dep							Iron (C4)			essed Plants (D1)
	or Crust (B4)	)					n in Tilled S	oils (C6)		
Iron Depo		A	(07)		Muck Sur				FAC-Neutral T	est (D5)
	on Visible on A	-	• • •		e or Well					
Sparsely	Vegetated Co	incave Surf	ace (B8)	U Other	r (Explain	i in Rem	arks)			
Field Observ	ations:		_							
Surface Water	Present?	Yes (	🔾 🛛 No 🤄	Dep	oth (inche	es):		_		
Water Table P	Present?	Yes (		Der	oth (inche					
Saturation Pro			~ ~ ~	Det				Wet	land Hydrology Present?	Yes 🔿 No 🖲

# Upland 03/04

Saturation Present?

Remarks:

(includes capillary fringe)

Yes 🔿 No 🖲

Depth (inches):

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

Wetland Hydrology Present?

## Upland 05/06

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings 138kV	City/County: Highla	and County	Sa	ampling Date:	07-Dec-17
Applicant/Owner: AEP		State: OH	Sampling Po	oint: upl-aeh-1	20717-02,03
Investigator(s): JTT, AEH	Section, Township, F	Range: S	т	R	
Landform (hillslope, terrace, etc.): Flat	Local r	elief (concave, convex,	none): flat		
Slope: 0.0% 0.0 ° Lat.: 39.1915517	Long.: -83.72	03563		Datum: NAD 8	3
Soil Map Unit Name:Pits, guarry (Pg)		NWI	classification:	NA	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s ● No ○ (If	no, explain in Remark	s.)		
Are Vegetation . , Soil , or Hydrology significantly	disturbed?	re "Normal Circumstar	nces" present?	Yes 🖲	No 🔿
Are Vegetation . , Soil , or Hydrology naturally pro	blematic? (	If needed, explain any	answers in Rei	marks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

downslope of raised pond. Likely receives spillover from pond thus having mixed veg and near hyrdic soils

Tree Stratum (Plot size: )	Absolute % Cover		Indicator Status	Dominance Test worksheet:
1	0		otatus	Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
2		0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4	0	0.0%		
5.	0	0.0%	0	Percent of dominant Species
	0	= Total Cove	er en	That Are OBL, FACW, or FAC:50.0% (A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species $15$ x 1 = $15$
3	0	0.0%		FACW species $25$ x 2 = $50$
4	0	0.0%		FAC species $35$ x 3 = $105$
5	0	0.0%		FACU species $50 \times 4 = 200$
Herb Stratum (Plot size:)	0	= Total Cove	er	UPL species $0 \times 5 = 0$
1, Solidago canadensis	45	✔ 36.0%	FACU	Column Totals: <u>125</u> (A) <u>370</u> (B)
2. Phalaris arundinacea	25	20.0%	FACW	Prevalence Index = $B/A = 2.960$
3. Poa pratensis	20	16.0%	FAC	
4. Scirpus atrovirens	15	12.0%	OBL	Hydrophytic Vegetation Indicators:
5. Symphyotrichum lanceolatum	15	12.0%	FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Cirsium arvense	5	4.0%	FACU	2 - Dominance Test is > 50%
7	0	0.0%		$\checkmark$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0	0.0%		
<u>Woody Vine Stratu</u> (Plot size:)	125	= Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes O No 💿
Remarks: (Include photo numbers here or on a separate sh	eet.)			

HYDROLOGY

Upland	05/06
--------	-------

Sampling Point: upl-aeh-120717-02.03
--------------------------------------

SOIL								Sampling Po	int: upl-aeh-120717-02.03
Profile Desc	ription: (De	scribe to t	he depth	needed to document	the ind	icator or co	onfirm the	e absence of indicators.)	
Depth         Matrix         Redox Features           (inches)         Color (moist)         %         Color (moist)         %						-			
(inches)			%	Color (moist)	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-10	10YR	4/1	100					Silt Loam	
·									
Hydric Soil	Indicators:	=Depletion	, RM=Redu	iced Matrix, CS=Covered			ains.	Accation: PL=Pore Lining. M.	
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>2 cm Muck (A10)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Muck Mineral (S1)</li> <li>5 cm Mucky Peat or Peat (S3)</li> </ul>			1)	Sandy Gleyed M     Sandy Redox (S     Stripped Matrix     Loamy Mucky M     Loamy Gleyed I     Depleted Matrix     Redox Dark Sui     Depleted Dark     Redox Depressi	65) (S6) Aineral ( Matrix (F (F3) face (F6 Surface	F1) F2) 5) (F7)		Coast Prairie Redox (A Dark Surface (S7) Iron Manganese Masso Very Shallow Dark Sur Other (Explain in Rem Indicators of hydrophyti wetland hydrology m unless disturbed or	es (F12) face (TF12) arks) ic vegetation and just be present,
Restrictive L Type: Depth (ind		erved):						Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:									

Wetland Hydrology Indica	ators:				
Primary Indicators (minimur	n of one is requ	ired; check	all that apply)		Secondary Indicators (minimum of two required)
Surface Water (A1)			Water-Stained Leaves (B9)	)	Surface Soil Cracks (B6)
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)
Water Marks (B1)			Hydrogen Sulfide Odor (C1	I)	Crayfish Burrows (C8)
Sediment Deposits (B2)			Oxidized Rhizospheres on	Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			Presence of Reduced Iron	(C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)			Recent Iron Reduction in 1	Filled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral Test (D5)
Inundation Visible on Ae	erial Imagery (B	\$7)	Gauge or Well Data (D9)		
Sparsely Vegetated Con	cave Surface (B	(8)	Other (Explain in Remarks	)	
Field Observations:					
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):		
Water Table Present?	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):		lydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland H	iydrology Present? Yes $\bigcirc$ No $ullet$
Describe Recorded Data (	stream gauge	, monitor	ing well, aerial photos, prev	ious inspections), if a	vailable:
Remarks:					
1					

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings 138kV	City/County: Highland	l County	Sampling Date: 07-Dec-17
Applicant/Owner: AEP	Sta	ite: OH Samplir	ng Point: upl-aeh-120717-01
Investigator(s): _JTT, AEH	Section, Township, Ran	nge: S T	R
Landform (hillslope, terrace, etc.): Flat	Local relie	ef (concave, convex, none):	at
Slope: 0.0% 0.0 ° Lat.: 39.19350301	Long.: -83.7246	825	Datum: NAD 83
Soil Map Unit Name:Pits, guarry (Pg)		NWI classificati	on: <u>NA</u>
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 💿 No 🔿 🤅 (If no	, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are	"Normal Circumstances" prese	nt? Yes 🖲 No 🔿
Are Vegetation . , Soil , or Hydrology naturally pro	blematic? (If r	needed, explain any answers ir	n Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ○ Yes ○ Yes ○	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $④$
Remarks: adjacent to wetland and "junk" yarc	I			

Dominant

## **VEGETATION** - Use scientific names of plants.

	Absolut		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cove	0000	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2		0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: (B)
4	0	0.0%		Percent of dominant Species
5	0	0.0%		That Are OBL, FACW, or FAC:(A/B)
	0	= Total Cove	er	
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species $0 \times 1 = 0$
3	0	0.0%		FACW species $0 \times 2 = 0$
4	0	0.0%		FAC species $0 \times 3 = 0$
5	0	0.0%		FACU species $95 \times 4 = 380$
<u>Herb Stratum</u> (Plot size:)	0	= Total Cove	er	UPL species $0   x 5 = 0$
1. Schedonorus arundinaceus	50	✔ 52.6%	FACU	Column Totals:(A)
2. Solidago canadensis	45	✔ 47.4%	FACU	Prevalence Index = $B/A = 4.000$
3	0	0.0%		
4	0	0.0%		Hydrophytic Vegetation Indicators:
5	0	0.0%		☐ 1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		$3$ - Prevalence Index is $\leq 3.0^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9	0	0.0%		
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratu (Plot size: )	95	= Total Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate sh	eet.)			

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Upland (	)7
----------	----

		Redox Featu	res			
Depth Matrix (inches) Color (moist)					Texture	Remarks
0-10 10YR 3/6	100	 	·		Silt Loam	
e: C=Concentration, D=Depletion	RM=Reduced Matrix, CS=0	Covered or Coate		ins.	Location: PL=Pore Lining. N	n=Matrix.
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A1 Thick Dark Surface (A12) Sandy Muck Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Sandy R Stripped Loamy N Loamy C Depleted Redox D Depleted	leyed Matrix (S4 edox (S5) I Matrix (S6) Aucky Mineral (F Gleyed Matrix (F3) d Matrix (F3) Dark Surface (F6) d Dark Surface ( Depressions (F8)	1) 2)		Indicators for Problem Coast Prairie Redox ( Dark Surface (S7) Iron Manganese Mass Very Shallow Dark Su Other (Explain in Ren  Indicators of hydrophy wetland hydrology r unless disturbed o	natic Hydric Soils <sup>3</sup> A16) ses (F12) Irface (TF12) narks) tic vegetation and must be present,
estrictive Layer (if observed): Type: Depth (inches):					Hydric Soil Present?	Yes 🔿 No 🖲

Wetland Hydrology Indica	tors:								
Primary Indicators (minimum	of one is re	Secondary Indicators (minimum of two required)							
Surface Water (A1)			Water-Stained Leaves (B9)		Surface Soil Cracks (B6)				
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)				
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)				
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)				
Sediment Deposits (B2)			Oxidized Rhizospheres on Living	g Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)			Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	Algal Mat or Crust (B4)			Soils (C6)	Geomorphic Position (D2)				
Iron Deposits (B5)	Iron Deposits (B5)				FAC-Neutral Test (D5)				
Inundation Visible on Ae	rial Imagery	(B7)	Gauge or Well Data (D9)	auge or Well Data (D9)					
Sparsely Vegetated Conc	ave Surface	(B8)	Other (Explain in Remarks)						
Field Observations:		0							
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):						
Water Table Present?	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):		vdrology Present? Yes 🔿 No 🖲				
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland H	ydrology Present? Yes 🔾 No 🖲				
Describe Recorded Data (s	stream gau	ge, monito	ring well, aerial photos, previous	inspections), if a	vailable:				
Remarks:									

SOIL

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hilsboro-Hutchingson	City/County: Highlan	d	Sampling Date: 12-Dec-17
Applicant/Owner: aep	St	ate: <u>OH</u> Samplin	ng Point: upl-aeh-20171212-01
Investigator(s): _aeh,pjr	Section, Township, Ra	nge: S T	R
Landform (hillslope, terrace, etc.): Mound	Local rel	ef (concave, convex, none):	at
Slope: 0.0% 0.0 ° Lat.: 39.224505512	Long.: -83.796	150848	Datum: NAD 83
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 to 2 percent slope		NWI classificat	ion: <u>N/A</u>
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s ● No ○ (If n	o, explain in Remarks.)	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly	disturbed? Are	e "Normal Circumstances" prese	ent? Yes 🖲 No 🔾
Are Vegetation , Soil , or Hydrology naturally pro	oblematic? (If	needed, explain any answers in	ו Remarks.)

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

	Yes ○ Yes ○ Yes ○	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

		- Species?	
	Absolut	nononan	Dominance Test worksheet:
_Tree Stratum (Plot size:)	% Cove	r Cover Status	Number of Dominant Species
1	0	0.0%	That are OBL, FACW, or FAC: (A)
2	0	0.0%	Tatal Number of Demission
3	0	0.0%	Total Number of Dominant Species Across All Strata: 3 (B)
4.	0	0.0%	
5.	0	0.0%	Percent of dominant Species
	0	= Total Cover	That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
<u>Sabling/Shrub Stratum (</u> Plot size:)			Prevalence Index worksheet:
1	0	0.0%	Total % Cover of: Multiply by:
2.	0	0.0%	OBL species $0   x   1 = 0$
3.	0	0.0%	FACW species $0   x 2 = 0$
4.	0	0.0%	FAC species $15 \times 3 = 45$
5	0	0.0%	FACU species $55$ x 4 = $220$
Herb Stratum (Plot size: )	0	= Total Cover	UPL species $0$ x 5 = $0$
1. Solidago canadensis	40	✓ 57.1% FACU	Column Totals: (A) (B)
2. Poa pratensis	15	✓ 21.4% FAC	Prevalence Index = $B/A = 3.786$
3. Rubus allegheniensis var. allegheniensis	15	✓ 21.4% FACU	Hydrophytic Vegetation Indicators:
4	0	0.0%	
5	0	0.0%	1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%	2 - Dominance Test is > 50%
7.	0	0.0%	<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%	data in Remarks or on a separate sheet)
10.	0	0.0%	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	70	= Total Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woodv Vine Stratu (Plot size:)			be present, unless disturbed of problematic.
1	0	0.0%	Hydrophytic
2	0	0.0%	Vegetetien
	0	= Total Cover	Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate she	eet.)		·

## SOIL

	•		he depth i				onfirm the	e absence of indicators.)	
Depth (inches)	Color (r	<u>Matrix</u> noist)	%	Color (moist)	ox Featu <u>%</u>	<u>Tvpe<sup>1</sup></u>	Loc <sup>2</sup>	Texture	Remarks
0-15	10YR	3/1	100					Silty Clay Loam	
31		=Depletior	ı, RM=Redu	ced Matrix, CS=Covere	d or Coat	ed Sand Gr		Location: PL=Pore Lining. M=	
Histosol (/ Histic Epip Black Histi Hydrogen Stratified I 2 cm Mucl Depleted I Thick Dark Sandy Mu	Hydric Soil Indicators:         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       Sandy Redox (S5)         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)         2 cm Muck (A10)       Depleted Matrix (F3)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)         Thick Dark Surface (A12)       Depleted Dark Surface (F7)         Sandy Muck Mineral (S1)       Redox Depressions (F8)				Indicators for Problema Coast Prairie Redox (A' Dark Surface (S7) Iron Manganese Masse Very Shallow Dark Surf Other (Explain in Rema <sup>3</sup> Indicators of hydrophytic wetland hydrology mu unless disturbed or	16) es (F12) face (TF12) arks) c vegetation and ust be present,			
Restrictive La	ayer (if obs	erved):							
Type: Depth (incl	nes):							Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:									

## HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one is required; chec	k all that apply)	Secondary Indicators (minimum of two required)		
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)		
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)		
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roo	ts (C3) Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)			
Field Observations:				
Surface Water Present? Yes 🔾 No 🖲	Depth (inches):			
Water Table Present? Yes O No 🖲	Depth (inches):	Wetland Hydrology Present? Yes O No 💿		
Saturation Present? Yes O No •	Depth (inches):	Wetland Hydrology Present? Yes U No O		
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous inspe	ections), if available:		
Remarks:				

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchingson	City/County:	Clinton		Sampling Date	e: 12-Dec-17
Applicant/Owner: AEP		State: Oh	Sampling	Point: Upl-	aeh-20171212-02
Investigator(s): _aeh, pjr	_ Section, Tov	vnship, Range: S	тт	R	
Landform (hillslope, terrace, etc.): Flat		Local relief (concave, conve	ex, none): flat		
Slope: 0.0% 0.0 ° Lat.: 39.238200243	Long.:	-83.834479734		Datum:	NAD 83
Soil Map Unit Name: <u>Clermont silt loam, 0 to 1 percent slopes (Cle1A)</u>		N\	VI classification	: NA	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	es 💿 No 🔿	(If no, explain in Rema	rks.)		
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly	disturbed?	Are "Normal Circumst	ances" present?	? Ye	s 💿 No 🔾
Are Vegetation, Soil, or Hydrology naturally pro	oblematic?	(If needed, explain a	ny answers in R	emarks.)	
SUMMARY OF FINDINGS Attach site man showing sa	mpling poi	nt locations transo	ete import	ant foatuu	roc oto

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

Hydrophytic Vegetation Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲		
Hydric Soil Present?	Yes 🖲	No O	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $\bigcirc$
Wetland Hydrology Present?	$_{\rm Yes}$ $\bigcirc$	No 💿		
Remarks:				

Dominant

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2		0.0%		Total Number of Dominant
3		0.0%		Species Across All Strata: <u>2</u> (B)
4		0.0%		Demonstration of classical sectors
5	0	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC:(A/B)
	0	= Total Cove	r	
<u>Saplina/Shrub Stratum (</u> Plot size:)		_		Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species $0 \times 1 = 0$
3	0	0.0%		FACW species $5$ x 2 = $10$
4	0	0.0%		FAC species $50 \times 3 = 150$
5	0	0.0%		FACU species $15$ x 4 = $60$
Herb Stratum (Plot size:)	0	= Total Cove	۱r	UPL species $0 x 5 = 0$
1, Setaria pumila	35	50.0%	FAC	Column Totals: <u>70</u> (A) <u>220</u> (B)
2. Solidago canadensis	15	21.4%	FACU	Prevalence Index = B/A = 3.143
3. Poa pratensis	10	14.3%	FAC	Hydrophytic Vegetation Indicators:
4. Echinochloa crus-galli	5	7.1%	FACW	
5. Xanthium strumarium	5	7.1%	FAC	☐ 1 - Rapid Test for Hydrophytic Vegetation
6	0	0.0%		2 - Dominance Test is > 50%
7	0	0.0%		$\square$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0	0.0%		
	70	= Total Cove	r	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes O No 🖲
Remarks: (Include photo numbers here or on a separate she	eet.)			1

SOIL

#### Sampling Point: Upl-aeh-20171212-02

Depth Matrix Redox Features									
(inches)	1		Texture	Remarks					
0-15	10YR	3/1	95	10YR 5/6	5	C	M	Silty Clay Loam	
Hydric Soil	Indicators:	=Depletior	, RM=Red	uced Matrix, CS=Cov			ains.	Location: PL=Pore Lining. I	
Hydric Soil Indicators:       Sandy Gleyed Matrix (S4)         Histosol (A1)       Sandy Redox (S5)         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)         2 cm Muck (A10)       ✓ Depleted Matrix (F3)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)         Thick Dark Surface (A12)       Depleted Dark Surface (F7)         Sandy Muck Mineral (S1)       Redox Depressions (F8)			Coast Prairie Redox ( Dark Surface (S7) Iron Manganese Mas Very Shallow Dark Si Other (Explain in Rei Indicators of hydrophy wetland hydrology unless disturbed c	urface (TF12) marks) ytic vegetation and must be present,					
Туре:	ayer (if obs							Hydric Soil Present?	Yes <ul> <li>No O</li> </ul>
Remarks:									

Wetland Hydrology Indica	itors:					
Primary Indicators (minimum	of one is rec	Secondary Indicators (minimum of two required)				
Surface Water (A1)			Water-Stained Leaves (B9)		Surface Soil Cracks (B6)	
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)	
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)	
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)	
Sediment Deposits (B2)			Oxidized Rhizospheres on L	iving Roots (C3)	Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)			Presence of Reduced Iron (	C4)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)			Recent Iron Reduction in Ti	lled Soils (C6)	Geomorphic Position (D2)	
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral Test (D5)	
Inundation Visible on Ae	rial Imagery	(B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Cond	ave Surface	(B8)	Other (Explain in Remarks)			
Field Observations:	$\sim$	$\sim$				
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):			
Water Table Present?	$_{\rm Yes}$ $\bigcirc$	No 💿	Depth (inches):		tvdroloav Present? Yes 🔿 No 🖲	
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland I	Hydrology Present? Yes $\cup$ No $ullet$	
Describe Recorded Data (	stream gaug	ge, monito	ring well, aerial photos, previo	ous inspections), if a	available:	
Remarks:						

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hilsboro-Hutchingson	City/County: Hi	ghland	Sa	ampling Date	e: 13-Dec-17
Applicant/Owner: aep		State: Oh	Sampling Po	oint: <b>upl-</b>	aeh-20171213-01
Investigator(s): aeh,pjr	Section, Townshi	p, Range: S	Γ	R	
Landform (hillslope, terrace, etc.): Flat	Loc	al relief (concave, convex,	none): flat		
Slope: 0.0% 0.0 ° Lat.: 39.242150304	Long.: -83	.845259773		Datum:	NAD 83
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 to 2 percent slope	es (WsS1A1)	NWI	classification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? $% \ensuremath{Yes}$	s 🖲 No 🔾	(If no, explain in Remarks	.)		
Are Vegetation . , Soil , or Hydrology significantly of	disturbed?	Are "Normal Circumstan	ces" present?	Yes	s 💿 No 🔿
Are Vegetation . Soil , or Hydrology naturally pro	blematic?	(If needed, explain any	answers in Rer	marks.)	

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

Hydrophytic Vegetation Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲		
Hydric Soil Present?	$_{ m Yes}$ $\bigcirc$	No 🖲	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $\bigcirc$
Wetland Hydrology Present?	$_{ m Yes}$ $\bigcirc$	No 🖲		
Remarks:				

Dominant

	Absolut	e Rel.Strat.	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		
3.	0	0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4.	0	0.0%		
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC:(A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1.	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		$\begin{array}{c c c c c c c c c c c c c c c c c c c $
2		0.0%		
<u> </u>	0	0.0%		
5.		0.0%		·
·				FACU species $100$ x 4 = $400$
Herb Stratum (Plot size:)	0	= Total Cove	er	UPL species $0 x 5 = 0$
1, Schedonorus arundinaceus	80	80.0%	FACU	Column Totals: <u>100</u> (A) <u>400</u> (B)
2. Solidago canadensis	20	20.0%	FACU	Prevalence Index = $B/A = 4.000$
3	0	0.0%		
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100	= Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
<u>Woodv Vine Stratu</u> (Plot size:)				be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic Vegetation
	0	= Total Cove	er	Present? Yes No •
Remarks: (Include photo numbers here or on a separate sh	eet.)			1

## SOIL

Profile Description: (Des				onfirm the	e absence of indicators.)	
Depth (inches) <u>Color (m</u>	Matrix noist) <u>%</u>	Color (moist)	x Features <u>%</u> <u>Tvpe</u> <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-15 10YR	3/2				Silty Clay Loam	
<sup>1</sup> Type: C=Concentration, D= Hydric Soil Indicators:	Depletion, RM=Red	uced Matrix, CS=Covered	or Coated Sand Gr	ains.	Aocation: PL=Pore Lining. M=	
Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Su Thick Dark Surface (A12 Sandy Muck Mineral (S1 5 cm Mucky Peat or Pea	2)	Sandy Gleyed M         Sandy Redox (S         Stripped Matrix         Loamy Mucky M         Loamy Gleyed N         Depleted Matrix         Redox Dark Surt         Depleted Dark S         Redox Depression	5) (S6) lineral (F1) Aatrix (F2) (F3) face (F6) Surface (F7)		Indicators for Problema Coast Prairie Redox (A' Dark Surface (S7) Iron Manganese Masse Very Shallow Dark Surf Other (Explain in Rema Indicators of hydrophytic wetland hydrology mu unless disturbed or p	16) face (F12) face (TF12) arks) c vegetation and ust be present,
Restrictive Layer (if obse	rved):					
Type: Depth (inches):					Hydric Soil Present?	res 🔿 No 🖲
Remarks:						

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; che	ck all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roc	ts (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	
Field Observations:		
Surface Water Present? Yes O No 🖲	Depth (inches):	
Water Table Present? Yes O No 🖲	Depth (inches):	Wetland Hydrology Present? Yes 🔿 No 🖲
Saturation Present? Yes O No	Depth (inches):	Wetland Hydrology Present? Yes 🔾 No 🔍
Describe Recorded Data (stream gauge, monito	pring well, aerial photos, previous insp	ections), if available:
Remarks:		

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:Hilsboro-Hutchingson	City/County:	Clinton	S	ampling Dat	e: 13-I	Dec-17
Applicant/Owner: aep		State: Oh	Sampling P	oint: <b>upl</b>	-aeh-2017	1213-02
Investigator(s): _aeh,pjr	_ Section, Town	nship, Range: S	т	R		
Landform (hillslope, terrace, etc.): Hillside		Local relief (concave, convex	, none): flat			
Slope: 0.0% 0.0 ° Lat.: 39.253066	Long.:	-83.872136		Datum:	NAD 83	
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 to 2 percent slope	es (WsS1A1)	NW	I classification:	N/A		
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 🖲 No 🔿	(If no, explain in Remark	(S.)			
Are Vegetation . , Soil , or Hydrology significantly	disturbed?	Are "Normal Circumsta	nces" present?	Ye	es 💿 No	$\bigcirc$
Are Vegetation . Soil , or Hydrology naturally pro	oblematic?	(If needed, explain any	y answers in Re	emarks.)		

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

Hydrophytic Vegetation Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲		
Hydric Soil Present?	$_{ m Yes}$ $\bigcirc$	No 🖲	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $\bigcirc$
Wetland Hydrology Present?	$_{ m Yes}$ $\bigcirc$	No 🖲		
Remarks:				

Dominant

		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4	0	0.0%		
5.	0	0.0%	0	Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: )				Prevalence Index worksheet:
1. Rubus allegheniensis	15	✓ 100.0%	FACU	Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $20$ x 1 = $20$
3.	0	0.0%		FACW species $5$ x 2 = $10$
4.	0	0.0%		FAC species $0 \times 3 = 0$
5.	0	0.0%		FACU species $55$ x 4 = $220$
(District)	15	= Total Cov	er	UPL species $0 \times 5 = 0$
Herb Stratum (Plot size:)				
1, Solidago canadensis	30	46.2%	FACU	Column Totals: <u>80</u> (A) <u>250</u> (B)
2. Bromus inermis	10	15.4%	FACU	Prevalence Index = $B/A = 3.125$
3. Juncus effusus	10	✓ 15.4%	OBL	Hydrophytic Vegetation Indicators:
4. Carex frankii	5	7.7%	OBL	□ 1 - Rapid Test for Hydrophytic Vegetation
5. Phalaris arundinacea	5	7.7%	FACW	2 - Dominance Test is > 50%
6. Lysimachia terrestris	5	7.7%	OBL	
7	0	0.0%		3 - Prevalence Index is ≤3.0 <sup>1</sup>
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0	0.0%		
Woody Vine Stratu (Plot size: )	65	= Total Cov	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u> </u>	0	0.0%		
2	0	0.0%		Hydrophytic
	0	= Total Cov		Vegetation Present? Yes O No •
		- 10(01000		
Remarks: (Include photo numbers here or on a separate she	eet )			
teasel 10				

#### Sampling Point: \_upl-aeh-20171213-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicator of confirm the absence of indicator of the depth indicator of confirm the absence of indicator of the depth indicator of confirm the absence of indicator of the depth indicator of confirm the absence of indicator of the depth indicator of confirm the absence of indicator of the depth indicator of confirm the absence of indicator of the depth indicator of confirm the absence of indicator of the depth indicator of th	
	5
<u>(inches)</u> <u>Color (moist)</u> <u>%</u> <u>Color (moist)</u> <u>%</u> <u>Loc</u> <sup>2</sup> <u>Texture</u>	
	Remarks
0-13         10YR         3/2         Silty Clay Loam	
Hydric Soil Indicators: Indicators fo	re Lining. M=Matrix. or Problematic Hydric Soils <sup>3</sup> : rie Redox (A16)
Black Histic (A3)       Dark Surfa         Hydrogen Sulfide (A4)       Stripped Matrix (S6)       Iron Mange         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Very Shalle         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Exp         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Other (Exp	ice (S7) anese Masses (F12) ow Dark Surface (TF12) olain in Remarks)
Sandy Muck Mineral (S1) Redox Depressions (F8) wetland H	f hydrophytic vegetation and hydrology must be present, disturbed or problematic.
Restrictive Layer (if observed):	
Type: Depth (inches): Hydric Soil Pre	esent? Yes 🔿 No 🖲
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check	all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	
Field Observations:		
Surface Water Present? Yes 🔿 No 💿	Depth (inches):	
Water Table Present? Yes O No 🖲	Depth (inches):	and Hydrology Present? Yes $\bigcirc$ No $\odot$
Saturation Present? (includes capillary fringe) Yes O No •	Depth (inches):	and Hydrology Present? Yes $\cup$ No $ullet$
Describe Recorded Data (stream gauge, monitori	ing well, aerial photos, previous inspections)	, if available:
Remarks:		

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hilsboro-Hutchingson City/County:	Clinton Sampling Date: 13-Dec	-17
Applicant/Owner: aep	State: Oh Sampling Point: upl-aeh-201712	13-03
Investigator(s): _aeh,pjr Section, To	ownship, Range: S T R	
Landform (hillslope, terrace, etc.): Flat	Local relief (concave, convex, none): flat	
Slope: 0.0% 0.0 ° Lat.: 39.2696439 Long.	.: -83.9116701 Datum: NAD 83	
Soil Map Unit Name: SmA	NWI classification: N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes $\odot$ No $\subset$	) (If no, explain in Remarks.)	
Are Vegetation . Soil , or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes $ullet$ No $igodot$	
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? Hydric Soil Present? Wetland Hydrology Present?	Yes ○ Yes ● Yes ○	No • No · No •	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

	Absolute			Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 2 (B)
4	0	0.0%		
5	0	0.0%	0	Percent of dominant Species That Are OBL_EACW_ or EAC: 0.0% (A/B)
	0	= Total Cove	er	That Are OBL, FACW, or FAC:(A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species 0 x 1 = 0
3.	0	0.0%		FACW species $0$ x 2 = $0$
4.	0	0.0%		FAC species $10$ x 3 = $30$
5.	0	0.0%		FACU species 70 $x 4 = 280$
Herb Stratum (Plot size: )	0	= Total Cove	er	UPL species $0$ x 5 = $0$
1. Symphyotrichum ericoides	25	31.3%	FACU	Column Totals: 80 (A) 310 (B)
2. Setaria faberi	20	25.0%	FACU	
3. Solidago canadensis	15	18.8%	FACU	Prevalence Index = B/A = <u>3.875</u>
4. Schedonorus arundinaceus	10	12.5%	FACU	Hydrophytic Vegetation Indicators:
	10	12.5%	FAC	1 - Rapid Test for Hydrophytic Vegetation
6	0	0.0%	TAC	2 - Dominance Test is > 50%
7		0.0%	·	$\bigcirc$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0	0.0%		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
<u>Woodv Vine Stratu</u> (Plot size:)	80	= Total Cove	er	be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes No 💿
				<u> </u>
Remarks: (Include photo numbers here or on a separate she	eet.)			
bluestem 10				

SOIL								Sampling	Point: upl-aeh-20171213-03		
Profile Desc	ription: (De	scribe to t	he depth	needed to doc	ument the in	dicator or c	onfirm the	e absence of indicators.)			
Depth	Depth Matrix Redox Features						_				
(inches)	Color (		%	Color (moi		Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-15	10YR	3/1	95	10YR	4/6 5						
				· ·							
<sup>1</sup> Type: C=Cor	centration, D	=Depletior	, RM=Redu	uced Matrix, CS=	Covered or Co	ated Sand G	ains.	Location: PL=Pore Lining.	M=Matrix.		
Hydric Soil	Indicators:							Indicators for Proble	matic Hydric Soils <sup>3</sup> :		
Histosol (					Gleyed Matrix	(S4)		Coast Prairie Redox (A16)			
Black His	pedon (A2)				Redox (S5)						
	n Sulfide (A4)				d Matrix (S6)			Iron Manganese Ma	sses (F12)		
	Layers (A5)				Mucky Minera			Very Shallow Dark S			
2 cm Mu	3				Gleyed Matrix	(F2)		Other (Explain in Remarks)			
	Below Dark S	Surface (A1	1)		d Matrix (F3)						
	rk Surface (A	•	.,		Dark Surface (	-		2			
	uck Mineral (S				d Dark Surfac			<sup>3</sup> Indicators of hydrophytic vegetation and			
	cky Peat or Pe			Redox	Depressions (F	-8)		wetland hydrology must be present, unless disturbed or problematic.			
Restrictive L	ayer (if obs	erved):									
Туре:											
Depth (inc	ches):							Hydric Soil Present?	Yes 🔍 No 🔾		
Remarks:											

## HYDROLOGY

Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is required; check	< all that apply)	Secondary Indicators (minimum of two required)						
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)						
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)						
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)						
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)						
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C	C3) Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)						
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)						
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)							
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)							
Field Observations:								
Surface Water Present? Yes $\bigcirc$ No $oldsymbol{igstar}$	Depth (inches):							
Water Table Present? Yes $\bigcirc$ No $oldsymbol{igstar}$	Depth (inches):	/etland Hydrology Present? Yes 🔿 No 🖲						
Saturation Present? Yes O No •	Depth (inches):	letland Hydrology Present? Yes 🔾 No 🔍						
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous inspection	ons), if available:						
Remarks:								

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: AEP hillsboro-hutchingson C	ity/County: Clinton	Samp	oling Date: 13-Dec-17
Applicant/Owner: AEP	State: OH	Sampling Point	upl-aeh-20171213-04
Investigator(s): _aeh, pjr	Section, Township, Range: S	T R	
Landform (hillslope, terrace, etc.): Mound	Local relief (concave,	, convex, none): flat	
Slope: 0.0% 0.0 ° Lat.: 39.2818285	Long.: -83.9338986	D	atum: NAD 83
Soil Map Unit Name: Cle1A1		NWI classification: N	Α
Are climatic/hydrologic conditions on the site typical for this time of year? $% \ensuremath{Yes}$	No     (If no, explain in	Remarks.)	
Are Vegetation . Soil , or Hydrology significantly d	isturbed? Are "Normal Ci	rcumstances" present?	Yes 💿 No 🔿
Are Vegetation , Soil , or Hydrology naturally prob	lematic? (If needed, exp	plain any answers in Remai	rks.)

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

Hydrophytic Vegetation Present?	Yes O	No 🖲			
Hydric Soil Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲	
Wetland Hydrology Present?	$_{\rm Yes}$ $\bigcirc$	No 💿			
Remarks:					

Dominant

## **VEGETATION -** Use scientific names of plants.

	Absolute	nononan	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cove		Number of Dominant Species
1	0	0.0%	That are OBL, FACW, or FAC: 0 (A)
2	0	0.0%	Total Number of Dominant
3	0	0.0%	Species Across All Strata: (B)
4	0	0.0%	
5	0	0.0%	Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
	0	= Total Cover	That are OBL, FACW, OF FAC:
_Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1	0	0.0%	Total % Cover of: Multiply by:
2	0	0.0%	OBL species x 1 =
3	0	0.0%	FACW species $0 \times 2 = 0$
4	0	0.0%	FAC species $0 \times 3 = 0$
5	0	0.0%	FACU species $85$ x 4 = $340$
Herb Stratum (Plot size:)	0	= Total Cover	UPL species $0$ $x 5 = 0$
1. Solidago canadensis	65	✓ 76.5% FACU	Column Totals: <u>85</u> (A) <u>340</u> (B)
2. Schedonorus arundinaceus	20	✓ 23.5% FACU	Prevalence Index = $B/A = 4.000$
3	0	0.0%	
4.	0	0.0%	Hydrophytic Vegetation Indicators:
5.	0	0.0%	1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%	2 - Dominance Test is > 50%
7.	0	0.0%	<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9	0	0.0%	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0	0.0%	
Woody Vine Stratu (Plot size: )	85	= Total Cover	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0	0.0%	
1 2.			Hydrophytic
۷	0	0.0%	Vegetation
	0	= Total Cover	Present? Yes V No 🛡
Remarks: (Include photo numbers here or on a separate sh	eet.)		

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

## Sampling Point: upl-aeh-20171213-04

Secondary Indicators (minimum of two required)

Saturation Visible on Aerial Imagery (C9)
 Stunted or Stressed Plants (D1)

Surface Soil Cracks (B6)

Drainage Patterns (B10)Dry Season Water Table (C2)

Crayfish Burrows (C8)

Geomorphic Position (D2) FAC-Neutral Test (D5)

Depth	epth Matrix Redox Features							_	
(inches)	Color (			Loc <sup>2</sup>	Texture	Remarks			
0-12	10YR	3/2	95	10YR 5/	8 <u>5</u> 	C	M	Silty Clay	
51			ı, RM=Redi	uced Matrix, CS=Co	wered or Coa	ted Sand Gr	ains.	Accation: PL=Pore Lining. N	
Black Hist Hydroger Stratified 2 cm Muc Depleted Thick Dar Sandy Mu	pipedon (A2) Sandy Redox (S5)				Coast Prairie Redox ( Dark Surface (S7) Iron Manganese Mas Very Shallow Dark Su Other (Explain in Ref Indicators of hydrophy wetland hydrology unless disturbed of	(A16) ses (F12) urface (TF12) marks) /tic vegetation and must be present,			
Restrictive L Type: Depth (inc	ayer (if obs							Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:								• 	

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; c	heck all that apply)
Surface Water (A1)	Water-Stained Leaves (B9)
High Water Table (A2)	Aquatic Fauna (B13)
Saturation (A3)	True Aquatic Plants (B14)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)	Presence of Reduced Iron (C4)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)
Iron Deposits (B5)	Thin Muck Surface (C7)
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)

Initial control visible on Aerial Inflagery (67)       Gauge or Weil Data (09)         Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)							
Field Observations:							
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):				
Water Table Present?	$_{\rm Yes}$ $\bigcirc$	No 💿	Depth (inches):		× 0 • 0		
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland Hydrology Present?	Yes 🔾 No 🖲		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: AEP hillsboro-hutchingson	City/County:	Clinton	Sa	ampling Dat	te: <u>13-E</u>	Dec-17
Applicant/Owner: AEP		State: OH	Sampling P	oint: <b>upl</b>	-aeh-2017	1213-05
Investigator(s): _aeh, pjr	Section, Tow	vnship, Range: S	r	R		
Landform (hillslope, terrace, etc.): Shoulder slope		Local relief (concave, convex,	none): none	2		
Slope: 0.0% 0.0 ° Lat.: 39.2959397	Long.:	-83.958088		Datum:	NAD 83	
Soil Map Unit Name: Ws1A1		NWI	classification:	NA		
Are climatic/hydrologic conditions on the site typical for this time of year? Ye	es 💿 No 🔿	(If no, explain in Remarks	.)			
Are Vegetation . , Soil , or Hydrology significantly	y disturbed?	Are "Normal Circumstan	ces" present?	Ye	es 💿 No	$\bigcirc$
Are Vegetation, Soil, or Hydrology naturally pro-	oblematic?	(If needed, explain any	answers in Re	marks.)		

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

Hydrophytic Vegetation Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲			
Hydric Soil Present?	Yes 🖲	No O	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $\bigcirc$	
Wetland Hydrology Present?	$_{\rm Yes}$ $\bigcirc$	No 💿			
Remarks:					

Dominant

	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:(B)
4	0	0.0%		
5	0	0.0%	0	Percent of dominant Species That Are OBL, FACW, or FAC:50.0% (A/B)
	0	= Total Cove	er	That are OBL, FACW, OF FAC:
<u>_Saplina/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $0   x   1 = 0$
3.	0	0.0%		FACW species $0   x 2 = 0$
4.	0	0.0%		FAC species $50 \times 3 = 150$
5.	0	0.0%		FACU species $5$ x 4 = $20$
Herb Stratum (Plot size: )	0	= Total Cove	er	UPL species $40$ x 5 = $200$
1, Glycine max	40	42.1%	UPL	Column Totals: 95 (A) 370 (B)
2. Setaria pumila	35	36.8%	FAC	
3. Xanthium strumarium	15	15.8%	FAC	Prevalence Index = B/A = <u>3.895</u>
4. Solidago canadensis	5	5.3%	FACU	Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7	0	0.0%		□ 3 - Prevalence Index is $\leq$ 3.0 <sup>1</sup>
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	95	= Total Cove		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woodv Vine Stratu (Plot size:)	90		:1	be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate she	eet.)			1

## Sampling Point: upl-aeh-20171213-05

SOIL								Sampling P	oint: upl-aeh-20171213-05	
Profile Desc	ription: (De	scribe to t	he depth	needed to docu	ment the ind	dicator or c	onfirm the	e absence of indicators.)		
Depth	Depth <u>Matrix Re</u>		Redox Fea			_				
(inches)	Color (	moist)	%	Color (mois	st) <u>%</u>	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-13	10YR	4/1	95	10YR	5/8 5	C	Μ	Clay Loam		
								_		
	-									
<sup>1</sup> Type: C=Cor	centration, D	-Depletion	n, RM=Redu	iced Matrix, CS=	Covered or Co	ated Sand G	ains.	Location: PL=Pore Lining.	M=Matrix.	
Hydric Soil	Indicators:							Indicators for Problen	natic Hydric Soils <sup>3</sup> :	
Histosol (	(A1)			Sandy C	leyed Matrix (	S4)			5	
· · ·	pedon (A2)			🗌 Sandy F	edox (S5)			Coast Prairie Redox (A16)		
Black His				Stripped	Matrix (S6)			Iron Manganese Mas	ses (F12)	
	n Sulfide (A4) Layers (A5)			Loamy I	/lucky Mineral	(F1)		Very Shallow Dark Su		
2 cm Mu	•			Loamy (	Gleyed Matrix	(F2)			. ,	
	Below Dark S	Curfage (A1	1)	🖌 Deplete	d Matrix (F3)			Other (Explain in Rer	narks)	
	k Surface (A	•	1)	Redox [	ark Surface (F	6)				
	uck Mineral (S	,		Deplete	d Dark Surface	e (F7)		<sup>3</sup> Indicators of hydrophy	tic vegetation and	
	cky Peat or Pe			Redox [	epressions (F	B)		wetland hydrology unless disturbed o		
Restrictive L									problematic.	
Type:		civeu).								
Depth (inc	hes):							Hydric Soil Present?	Yes 💿 No 🔾	
Remarks:										
Romanto.										

## HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one is required; check	ck all that apply)	Secondary Indicators (minimum of two required)		
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)		
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)		
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roo	ts (C3) Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils	(C6) Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)			
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)			
Field Observations:				
Surface Water Present? Yes O No 💿	Depth (inches):			
Water Table Present? Yes O No 🖲	Depth (inches):	Wetland Hydrology Present? Yes 🔿 No 🖲		
Saturation Present? Yes No	Depth (inches):	Wetland Hydrology Present? Yes 🔾 No 🔍		
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspe	ections), if available:		
Remarks:				

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings Ci	ity/County:	Warren		Sampling Da	ite: 14-Dec-17
Applicant/Owner: AEP		State: OH	Sampling	Point: <b>u</b>	pl-jbl-121417-02
Investigator(s): _JBL,JTT	Section, Towr	nship, Range: S 0	т_0	R 0	
Landform (hillslope, terrace, etc.): Hillside		Local relief (concave,	, convex, none): rolli	ng	
Slope: 0.0% / 0.0 ° Lat.: 39.318819	Long.:	-83.9927		Datum:	NAD 83
Soil Map Unit Name: JoR1B1			NWI classification:	: <u>N/A</u>	
Are climatic/hydrologic conditions on the site typical for this time of year? $% {\mbox{\sc Yes}}$	● No ○	(If no, explain in	Remarks.)		
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly dis	isturbed?	Are "Normal Ci	rcumstances" present?	γ Y	es 🔍 No 🔾
Are Vegetation , Soil , or Hydrology naturally probl	lematic?	(If needed, exp	plain any answers in R	emarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ○ Yes ○ Yes ○	No	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

## **VEGETATION -** Use scientific names of plants.

		— Species? -		-
_Tree Stratum_(Plot size: )	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:O(A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 3 (B)
4.	0	0.0%		
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove	r	That Are OBL, FACW, or FAC:0.0% (A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species 0 x 1 = 0
3.	0	0.0%		FACW species $0$ x 2 = $0$
4.	0	0.0%		FAC species $0 \times 3 = 0$
5.	0	0.0%		FACU species $90$ x 4 = $360$
Herb Stratum (Plot size:)	0	= Total Cove	r	UPL species $0 \times 5 = 0$
1. Conyza canadensis	30	33.3%	FACU	Column Totals: (A) (B)
2. Festuca arundinacea	25	27.8%	FACU	Prevalence Index = $B/A = 4.000$
3. Cirsium arvense	25	27.8%	FACU	
4. Solidago altissima	10	11.1%	FACU	Hydrophytic Vegetation Indicators:
5.	0	0.0%	-	1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woodv Vine Stratum (Plot size: )	90	= Total Cove	r	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
	0	= Total Cove	r	Vegetation Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate she	eet.)			1

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL								Samplir	ng Point: <b>_upl-ibl-121417-02</b>
Profile Descrip	ption: (Describe to th	e depth n	eeded to document	t the indicat	or or co	nfirm the	absence of	indicators.)	)
Depth	Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	<u>%</u> 1	Type <sup>1</sup>	Loc <sup>2</sup>	Тех	ture	Remarks
0-11	10YR 3/3	100					Loam		
				- <u>-</u> -			-		
				· · · · · · · · · · · · · · · · · · ·			-		
	entration, D=Depletion,	RM=Reduc	ed Matrix, CS=Covere	ed or Coated	Sand Gra	ins.	4 ocation: I	L=Pore Linir	g. M=Matrix.
lydric Soil In							Indicat	ors for Prob	lematic Hydric Soils <sup>3</sup> :
Histosol (A			Sandy Gleyed				Coas	t Prairie Red	ox (A16)
Histic Epipe Black Histic			Sandy Redox				Dark	Surface (S7)	)
Black Histic	• •		Stripped Matri				Iron	Manganese I	Masses (F12)
Stratified La			Loamy Mucky				Very	Shallow Dar	k Surface (TF12)
2 cm Muck	5		Loamy Gleyed					r (Explain in	
-	elow Dark Surface (A11)	)	Depleted Matr						(ionalio)
- '	Surface (A12)	/	Redox Dark S				2		
	Sandy Muck Mineral (S1)					<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy Muc	k Mineral (S1)		·		)		<sup>3</sup> Indica	tors of hydro	pphytic vegetation and
_ ´			Depleted Dark     Redox Depres		)		WE	tland hydrolo	ophytic vegetation and ogy must be present, ed or problematic.
5 cm Mucky	y Peat or Peat (S3)		·		)		WE	tland hydrolo	ogy must be present,
5 cm Muck			·		)		WE	tland hydrolo	ogy must be present,
5 cm Mucky estrictive Lay Type:	y Peat or Peat (S3) yer (if observed):		·		)		we u	tland hydrolo	agy must be present, ad or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche	y Peat or Peat (S3) yer (if observed):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche	y Peat or Peat (S3) yer (if observed):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche	y Peat or Peat (S3) yer (if observed):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche	y Peat or Peat (S3) yer (if observed):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche	y Peat or Peat (S3) yer (if observed):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (incho emarks:	y Peat or Peat (S3) yer (if observed): es):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (incho Remarks:	y Peat or Peat (S3) yer (if observed): es):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche Remarks: YDROLOO	y Peat or Peat (S3) yer (if observed): es):		·		)		we u	tland hydrolo nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (incho Remarks: YDROLOO	y Peat or Peat (S3) yer (if observed): es): GY	required; c	Redox Depres		)		We U	tland hydrold nless disturbe	gy must be present, ed or problematic.
5 cm Mucky estrictive Lay Type: Depth (inche emarks: YDROLOO	y Peat or Peat (S3) yer (if observed): es): es): es): ology Indicators: rors (minimum of one is	required; c	heck all that apply)				We U	tland hydrolo nless disturbe nil Present?	ygy must be present, ed or problematic. Yes No •
	y Peat or Peat (S3) yer (if observed): es): es): es): ology Indicators: rors (minimum of one is	required; c	heck all that apply)	ed Leaves (B			We U	tland hydrold nless disturbe nil Present? condary Indi Surface Soi	y must be present, ed or problematic. Yes No O
	y Peat or Peat (S3) yer (if observed): es):	required; c		ed Leaves (B	9)		We U	tland hydrold nless disturbe il Present? condary Indi Surface Soi Drainage P.	ygy must be present, ed or problematic. Yes No O cators (minimum of two required) I Cracks (B6)
	y Peat or Peat (S3) yer (if observed): es): es): es): ology Indicators: cors (minimum of one is ater (A1) r Table (A2) (A3)	required; c		ed Leaves (B4	9)		We U	tland hydrold nless disturbe il Present? condary Indi Surface Soi Drainage P.	yey must be present, ed or problematic. Yes No cators (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2)
	y Peat or Peat (S3) yer (if observed): es): es): es): ology Indicators: cors (minimum of one is ater (A1) r Table (A2) (A3)	required; c		ed Leaves (B4) na (B13) c Plants (B14)	9)		We U	tland hydrold less disturbe iil Present? condary Indi Surface Soi Drainage P. Dry Season Crayfish Bu	yey must be present, ed or problematic. Yes No cators (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2)
	y Peat or Peat (S3) yer (if observed): es): es): es): GY ology Indicators: cors (minimum of one is ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2)	required; c		ed Leaves (BG na (B13) c Plants (B14) ulfide Odor (C	9) ) C1) 1 Living R		We U	tland hydrold less disturbe iil Present? condary Indi Surface Soi Drainage P. Dry Season Crayfish Bu Saturation	yey must be present, ed or problematic. Yes No • Cators (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
	y Peat or Peat (S3) yer (if observed): es): es): es): GY ology Indicators: cors (minimum of one is ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2)	required; c		ed Leaves (B4 na (B13) c Plants (B14) ulfide Odor (C izospheres or	9) ) C1) n Living R n (C4)	. ,	We U	condary Indi Surface Soi Drainage P Dry Season Crayfish Bu Saturation ` Stunted or	yey must be present, ad or problematic. Yes No • cators (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) Visible on Aerial Imagery (C9)
	y Peat or Peat (S3) yer (if observed): es): es): GY ology Indicators: tors (minimum of one is ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)	required; c		ed Leaves (B4 na (B13) c Plants (B14) ulfide Odor (C izospheres or Reduced Iror Reduction in	9) ) C1) n Living R n (C4)	. ,	We U	condary Indi Surface Soi Drainage P Dry Season Crayfish Bu Saturation ` Stunted or	yey must be present, ed or problematic. Yes No Cators (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
	y Peat or Peat (S3) yer (if observed): es): es): GY ology Indicators: tors (minimum of one is ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)			ed Leaves (B4 na (B13) c Plants (B14) ulfide Odor (C izospheres or Reduced Iror Reduction in	9) ) C1) n Living R n (C4) Tilled So	. ,	We U	tland hydrold ness disturbo nil Present? Drainage P. Dry Season Crayfish Bu Saturation ' Stunted or Geomorphi	yey must be present, ed or problematic. Yes No Cators (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)

Field Observations:

Water Table Present?

Saturation Present?

Remarks:

Surface Water Present?

(includes capillary fringe)

Yes O No 🖲

Yes O No 🖲

Yes O No 💿

Depth (inches):

Depth (inches):

Depth (inches):

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

Yes 🔿 No 🖲

Wetland Hydrology Present?

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings City/Cou	nty: Warren	Sampling Date: 14-Dec-17
Applicant/Owner: AEP	State: OH Sam	pling Point: upl-jbl-121417-01
Investigator(s): JBL,JTT Section	, Township, Range: S 0 T 0	R 0
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none):	none
Slope: 0.0% / 0.0 ° Lat.: 39.327205	ng.:84.006869	Datum: NAD 83
Soil Map Unit Name: HiD2	NWI classific	ation: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes $\odot$ N	) (If no, explain in Remarks.)	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly disturbed	? Are "Normal Circumstances" pre	esent? Yes 💿 No 🔿
Are Vegetation . , Soil , or Hydrology naturally problemation	(If needed, explain any answer	s in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $ullet$
Remarks:				

Dominant

## **VEGETATION -** Use scientific names of plants.

		— Si	pecies?		
_Tree Stratum_(Plot size: )	Absolute % Cove	∍ Re	el.Strat. Cover	Indicator Status	Dominance Test worksheet:
				Status	Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: (A)
2	0		0.0%		Total Number of Dominant
3	0	$\Box$	0.0%		Species Across All Strata: 1 (B)
4	0		0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL_EACW_or EAC·0.0% (A/B)
	0	= 1	Total Cove	er	That Are OBL, FACW, or FAC: (A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)					Prevalence Index worksheet:
1	0		0.0%		Total % Cover of: Multiply by:
2	0		0.0%		OBL species x 1 =
3	0		0.0%		FACW species $25$ x 2 = $50$
4	0		0.0%		FAC species $0 \times 3 = 0$
5.	0		0.0%		FACU species $75$ x 4 = $300$
Herb Stratum (Plot size:)	0	= 1	Total Cove	er	UPL species $0 \times 5 = 0$
1, Festuca arundinacea	60		60.0%	FACU	Column Totals: <u>100</u> (A) <u>350</u> (B)
2. Solidago gigantea	15		15.0%	FACW	Prevalence Index = $B/A = 3.500$
3. Symphyotrichum ericoides	15		15.0%	FACU	Hydrophytic Vegetation Indicators:
4. Dichanthelium clandestinum	10		10.0%	FACW	
5	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
6	0		0.0%		2 - Dominance Test is > 50%
7.	0		0.0%		3 - Prevalence Index is ≤3.0 $^{1}$
8.	0		0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9	0		0.0%		
10.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100	= 1	Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0		0.0%		
2.	0		0.0%		Hydrophytic
	0	= 1	Total Cove	er	Vegetation Present? Yes O No O
Remarks: (Include photo numbers here or on a separate sh	eet.)				

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL						Sampling Po	pint: upl-ibl-121417-01		
Profile Descrip	ption: (Describe to	o the depth	needed to document	the indicator or c	onfirm the	e absence of indicators.)			
Depth	Matrix		Red	lox Features		_			
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-13	10YR 4/3	100				Loam			
					-				
Type: C=Conce	entration, D=Depleti	ion, RM=Redu	uced Matrix, CS=Covere	ed or Coated Sand G	ains.	Aocation: PL=Pore Lining. N	=Matrix.		
Hydric Soil In	dicators:					Indicators for Problem	atic Hydric Soils <sup>3</sup> :		
Histosol (A	•		Sandy Gleyed	Matrix (S4)		Coast Prairie Redox (/	5		
Histic Epipe			Sandy Redox	(S5)		Dark Surface (S7)	(10)		
Black Histic			Stripped Matri	x (S6)			oo (F10)		
Hydrogen S			Loamy Mucky	Mineral (F1)		Iron Manganese Mass			
Stratified La	•		Loamy Gleyed	Matrix (F2)		Very Shallow Dark Surface (TF12)			
2 cm Muck						Other (Explain in Rem	arks)		
Depleted B	eted Below Dark Surface (A11)								
_	Surface (A12)		Depleted Dark	Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy Mucl	k Mineral (S1)		Redox Depres			wetland hydrology must be present,			
5 cm Mucky	y Peat or Peat (S3)					unless disturbed or	problematic.		
estrictive Lag	yer (if observed):								
Туре:							<b>•</b> •		
Depth (inche	es):					Hydric Soil Present?	Yes 🔾 No 🖲		
Remarks:									
YDROLO	GY								
Vetland Hydro	ology Indicators:								
Primary Indicat	ors (minimum of on	e is required;	check all that apply)			Secondary Indicator	s (minimum of two required)		
Surface Wa	ater (A1)		Water-Stain	ed Leaves (B9)		Surface Soil Cra	cks (B6)		
	Table (A2)		Aquatic Fau			Drainage Patter			
Saturation	. ,			c Plants (B14)		Dry Season Wa			
Water Mark				ulfide Odor (C1)		Crayfish Burrow			
_					Doote (Ca)				
	Deposits (B2)			izospheres on Living	RUUIS (U3)		le on Aerial Imagery (C9)		
Drift Depos				Reduced Iron (C4)			ssed Plants (D1)		
	r Crust (B4)			Reduction in Tilled S	olis (C6)	Geomorphic Pos	. ,		
Iron Denos	its (B5)		Thin Muck S	urface (C7)		EAC-Neutral Ter	st (1)5)		

Algal Mat or Crust (B4) Iron Deposits (B5)			Recent Iron Reduction in Tilled Soil:     Thin Muck Surface (C7)		C6) Geomorphic Position (D2) FAC-Neutral Test (D5)				
Inundation Visible on Aerial Imagery (B7)			Gauge or Well Data (D9)						
Sparsely Vegetated Concave Surface (B8)			Other (Explain in Remarks)						
				<del></del>					
Field Observations:		~							
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):						
Water Table Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲	Depth (inches):		× 0 × 0				
Saturation Present? (includes capillary fringe)	$_{\rm Yes}$ $\bigcirc$	No 🖲	Depth (inches):	Wetland Hydrology Present?	Yes 🔾 No 🖲				
Describe Recorded Data (	stream gaug	ge, monito	pring well, aerial photos, previous insp	pections), if available:					
Remarks:									

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings C	ity/County: Warren	S	ampling Date: 13-Dec-17
Applicant/Owner: AEP	State: C	OH Sampling P	oint: upl-jbl-121317-03
Investigator(s): _JBL, JTT	Section, Township, Range: S	0 T <u>0</u>	R _0
Landform (hillslope, terrace, etc.): Hillside	Local relief (conca	ve, convex, none): flat	
Slope: 0.0% / 0.0 ° Lat.: 39.340267	Long.: -84.028225		Datum: NAD 83
Soil Map Unit Name: RpC2		NWI classification:	N/A
Are climatic/hydrologic conditions on the site typical for this time of year? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	● No ○ (If no, explain	n in Remarks.)	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly d	isturbed? Are "Normal	Circumstances" present?	Yes 💿 No 🔿
Are Vegetation . , Soil , or Hydrology naturally prob	lematic? (If needed,	explain any answers in Re	marks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks: upland 3				

Dominant

## **VEGETATION -** Use scientific names of plants.

Tree Stratum_(Plot size: )	Absolut % Cove	e Re	l.Strat. Cover	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species           That are OBL, FACW, or FAC:         1         (A)
2.	0		0.0%		
3	0		0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4.	0		0.0%		Species Across Air Strata (b)
5.	0		0.0%		Percent of dominant Species
	0	= T	otal Cove	er	That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)
_Sapling/Shrub Stratum (Plot size:)					Prevalence Index worksheet:
1. Rubus allegheniensis	25	$\checkmark$	100.0%	FACU	Total % Cover of: Multiply by:
2	0		0.0%		OBL species $0 \times 1 = 0$
3.	0		0.0%		FACW species $0   x 2 = 0$
4	0		0.0%		FAC species $20$ x 3 = $60$
5	0		0.0%		FACU species $105 \times 4 = 420$
Herb Stratum (Plot size:)	25	= T	otal Cove	er	UPL species $0 \times 5 = 0$
1, Symphyotrichum ericoides	50		50.0%	FACU	Column Totals: <u>125</u> (A) <u>480</u> (B)
2. Solidago canadensis	30	$\checkmark$	30.0%	FACU	Prevalence Index = $B/A = 3.840$
3. Juncus tenuis	20		20.0%	FAC	
4	0		0.0%		Hydrophytic Vegetation Indicators:
5	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
6	0		0.0%		2 - Dominance Test is > 50%
7.	0		0.0%		3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.	0		0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0		0.0%		
Woodv Vine Stratum (Plot size:)	100	= T	otal Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0		0.0%		
2.	0		0.0%		Hydrophytic Vegetation
	0	= T	otal Cove	er	Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate she	eet.)				

SOIL		Sampling Point: upl-ibl-121317-03
Profile Description: (Describe to the dept	h needed to document the indicator or confirm th	e absence of indicators.)
Depth Matrix	Redox Features	_
(inches) Color (moist) %	<u>Color (moist) % Type<sup>1</sup> Loc<sup>2</sup></u>	Texture Remarks
0-13 10YR 4/3 100		Loam
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Re	duced Matrix, CS=Covered or Coated Sand Grains.	Location: PL=Pore Lining. M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2) Black Histic (A3)	Sandy Redox (S5)	Dark Surface (S7)
Hydrogen Sulfide (A4)	Stripped Matrix (S6)	Iron Manganese Masses (F12)
Stratified Layers (A5)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
$\square$ 2 cm Muck (A10)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	2
Sandy Muck Mineral (S1)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if observed):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes $\bigcirc$ No $oldsymbol{igodol}$
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators: Primary Indicators (minimum of one is require	d check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6) Drainage Patterns (B10)
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	<ul> <li>Oxidized Rhizospheres on Living Roots (C3)</li> </ul>	
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)		
Sparsely Vegetated Concave Surface (B8)	Gauge or Well Data (D9)	
	Other (Explain in Remarks)	
Field Observations:	I	
	Depth (inches):	
		tland Hydrology Present? Yes 🔿 No 🖲
Saturation Present? (includes capillary fringe) Yes O No	Depth (inches):	
	nonitoring well, aerial photos, previous inspectior	ns), if available:
Remarks:		

# Upland 17

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings City/County:	Warren San	npling Date: 13-Dec-17
Applicant/Owner: AEP	State: OH Sampling Poir	nt: upl-jbl-121317-01
Investigator(s): JBL, JTT Section, To	wwnship, Range: S 0 T 0 R	2
Landform (hillslope, terrace, etc.): Mound	Local relief (concave, convex, none): convex	(
Slope: 0.0% / 0.0 ° Lat.: 39.343258 Long.	-84.032810	Datum: NAD 83
Soil Map Unit Name: HrD2	NWI classification: N	J/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes $\odot$ No $\subset$	) (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 Rema	arks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

#### **VEGETATION** - Use scientific names of plants.

		— Species? ·		
_Tree Stratum_(Plot size: )	Absolute	Rel.Strat.		Dominance Test worksheet:
	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 3 (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL_EACW_or_EAC: 33.3% (A/B)
	0	= Total Cove	er	That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species x 1 =
3.	0	0.0%		FACW species $0 \times 2 = 0$
4.	0	0.0%		FAC species $30 \times 3 = 90$
5.	0	0.0%		FACU species 70 $x 4 = 280$
	0	= Total Cove	er	UPL species $0 \times 5 = 0$
Herb Stratum (Plot size:)		30.0%	540	
1, Poa pratensis	30		FAC	Column Totals: <u>100</u> (A) <u>370</u> (B)
2. Festuca arundinacea	50	50.0%	FACU	Prevalence Index = $B/A = 3.700$
3. Lonicera japonica	20	20.0%	FACU	Hydrophytic Vegetation Indicators:
4	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
5	0	0.0%		2 - Dominance Test is > 50%
6.	0	0.0%		$\square$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
7.	0	0.0%		
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.	0	0.0%		
Woody Vine Stratum (Plot size: )	100	= Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes O No 🖲
Remarks: (Include photo numbers here or on a separate she	eet.)			1

ofile Desci	ription: (Des	cribe to th	ie depth ne	eded to documer			absence of marcators.	
Depth	•	Matrix			edox Features			
(inches)	Color (n		%	Color (moist)	<u>%</u> <u>Type</u> <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-7	10YR	4/3	100				Loam	
7-12	10YR	4/4	100				Loam	
					·			
,,	centration, D=	Depletion,	RM=Reduce	d Matrix, CS=Cove	red or Coated Sand Gra	ins.	Accation: PL=Pore Lining. M	_
Histosol (				Sandy Gleve	d Matrix (S4)		Indicators for Problem	atic Hydric Soils <sup>3</sup> :
	pedon (A2)			Sandy Redox			Coast Prairie Redox (A	.16)
Black His				Stripped Mat			Dark Surface (S7)	
	Sulfide (A4)						Iron Manganese Mass	es (F12)
Stratified	Layers (A5)				y Mineral (F1)		Very Shallow Dark Sur	face (TF12)
2 cm Muc	3				ed Matrix (F2)		Other (Explain in Rem	
_	Below Dark S	urfaco (A11	)	Depleted Ma				urita <i>j</i>
_ '	k Surface (A1	•	/	Redox Dark				
_	•	,		Depleted Da	rk Surface (F7)		<sup>3</sup> Indicators of hydrophyt	ic vegetation and
	ick Mineral (S	•		Redox Depre	essions (F8)		wetland hydrology m	
	ky Peat or Pe						unless disturbed or	problematic.
estrictive L	ayer (if obse	erved):						
<b>T</b>								
Type:	hoc).	-					Hydric Soil Present?	Yes 🔿 No 🖲
Type: Depth (inc Remarks:	hes):						Hydric Soil Present?	Yes 🔿 No 🖲
Depth (inc Remarks: YDROLC	)GY						Hydric Soil Present?	Yes O No O
Depth (inc Remarks: IYDROLC	DGY Irology India	ators:	required; ch	eck all that apply)				
Depth (inc Remarks: NYDROLC Vetland Hyc Primary Indic	DGY Irology Indic ators (minimu	ators:	required; ch	eck all that apply)	ned Leaves (R9)		Secondary Indicator	s (minimum of two required)
Depth (inc Remarks: IYDROLC Vetland Hyc Primary Indic Surface V	DGY Irology India ators (minimu Vater (A1)	ators:	required; ch	Water-Stai	ned Leaves (B9)		Secondary Indicator	s (minimum of two required) cks (B6)
Depth (inc Remarks: YDROLC Vetland Hyc Primary Indic Surface V High Wat	DGY Irology Indic ators (minimu Vater (A1) er Table (A2)	ators:	required; ch	Water-Stai	una (B13)		Secondary Indicator Surface Soil Crat Drainage Pattern	s (minimum of two required) cks (B6) rs (B10)
Depth (inc Remarks: YDROLC Primary Indic Surface V High Wat Saturatio	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3)	ators:	required; ch	Water-Stai	una (B13) tic Plants (B14)		Secondary Indicator	s (minimum of two required) cks (B6) ns (B10) er Table (C2)
Depth (inc Remarks: IYDROLC Vetland Hyc Primary Indic Surface V High Wat Saturatio Water Ma	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) irks (B1)	ators: m of one is	required; ch	Water-Stai Aquatic Fa True Aqua	una (B13) tic Plants (B14) Sulfide Odor (C1)		Secondary Indicator Surface Soil Crai Drainage Patterr Dry Season Wat	s (minimum of two required) cks (B6) ns (B10) er Table (C2) s (C8)
Depth (inc Remarks: Primary Indic Surface V High Wat Saturation Water Ma Sediment	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2)	ators: m of one is	required; ch	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R		Secondary Indicator Surface Soil Craw Drainage Pattern Dry Season Wat Crayfish Burrow: Saturation Visibl	s (minimum of two required) cks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9)
Depth (inc Remarks: YDROLC Yetland Hyc Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dep	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) irks (B1) Deposits (B2) osits (B3)	ators: m of one is	required; ch	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence c	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4)		Secondary Indicator Surface Soil Crac Drainage Pattern Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1)
Depth (inc Remarks: R	DGY Irology India ators (minimu Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4)	ators: m of one is	required; ch	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence c Recent Iro	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So		Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: YDROLC Yetland Hyc Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depi Algal Mat Iron Depo	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)	ators: m of one is		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence c Recent Iro	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4)		Secondary Indicator Surface Soil Crac Drainage Pattern Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: PUDROLC Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depr Algal Mat Iron Depr Inundation	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) or Crust (B4) osits (B5) on Visible on A	erial Image	ry (B7)	Water-Stai Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence c Recent Iro Thin Muck	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So		Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: PDROLC Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dep Algal Mat Iron Depu Inundatic	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)	erial Image	ry (B7)	Water-Stai Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized R Presence c Recent Iro Thin Muck Gauge or N	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7)		Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: <b>YDROLC</b> <b>Vetland Hyc</b> Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dep Algal Mat Iron Depr Inundatic Sparsely	DGY Irology India ators (minimu Vater (A1) er Table (A2) n (A3) Irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) on Visible on A Vegetated Cor	erial Image	ry (B7)	Water-Stai Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized R Presence c Recent Iro Thin Muck Gauge or N	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Well Data (D9)		Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: YDROLC Vetland Hyc Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dep Algal Mat Iron Depu Inundatic Sparsely	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) or Crust (B4) posits (B5) on Visible on A Vegetated Cor rations:	erial Image	ry (B7) ce (B8)	Water-Stai         Aquatic Fa         True Aqua         Hydrogen         Oxidized R         Presence c         Recent Iro         Thin Muck         Gauge or V         Other (Exp	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Well Data (D9) olain in Remarks)		Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: Remarks: IYDROLC Vetland Hyc Primary Indic Surface V High Wat Saturation Saturation Water Ma Sediment Drift Dep Algal Mat Iron Depu Algal Mat Iron Depu Sparsely Surface Water	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) or Crust (B4) osits (B5) or Visible on A Vegetated Cor ations: Present?	erial Image	ry (B7) ce (B8)	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Nell Data (D9) plain in Remarks)		Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: R	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) or Crust (B4) osits (B5) or Visible on A Vegetated Cor ations: Present?	erial Image	ry (B7) ce (B8)	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Well Data (D9) olain in Remarks)	ils (C6)	Secondary Indicator Surface Soil Crac Drainage Pattern Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2) t (D5)
Depth (inc Remarks: Remarks: Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatic Sparsely Surface Water Water Table P Saturation Pre	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B3) or Crust (B4) osits (B5) on Visible on A Vegetated Cor ations: Present? resent?	erial Image	ry (B7) ce (B8) ) No ) No ) No )	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Well Data (D9) olain in Remarks)	ils (C6)	Secondary Indicator Surface Soil Crac Drainage Patter Dry Season Wat Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2)
Depth (inc Remarks: Remarks: Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatic Sparsely Surface Water Water Table P Saturation Pre includes capi	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B3) or Crust (B4) osits (B5) on Visible on A Vegetated Cor ations: Present? Isent? Ilary fringe)	erial Image	ry (B7) ce (B8) ) No ) No ) No ) No )	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Nell Data (D9) plain in Remarks) nches): nches):	Wetl	Secondary Indicator Surface Soil Crail Drainage Patteri Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes and Hydrology Present?	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2) t (D5)
Depth (inc Remarks: Remarks: Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatic Sparsely Surface Water Water Table P Saturation Pre includes capi	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B3) or Crust (B4) osits (B5) on Visible on A Vegetated Cor ations: Present? Isent? Ilary fringe)	erial Image	ry (B7) ce (B8) ) No ) No ) No ) No )	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Well Data (D9) olain in Remarks)	Wetl	Secondary Indicator Surface Soil Crail Drainage Patteri Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes and Hydrology Present?	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2) t (D5)
Depth (inc Remarks: Remarks: Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dep Algal Mat Iron Depu Algal Mat Iron Depu Surface Water Surface Water Vater Table P Saturation Pre includes capi Describe Rec	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B3) or Crust (B4) osits (B5) on Visible on A Vegetated Cor ations: Present? Isent? Ilary fringe)	erial Image	ry (B7) ce (B8) ) No ) No ) No ) No )	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Nell Data (D9) plain in Remarks) nches): nches):	Wetl	Secondary Indicator Surface Soil Crail Drainage Patteri Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes and Hydrology Present?	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2) t (D5)
Depth (inc Remarks: Remarks: Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatic Sparsely Surface Water Water Table P Saturation Pre includes capi	DGY Irology Indic ators (minimu Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B3) or Crust (B4) osits (B5) on Visible on A Vegetated Cor ations: Present? Isent? Ilary fringe)	erial Image	ry (B7) ce (B8) ) No ) No ) No ) No )	Water-Stai	una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on Living R of Reduced Iron (C4) n Reduction in Tilled So Surface (C7) Nell Data (D9) plain in Remarks) nches): nches):	Wetl	Secondary Indicator Surface Soil Crail Drainage Patteri Dry Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes and Hydrology Present?	s (minimum of two required) :ks (B6) ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1) ition (D2) t (D5)

# Upland 18

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County: V	Warren	Sa	ampling Date:	13-Dec-17
Applicant/Owner: AEP		State: OH	Sampling Po	oint: upl-jbl	121317-02
Investigator(s): JBL, JTT	Section, Townsh	hip, Range: S 0 T	0	R _0	
Landform (hillslope, terrace, etc.): Flat	Lo	ocal relief (concave, convex, i	none): flat		
Slope: 0.0% / 0.0 ° Lat.: 39.346162	Long.: -8	34.038094		Datum: NAD	83
Soil Map Unit Name: WsS1B1		NWI	lassification:		
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 significant	ntly disturbed?	Are "Normal Circumstand	es" present?	Yes 🖲	No 🔿
Are Vegetation . Soil , or Hydrology naturally	problematic?	(If needed, explain any a	inswers in Rer	marks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks: mowed path				

Dominant

### **VEGETATION -** Use scientific names of plants.

		- Sr	becies?		
_Tree Stratum_(Plot size: )	Absolute % Cover	e Re	el.Strat.	Indicator Status	Dominance Test worksheet:
				Status	Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: (A)
2	0		0.0%		Total Number of Dominant
3	0	$\square_{-}$	0.0%		Species Across All Strata: 3 (B)
4	0		0.0%		
5	0		0.0%		Percent of dominant Species
	0	= T	otal Cove	er	That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
<u>Sapling/Shrub Stratum (Plot size:</u> )					Prevalence Index worksheet:
1	0		0.0%		Total % Cover of: Multiply by:
2.	0		0.0%		OBL species $0   x   1 = 0$
3.	0		0.0%		FACW species $0 \times 2 = 0$
4.	0		0.0%		FAC species $40$ x 3 = $120$
5.	0		0.0%		FACU species $60 \times 4 = 240$
	0	= T	otal Cove	er	UPL species $0 \times 5 = 0$
Herb Stratum (Plot size:)					
1, Poa pratensis	40		40.0%	FAC	Column Totals: <u>100</u> (A) <u>360</u> (B)
2. Festuca trachyphylla	40		40.0%	FACU	Prevalence Index = $B/A = 3.600$
3. Glechoma hederacea	20	✓_	20.0%	FACU	Hydrophytic Vegetation Indicators:
4	0		0.0%		
5	0		0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0		0.0%		2 - Dominance Test is > 50%
7.	0		0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0		0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0		0.0%		data in Remarks or on a separate sheet)
10.	0		0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100		otal Cove		<sup>1</sup> . Indicators of hydric soil and wetland hydrology must
Woodv Vine Stratum (Plot size:)		- 1		21	be present, unless disturbed or problematic.
1	0		0.0%		
2.	0		0.0%		Hydrophytic
	0	= T	otal Cove	er en	Vegetation Present? Yes O No •
Remarks: (Include photo numbers here or on a separate she	oot)				
itematika. (moluue prioto numbers nere or on a separate site	501.)				

US Army Corps of Engineers

SOIL							Sampling Po	int: _upl-ibl-121317-02
Profile Descr	iption: (Desc	cribe to t	he depth	needed to document th	ne indicator or c	onfirm the	e absence of indicators.)	
Depth		Aatrix		Redox	<pre>K Features</pre>		_	
(inches)	Color (m	oist)	%	Color (moist)	<u>%</u> <u>Type</u> <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-7	10YR	3/3	100				Loam	
7-12	10YR	4/4	100				Clay Loam	
					L			
<sup>1</sup> Type: C=Conc		Depletion	. RM=Redu	iced Matrix, CS=Covered	or Coated Sand G	ains.	Location: PL=Pore Lining. M	=Matrix.
Hydric Soil I		Boplotion	1111 11041			unior	-	
				Sandy Gleyed Ma	atrix (S4)		Indicators for Problem	atic Hydric Soils <sup>3</sup> :
Histic Epip				Sandy Redox (S5			Coast Prairie Redox (A	16)
Black Histi	ic (A3)			Stripped Matrix (			Dark Surface (S7)	
Hydrogen	Sulfide (A4)			Loamy Mucky Mi			Iron Manganese Mass	es (F12)
Stratified I	Layers (A5)			Loamy Gleyed M			Very Shallow Dark Sur	face (TF12)
2 cm Mucl	k (A10)			Depleted Matrix			Other (Explain in Rem	arks)
Depleted I	Below Dark Su	urface (A1	1)	Redox Dark Surf				
Thick Dark	Surface (A12	2)		Depleted Dark Sur			<sup>3</sup> Indicators of hydrophyt	
Sandy Mu	ck Mineral (S1	)					<sup>3</sup> Indicators of hydrophyt wetland hydrology m	ic vegetation and
5 cm Mucl	ky Peat or Pea	at (S3)		Redox Depressio	IIIS (F8)		unless disturbed or	
Restrictive La	aver (if obse	rved):						
Type:	<b>,</b>	-						
Depth (inch	nes):						Hydric Soil Present?	Yes 🔾 No 🖲
Remarks:								
Remarks.								
HYDROLO	GY							
	-							
Wetland Hyd			c roquirod.	check all that apply)			Secondary Indicator	c (minimum of two required)
			s required,	check all that apply)	(5.0)			s (minimum of two required)
Surface W				Water-Stained			Surface Soil Cra	
-	er Table (A2)			Aquatic Fauna			Drainage Patterr	
Saturation				True Aquatic P	. ,		Dry Season Wat	
Water Mar				Hydrogen Sulfi			Crayfish Burrows	
	Deposits (B2)				spheres on Living	Roots (C3)		e on Aerial Imagery (C9)
Drift Depo	sits (B3)			Presence of Re	educed Iron (C4)		Stunted or Stres	sed Plants (D1)
Algal Mat	or Crust (B4)			Recent Iron Re	eduction in Tilled S	oils (C6)	Geomorphic Pos	ition (D2)
Iron Depo	sits (B5)			Thin Muck Surf	face (C7)		FAC-Neutral Tes	t (D5)
Inundation	n Visible on Ae	erial Imag	ery (B7)	Gauge or Well	Data (D9)			
Sparsely V	egetated Con	cave Surfa	ace (B8)	Other (Explain	in Remarks)			
Field Observa	ations:		$\sim$ - $\sim$	<u> </u>				
Surface Water	Present?	Yes (			s):	_		
Water Table Pr	resent?	Yes (	⊃ No (	Depth (inche	s):	_		
Saturation Pres	sent?	Yes (	No (	• •		Wet	land Hydrology Present?	Yes 💿 No 🔾
(includes capill				-		<u> </u>	<u> </u>	
Describe Reco	orded Data (	stream g	gauge, mo	onitoring well, aerial ph	notos, previous i	nspections	s), if available:	
Remarks:								

### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County: War	rren	Sa	ampling Date:	12-Dec-17
Applicant/Owner: AEP		State: OH	Sampling Po	oint: <b>upl</b>	-jbl-121217-02
Investigator(s): _JBL, JTT	Section, Township,	, Range: S 0 T	0	R 0	
Landform (hillslope, terrace, etc.): Mound	Local	l relief (concave, convex, r	one): conca	ave	
Slope: 0.0% / 0.0 ° Lat.: 39.356822	Long.: -84.0	056094		Datum: N	NAD 83
Soil Map Unit Name: Cle1A		NWI c	lassification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 🖲 No 🔾 (	(If no, explain in Remarks.)			
Are Vegetation . , Soil , or Hydrology isignificantly	disturbed?	Are "Normal Circumstance	es" present?	Yes	● <sub>No</sub> ○
Are Vegetation, Soil, or Hydrology naturally pro	blematic?	(If needed, explain any a	nswers in Rei	marks.)	

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

	Yes ○ Yes ○ Yes ○	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $④$
Remarks:				

Dominant

	Absolute	Species?     Rel.Strat.	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: )	% Cover		Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2		0.0%		
2				Total Number of Dominant
3	0	0.0%		Species Across All Strata: (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL_EACW_or_EAC: 0.0% (A/B)
	0	= Total Cove	r	That Are OBL, FACW, or FAC:(A/B)
<u>Sabling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species x 1 =
3.	0	0.0%		FACW species $15$ x 2 = $30$
4.	0	0.0%		FAC species $0$ x 3 = $0$
5.	0	0.0%		FACU species $85$ x 4 = $340$
Herb Stratum (Plot size: )	0	= Total Cove	r	UPL species $0$ $x 5 = 0$
1. Festuca arundinacea	65	✔ 65.0%	FACU	Column Totals: <u>100</u> (A) <u>370</u> (B)
2. Bromus arvensis	20	20.0%	FACU	Prevalence Index = B/A = 3.700
3. Solidago gigantea	15	15.0%	FACW	
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> . Indicators of hydric soil and wetland hydrology must
<u>Woody Vine Stratum</u> (Plot size:)	100	= Total Cove	r	be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate sh	eet.)			1

Upland	20
--------	----

SOIL							Sampling Po	int: upl-ibl-121217-02
Profile Desc	ription: (Describe to	the depth	needed to document	the indi	cator or co	onfirm the	e absence of indicators.)	
Depth	Depth Matrix Redox Features					_		
(inches)	Color (moist)	%	Color (moist)	%	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-13	10YR 3/3		 				Loam	
1 Type: C-Cop					ed Sand Gr		مراجع من	-Matrix
Hydric Soil					eu Sanu Gi		0	
Histosol ( Histic Epi Black His Hydroger Stratified 2 cm Muc Depleted Thick Dar Sandy Mu	A1) pedon (A2) tic (A3) n Sulfide (A4) Layers (A5)	A11)	Sandy Gleyed M Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed I Depleted Matrix Redox Dark Sur Redox Depressi	S5) (S6) Aineral (I Matrix (F (F3) rface (F6 Surface	F1) (F7)		Indicators for Problem Coast Prairie Redox (A Dark Surface (S7) Iron Manganese Mass Very Shallow Dark Sur Other (Explain in Rem <sup>3</sup> Indicators of hydrophyt wetland hydrology n unless disturbed or	(16) es (F12) face (TF12) arks) ic vegetation and ust be present,
	ayer (if observed):							
Type: Depth (inc							Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:								

Wetland Hydrology Indic	ators:						
Primary Indicators (minimur	n of one is rec	quired; chec		Secondary Indicators (minimum of two required)			
Surface Water (A1)			Water-Stained Leaves (B9)		Surface Soil Cracks (B6)		
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)		
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)		
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)		
Sediment Deposits (B2)			Oxidized Rhizospheres on Livin	ig Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)			Presence of Reduced Iron (C4)	1	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)			Recent Iron Reduction in Tillec	l Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral Test (D5)		
Inundation Visible on A	erial Imagery	(B7)	Gauge or Well Data (D9)				
Sparsely Vegetated Cor	cave Surface (	(B8)	Other (Explain in Remarks)				
Field Observations:		0					
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):				
Water Table Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲	Depth (inches):	_			
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland H	lydrology Present? Yes 🔿 No 🖲		
Describe Recorded Data	stream gaug	ge, monito	ring well, aerial photos, previous	inspections), if a	vailable:		
Remarks:							

### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings City/	/County: Warren		Sa	mpling Date:	11-Dec-17
Applicant/Owner: AEP	Stat	e: OH	Sampling Po	int: <b>upl-jb</b>	ol-121117-02
Investigator(s): JBL, JTT Se	ection, Township, Rang	e: S 0 T	0	R 0	_
Landform (hillslope, terrace, etc.): Hillside	Local relief	(concave, convex, no	ne): none		
Slope: 0.0 ° Lat.: 39.362985	Long.: -84.0714	7		Datum: NAI	0 83
Soil Map Unit Name: <u>JoR1B2</u>		NWI cla	ssification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes $lacksquare$	No 🔿 (If no,	explain in Remarks.)			
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly distu	urbed? Are "	Normal Circumstances	" present?	Yes 🤇	🖻 No 🔿
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If no	eded, explain any an	swers in Rem	narks.)	

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

	Yes ○ Yes ○ Yes ○	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $④$
Remarks:				

Dominant

	Absolute	— Species? - e Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 1 (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species
	0	= Total Cove	r	That Are OBL, FACW, or FAC:(A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $0$ $x 1 = 0$
3.	0	0.0%		FACW species $0$ x 2 = $0$
4.	0	0.0%		FAC species $0$ x 3 = $0$
5.	0	0.0%		FACU species $100$ x 4 = $400$
Herb Stratum (Plot size: )	0	= Total Cove	r	UPL species $0 \times 5 = 0$
1. Festuca rubra	90	✔ 90.0%	FACU	Column Totals: 100 (A) 400 (B)
2. Lonicera japonica	10	10.0%	FACU	
3.	0	0.0%		Prevalence Index = B/A = 4.000
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		□ 3 - Prevalence Index is $\leq$ 3.0 <sup>1</sup>
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100	= Total Cove	r	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>Woody Vine Stratum</u> (Plot size:)				be present, unless disturbed of problematic.
1		0.0%		Hydrophytic
2	0	0.0%		Vegetation
	0	= Total Cove	r	Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate sh	eet.)			

Upla	nd	21
------	----	----

0.15       10YR       4/4       100       Clay Loam         Image: Carrier Carrier Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       Accation: PL=Pore Lining. M=Matrix.         Hydric Soil Indicators:       Image: Carrier Carrier Carrier Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       Accation: PL=Pore Lining. M=Matrix.         Hydric Soil Indicators:       Image: Carrier Carrier Carrier Carrier Concentration, D=Depletion, RM=Reduced Matrix, CS4)       Image: Carrier Carr	Due file De	inting (D		الاستعام معا		In a 244 P			Sampling Poi	
Color (moist)       %       Color (moist)       %       Type 1       Loc2       Texture       Ren         0-15       10YR       4/4       100       Clay Leam       Clay Leam       Clay Leam         0-15       10YR       4/4       100       Clay Leam       Clay Leam       Clay Leam         0		•		he depth				onfirm the	e absence of indicators.)	
0.15       10YR       4/4       100       Clay Loam         Image: Clay Loam       Clay Loam       Clay Loam         Image: Clay Loam       Image: Clay Loam       Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Clay Loam         Image: Clay Loam       Image: Clay Loam       Image: Cla	•			%				Loc <sup>2</sup>	Texture	Remark
Hydric Soil Indicators:       Indicators:       Indicators for Problematic Hydric Set         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Straticive Layer (if observed):       Type:       Yes       Very Matrix (F2)	-									
Hydric Soil Indicators:       Indicators:       Indicators for Problematic Hydric Set         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Strictive Layer (if observed):       Type:       Type:       Yes       New Yes										
Hydric Soil Indicators:       Indicators:       Indicators:         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         5 cm Mucky Peat or Peat (S3)       Restrictive Layer (if observed):       Yes       Yes										
Hydric Soil Indicators:       Indicators:       Indicators for Problematic Hydric Set         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Strictive Layer (if observed):       Type:       Type:       Yes       New Yes		·								
Hydric Soil Indicators:       Indicators:       Indicators for Problematic Hydric Set         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Type:       Type:       Hudrig Seil Present2       Yes										
Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Dark Surface (S7)         Black Histic (A3)       Stripped Matrix (S6)       Dark Surface (S7)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       3         Thick Dark Surface (A12)       Depleted Dark Surface (F7)       3       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Restrictive Layer (if observed):       Type:       Yes       Yes       New Yes	Type: C=Con	centration, D=	Depletion	, RM=Redu	uced Matrix, CS=Covered	or Coat	ed Sand Gr	ains.	Accation: PL=Pore Lining. M=	=Matrix.
Histic Epipedon (A2)       Sandy Redox (S5)         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)         2 cm Muck (A10)       Depleted Matrix (F3)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)         Thick Dark Surface (A12)       Depleted Dark Surface (F7)         Sandy Muck Mineral (S1)       Redox Depressions (F8)         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)					Sandy Gleyed M	atrix (S	4)		_	-
Black Histic (A3)       Stripped Matrix (S6)       Iron Manganese Masses (F12)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Stratified Layer (if observed):       Type:					Sandy Redox (S	5)				16)
Image: Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Image: Very Shallow Dark Surface (TF12)         Image: Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Image: Other (Explain in Remarks)         Image: Stratified Layers (A10)       Image: Depleted Matrix (F3)       Image: Other (Explain in Remarks)         Image: Depleted Below Dark Surface (A11)       Image: Redox Dark Surface (F6)       Image: Other (Explain in Remarks)         Image: Thick Dark Surface (A12)       Image: Depleted Dark Surface (F7)       Image: Other (Explain in Remarks)         Image: Stratified Layer (If observed):       Image: Comparison (F8)       Image: Comparison (F8)         Image: Type: Image: Comparison (F1)       Image: Comparison (F1)       Image: Comparison (F1)         Image: Comparison (F1)       Image: Comparison (F1)       Image: Comparison (F1)         Image: Comparison (F1)       Image: Comparison (F2)       Image: Comparison (F2)         Image: Comparison (F1)       Image: Comparison (F2)       Image: Comparison (F2)         Image: Comparison (F2)       Image: Comparison (F2)       Image: Comparison (F2)         Image: Comparison (F2)       Image: Comparison (F2)       Image: Comparison (F2)         Image: Comparison (F2)       Image: Comparison (F2)       Image: Comparison (F2)         Image: Comparison (F2)       Image: Comparison (F2)       Image: Comparison (F2)      <										es (F12)
Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)         Thick Dark Surface (A12)       Depleted Dark Surface (F7)         Sandy Muck Mineral (S1)       Redox Depressions (F8)         Image: Solid Depleted Dark (S3)       Restrictive Layer (if observed):         Type:       Type:										
Depleted Below Dark Surface (A11)     Depleted Matrix (F3)     Depleted Matrix (F3)     Redox Dark Surface (F6)     Sandy Muck Mineral (S1)     Depleted Dark Surface (F7)     Sandy Muck Yeat or Peat (S3)     Restrictive Layer (if observed):     Type:     Type:     Type:     Depleted Matrix (F3)     Depleted Matrix (F3)     Redox Dark Surface (F6)     Sandy Muck Mineral (S1)     Redox Depressions (F8)     Understand hydrology must be present     unless disturbed or problematic.		5					2)			
□       Thick Dark Surface (A12)       □       Depleted Dark Surface (F7)       ³       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         □       S andy Muck Mineral (S1)       □       Redox Depressions (F8)       ³       Indicators of hydrophytic vegetation a wetland hydrology must be present unless disturbed or problematic.         Restrictive Layer (if observed):       Type:			urface (A1	1)	·	• •	<b>、</b>			
Sandy Muck Mineral (S1)       Redox Depressions (F8)       Induction of hydrology must be present unless disturbed or problematic.         Som Mucky Peat or Peat (S3)       Restrictive Layer (if observed):       Induction of hydrology must be present unless disturbed or problematic.         Type:	Thick Dar	k Surface (A12	2)				,		3	
S cm Mucky Peat or Peat (S3)     unless disturbed or problematic.       Restrictive Layer (if observed):     Type:	Sandy Muck Minoral (S1)					Indicators of hydrophytic vegetation and wetland hydrology must be present.				
Type:	5 cm Muc	ky Peat or Pea	at (S3)			5113 (1 0)				
	Restrictive L	ayer (if obse	rved):							
Hydric Soil Present? Voc V	Туре:									$\circ$
Depth (inches):		hes):							Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:	Depth (inc									

Wetland Hydrology Indica	ators:			
Primary Indicators (minimun	n of one is reg	quired; cheo	ck all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)			Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)			Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)			True Aquatic Plants (B14)	Dry Season Water Table (C2)
Water Marks (B1)			Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)			Oxidized Rhizospheres on Living R	g Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled Sc	Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)			Thin Muck Surface (C7)	FAC-Neutral Test (D5)
Inundation Visible on Ae	erial Imagery	(B7)	Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8)			Other (Explain in Remarks)	
Field Observations:				
Surface Water Present?	$_{\rm Yes}$ $\bigcirc$	No 🖲	Depth (inches):	
Water Table Present?	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	── Wetland Hydrology Present? Yes ○ No ④
Saturation Present? (includes capillary fringe)	$V \cap S \setminus V \cap V$			Wetland Hydrology Present? Yes 💛 No 🔍
Describe Recorded Data (	stream gau	ge, monito	pring well, aerial photos, previous in	inspections), if available:
Remarks:		-		

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County: W	arren	S	ampling Date	e:12-Dec-17
Applicant/Owner: AEP		State: OH	Sampling P	oint: <b>up</b>	l-jbl-121217-01
Investigator(s): _JBL, JTT	Section, Townshi	p, Range: S 0 T	0	R 0	
Landform (hillslope, terrace, etc.): Flat	Loca	al relief (concave, convex, r	one): flat		
Slope: 0.0% / 0.0 ° Lat.: 39.365041	Long.:84	1.078252		Datum:	NAD 83
Soil Map Unit Name: WsS1A1		NWI c	lassification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 🖲 No 🔾	(If no, explain in Remarks.)	1		
Are Vegetation . , Soil , or Hydrology significantly	disturbed?	Are "Normal Circumstance	es" present?	Yes	s 💿 No 🔿
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?	(If needed, explain any a	nswers in Re	marks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No O No O No O	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $④$
Remarks:				

Dominant

Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	Dominance Test worksheet:
	0	0.0%	510103	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3				Species Across All Strata:3 (B)
5.	0	0.0%		Percent of dominant Species
	0			That Are OBL, FACW, or FAC: $0.0\%$ (A/B)
<u>Saplino/Shrub Stratum (</u> Plot size: )		= Total Cove	ſ	
1	10	✔ 100.0%	FACU	Prevalence Index worksheet:
າ ັ			FACU	Total % Cover of: Multiply by:
2		0.0%		OBL species $0 \times 1 = 0$
3 4	0	0.0%		FACW species $28$ x 2 = $56$
4 5	0	0.0%		FAC species $10$ x 3 = $30$
5	0	0.0%		FACU species $80 \times 4 = 320$
<u>Herb Stratum</u> (Plot size:)	10	= Total Cove	r	UPL species $0 \times 5 = 0$
1, Solidago altissima	50	46.3%	FACU	Column Totals: <u>118</u> (A) <u>406</u> (B)
2. Apocynum cannabinum	10	9.3%	FAC	Prevalence Index = $B/A = 3.441$
3. Festuca arundinacea	20	✔ 18.5%	FACU	
4. Persicaria pensylvanica	15	13.9%	FACW	Hydrophytic Vegetation Indicators:
5. Carex vulpinoidea	8	7.4%	FACW	1 - Rapid Test for Hydrophytic Vegetation
6. Agrostis stolonifera	5	4.6%	FACW	2 - Dominance Test is > 50%
7.	0	0.0%		$\square$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	108	= Total Cove	r	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				be present, uness disturbed of problematic.
1	0	0.0%		Hydrophytic
2	0	0.0%		Vegetation
	0	= Total Cove	r	Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate she	eet.)			

Depth (inches)         Matrix           0-5         10YR         4/2           10YR         4/2         10YR						e absence of indicators.)		
0-5 10YR 4/2			ox Featu					
		(moist)	<u>%</u>	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
	98 10YR	4/4	2			Silty Clay Loam		
5-14 10YR 4/2	95 10YR	4/4	5			Clay Loam		
ype: C=Concentration, D=Depletion,	RM=Reduced Matrix	, CS=Covered	d or Coate	ed Sand Gr	ains.	Location: PL=Pore Lining. M=Ma	trix.	
lydric Soil Indicators:						Indicators for Problematic	Hydric Soils <sup>3</sup> :	
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>2 cm Muck (A10)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Muck Mineral (S1)</li> </ul>	) C C C C C C C C C C C C C C C C C C C	andy Gleyed I andy Redox (: ripped Matrix boamy Mucky I boamy Gleyed epleted Matri edox Dark Su epleted Dark	S5) (S6) Mineral (F Matrix (F2 x (F3) rface (F6) Surface (	1) 2)		Coast Prairie Redox (A16) Dark Surface (S7) Iron Manganese Masses (F Very Shallow Dark Surface Other (Explain in Remarks Indicators of hydrophytic ve wetland hydrology must	(TF12)	
Sandy Wack Winteral (ST)       Image: Redox Depressions (F8)         5 cm Mucky Peat or Peat (S3)						unless disturbed or problematic.		
estrictive Layer (if observed):								
Type:								
Depth (inches):						Hydric Soil Present? Yes	● <sub>No</sub> ○	
YDROLOGY								
etland Hydrology Indicators:								
rimary Indicators (minimum of one is	required; check all t	hat apply)				Secondary Indicators (m	inimum of two required)	
Surface Water (A1)		Water-Staine		(B9)		Surface Soil Cracks (		
High Water Table (A2)		Aquatic Faun				Drainage Patterns (E		
Saturation (A3)		True Aquatic				Dry Season Water Ta		
		Hydrogen Su			D . /	Crayfish Burrows (C		
Water Marks (B1)		Oxidized Rhiz		-	Roots (C3)		Aerial Imagery (C9)	
Sediment Deposits (B2)		D				Stunted or Stressed		
Sediment Deposits (B2) Drift Deposits (B3)		Presence of F		. ,	-11- (01)		. ,	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Recent Iron I	Reduction	in Tilled S	oils (C6)	Geomorphic Position	(D2)	
Sediment Deposits (B2) Drift Deposits (B3)			Reduction Irface (C7	in Tilled S	oils (C6)		(D2)	

Surface Water Present?

(includes capillary fringe)

Water Table Present?

Saturation Present?

Remarks:

Yes O No 💿

Yes 

No O

No 🖲

 $_{\rm Yes}$   $\bigcirc$ 

Depth (inches):

Depth (inches):

Depth (inches):

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

6

0

Wetland Hydrology Present?

Yes 

No O

# Upland 23/24

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County:	Warren	S	Sampling Date	e: 11-Dec-17
Applicant/Owner: AEP		State: OH	Sampling F	Point: upl-	jbl-121117-03,04
Investigator(s): _JBL, JTT	_ Section, Towr	nship, Range: S 0	т <u>О</u>	R 0	
Landform (hillslope, terrace, etc.): Hillside		Local relief (concave, conve	k, none): <u>flat</u>		
Slope:0.0% /0.0 ° Lat.:39.365753	Long.:	-84.080067		Datum:	NAD 83
Soil Map Unit Name: Cle1A		NW	I classification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 🖲 No 🔿	(If no, explain in Remar	ks.)		
Are Vegetation, Soil, or Hydrology significantly	disturbed?	Are "Normal Circumsta	inces" present?	Ye	s 💿 No 🔿
Are Vegetation . , Soil , or Hydrology naturally pro	oblematic?	(If needed, explain ar	y answers in Re	emarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

### **VEGETATION** - Use scientific names of plants.

	Absolute		r Dominance Test worksheet:
(Plot size:)	% Cove		Number of Dominant Species
1		0.0%	That are OBL, FACW, or FAC: 0 (A)
2	0	0.0%	Total Number of Dominant
3	0	0.0%	Species Across All Strata:(B)
4	0	0.0%	
5	0	0.0%	Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
	0	= Total Cover	
<u>Sapling/Shrub_Stratum (</u> Plot size:)			Prevalence Index worksheet:
1	0	0.0%	Total % Cover of: Multiply by:
2.	0	0.0%	OBL species x 1 =
3	0	0.0%	FACW species $0 x 2 = 0$
4.	0	0.0%	FAC species $0 \times 3 = 0$
5.	0	0.0%	FACU species $100 \times 4 = 400$
Herb Stratum (Plot size: )	0	= Total Cover	UPL species $0$ x 5 = $0$
1. Festuca arundinacea	100	✓ 100.0% FACU	Column Totals: 100 (A) 400 (B)
2.	0	0.0%	
2	0	0.0%	Prevalence Index = $B/A = 4.000$
4.	0	0.0%	Hydrophytic Vegetation Indicators:
5.	0	0.0%	1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%	$\square$ 2 - Dominance Test is > 50%
7.		0.0%	□ 3 - Prevalence Index is $\leq$ 3.0 <sup>1</sup>
8.	0	0.0%	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.		0.0%	data in Remarks or on a separate sheet)
10.	0		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	0	0.0%	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	100	= Lotal Cover	· · · · · · · · · · · · · · · · · · ·
<u>Woody Vine Stratum</u> (Plot size:)	100	= Total Cover	be present, unless disturbed or problematic.
		= Total Cover	be present, unless disturbed or problematic.
<u>Woody Vine Stratum</u> (Plot size:) 1 2			be present, unless disturbed or problematic.
1	0	0.0%	be present, unless disturbed or problematic.
1 2	0 0 0	0.0%	be present, unless disturbed or problematic.
1	0 0 0	0.0%	be present, unless disturbed or problematic.

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

HYDROLOGY

Upland 2	23/24
----------	-------

SOIL								Sampling Po	int: upl-ibl-121117-03
Profile Desc	cription: (Des	scribe to t	he depth	needed to document	the indi	cator or co	onfirm the	e absence of indicators.)	
Depth Matrix			Redox Features				_		
(inches)	Color (r	noist)	%	Color (moist)	%	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-13	10YR	3/3	100						
Hydric Soil Histosol Histic Ep Black His Hydroge Stratified 2 cm Mu Depleted Thick Da Sandy M 5 cm Mu	Indicators: (A1) pipedon (A2) stic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark S ark Surface (A1 luck Mineral (S ucky Peat or Pe Layer (if obse	Surface (A1 12) 11) 2at (S3) e <b>rved):</b>	1)	Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct of the system       Image: Construct of the system         Image: Construct	Matrix (S S5) (S6) Mineral (I Matrix (F K (F3) rface (F6 Surface	4) F1) (72) (F7)	ains.	Accation:       PL=Pore Lining. M         Indicators for Problem         Coast Prairie Redox (A         Dark Surface (S7)         Iron Manganese Mass         Very Shallow Dark Sur         Other (Explain in Rem <sup>3</sup> Indicators of hydrophyt         wetland hydrology n         unless disturbed or	atic Hydric Soils <sup>3</sup> : (16) es (F12) face (TF12) arks) ic vegetation and hust be present,

Primary Indicators (minimum of one is required; check all that apply)					Secondary Indicators (minimum of two required)		
Surface Water (A1)			Water-Stained Leaves (B9)		Surface Soil Cracks (B6)		
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)		
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)		
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)		
Sediment Deposits (B2)			Oxidized Rhizospheres on Livi	ng Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)			Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled Soils (C6)		Geomorphic Position (D2)		
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral Test (D5)		
Inundation Visible on A	erial Imagery	(B7)	Gauge or Well Data (D9)				
Sparsely Vegetated Con	icave Surface	(B8)	Other (Explain in Remarks)				
Field Observations:							
	Yes O	No 🖲	Depth (inches):				
Surface Water Present?	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):				
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	0			Wetland H	Hydrology Present? Yes 🔿 No 🖲		
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):		5 55		
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):		5 55		
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):		5 55		
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):		5 55		
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):		5 05		

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings 0	City/County: Wa	rren		Sampling Date	e:11-Dec-17
Applicant/Owner: AEP		State: OH	Sampling F	Point: <b>up</b>	ol-jbl-121117-01
Investigator(s): JBL, JTT	Section, Township	, Range: S 8	т 5Е	R 3N	
Landform (hillslope, terrace, etc.): Mound	Loca	I relief (concave, convex	, none): conc	cave	
Slope: 0.0% / 0.0 ° Lat.: 39.376352	Long.: -84.	117186		Datum:	NAD 83
Soil Map Unit Name: <u>JoR1B2</u>		NW	I classification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	• No 🔾 (	(If no, explain in Remark	(s.)		
Are Vegetation . Soil , or Hydrology significantly c	listurbed?	Are "Normal Circumsta	nces" present?	Ye	s 💿 No 🔿
Are Vegetation , Soil , or Hydrology naturally prot	olematic?	(If needed, explain any	answers in Re	emarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ○ Yes ○ Yes ○	No () No () No ()	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $oldsymbol{eta}$
Remarks:				

Dominant

Tree Stratum (Plot size: )	Absolute % Cover		Indicator Status	Dominance Test worksheet:
1/	0	0.0%	otatao	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4.	0	0.0%		Species Across Air Strata (b)
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC:0.0% (A/B)
<u>Saplina/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species $0 \times 1 = 0$
3	0	0.0%		FACW species $0   x 2 = 0$
4	0	0.0%		FAC species $0 \times 3 = 0$
5	0	0.0%		FACU species $65 \times 4 = 260$
Herb Stratum (Plot size:)	0	= Total Cove	۶r	UPL species $25$ x 5 = $125$
1, Festuca arundinacea	25	27.8%	FACU	Column Totals: <u>90</u> (A) <u>385</u> (B)
2. Daucus carota	25	27.8%	UPL	Prevalence Index = $B/A = 4.278$
3. Symphyotrichum ericoides	20	22.2%	FACU	
4. Elaeagnus angustifolia	5	5.6%	FACU	Hydrophytic Vegetation Indicators:
5. Andropogon virginicus	15	16.7%	FACU	1 - Rapid Test for Hydrophytic Vegetation
6. Juncus tenuis	0	0.0%	FAC	2 - Dominance Test is > 50%
7	0	0.0%		$\bigcirc$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10	0	0.0%		
Woody Vine Stratum (Plot size: )	90	= Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic Vegetation
	0	= Total Cove	er	Present? Yes No 💿
Remarks: (Include photo numbers here or on a separate she	eet.)			

Upland 2	25
----------	----

SOIL							Sampling Po	pint: upl-ibl-121117-01
Profile Desc	ription: (Descr	ibe to the d	epth needed to document	the indica	tor or co	onfirm the	e absence of indicators.)	
Depth Matrix		Redox Features				_		
(inches)	Color (mo			%	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-13	10YR	4/3 10					Clay Loam	
1 Type: C-Cor		Penletion DM	=Reduced Matrix, CS=Covered		Sand Cr		Location: PL=Pore Lining. M	I-Matrix
Hydric Soil	-				Sanu Gr	airis.	Indicators for Problem	
Histosol Histic Ep Black His Hydrogel Stratified 2 cm Mu Depleted Thick Da Sandy M	(A1) ipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5)		Sandy Gleyed M Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed I Depleted Matrix Redox Dark Sur Redox Depressi	S5) (S6) Aineral (F1) Matrix (F2) (F3) face (F6) Surface (F7			Coast Prairie Redox (/ Dark Surface (S7) Iron Manganese Mass Very Shallow Dark Su Other (Explain in Rem Indicators of hydrophy wetland hydrology r unless disturbed or	A16) rface (F12) rface (TF12) narks) tic vegetation and nust be present,
Restrictive I	Layer (if observ	ved):						
Type: Depth (ind							Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:								

Wetland Hydrology Indica	1015.							
Primary Indicators (minimum	n of one is rec	quired; chea	ck all that apply)		Secondary Indicators (minimum of two required)			
Surface Water (A1)			Water-Stained Leaves (B9)		Surface Soil Cracks (B6)			
High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)			
Saturation (A3)			True Aquatic Plants (B14)		Dry Season Water Table (C2)			
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)			
Sediment Deposits (B2)			Oxidized Rhizospheres on Living	Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)			Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled	Soils (C6)	Geomorphic Position (D2)			
Iron Deposits (B5)			Thin Muck Surface (C7)		FAC-Neutral Test (D5)			
Inundation Visible on Ae	erial Imagery (	(B7)	Gauge or Well Data (D9)					
Sparsely Vegetated Cond	Sparsely Vegetated Concave Surface (B8)			Other (Explain in Remarks)				
Field Observations:	$\frown$							
Field Observations: Surface Water Present?	Yes 〇	No 🖲	Depth (inches):	_				
	Yes ○ Yes ○	No 💿 No 💿	Depth (inches): Depth (inches):	_				
Surface Water Present?	~	_	· · · · ·		Hydrology Present? Yes 🔿 No 🖲			
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):	_				
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):	_				
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):	_				
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):	_				
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (	Yes ○ Yes ○	No 💿 No 💿	Depth (inches):	_				

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings City/County	: Warren Sampling Date: 07-Dec-17
Applicant/Owner: _AEP	State: OH Sampling Point: upl-jbl-120717-01
Investigator(s): JBL, PJR Section, 1	ownship, Range: S 14 T 5E R 3N
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): none
Slope: 0.0% / 0.0 ° Lat.: 39.383275 Long	.: -84.142314 Datum: NAD 83
Soil Map Unit Name: HtE2	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes 💿 No 🤇	) (If no, explain in Remarks.)
Are Vegetation $\Box$ , Soil $\Box$ , or Hydrology $\Box$ significantly disturbed?	Are "Normal Circumstances" present? Yes $oldsymbol{igstar}$ No $igstar$
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? Hydric Soil Present? Wetland Hydrology Present?	Yes ○ Yes ○ Yes ○	No	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

### **VEGETATION -** Use scientific names of plants.

		— Species?		
_ <u>Tree Stratum_</u> (Plot size: )	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 3 (B)
4	0	0.0%		
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $0 x 1 = 0$
3.	0	0.0%		FACW species $0   x 2 = 0$
4.	0	0.0%		FAC species $20 \times 3 = 60$
5.	0	0.0%		FACU species $80 \times 4 = 320$
Herb Stratum (Plot size: )	0	= Total Cove	er	UPL species $0 \times 5 = 0$
		30.0%	FAOL	Column Totals: 100 (A) 380 (B)
1, Plantago lanceolata	30		FACU	Column Totals: <u>100</u> (A) <u>380</u> (B)
2. Festuca arundinacea	35	35.0%	FACU	Prevalence Index = $B/A = 3.800$
3. Andropogon virginicus	15	15.0%	FACU	Hydrophytic Vegetation Indicators:
4. Setaria pumila	20	20.0%	FAC	1 - Rapid Test for Hydrophytic Vegetation
5	0	0.0%		2 - Dominance Test is > 50%
6	0	0.0%		
7.	0	0.0%		3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: )	100	= Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
<u>ــــــــــــــــــــــــــــــــــــ</u>				Vegetation Present? Yes No •
	0	= Total Cove	ei.	
				•
Remarks: (Include photo numbers here or on a separate sh	eet.)			

US Army Corps of Engineers

SOIL			Sampl	ing Point: _upl-ibl-120717-01
Profile Description: (Description)	ibe to the depth ne	eded to document the indicator or conf	irm the absence of indicators	.)
Depth M	atrix	Redox Features		
(inches) Color (mo	<u>ist) %</u>	Color (moist) <u>%</u> Type <sup>1</sup>	Loc <sup>2</sup> Texture	Remarks
0-13 10YR	4/3 100		Clay Loam	
·				
1				
31	epletion, RM=Reduce	d Matrix, CS=Covered or Coated Sand Grain	s. 4ocation: PL=Pore Lin	ing. M=Matrix.
Hydric Soil Indicators:			Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gleyed Matrix (S4)	Coast Prairie Re	dox (A16)
Histic Epipedon (A2)		Sandy Redox (S5)	Dark Surface (S	
Black Histic (A3)		Stripped Matrix (S6)	Iron Manganese	
		Loamy Mucky Mineral (F1)		irk Surface (TF12)
Stratified Layers (A5)		Loamy Gleyed Matrix (F2)		
2 cm Muck (A10)	(A11)	Depleted Matrix (F3)	Other (Explain in	n Remarks)
Depleted Below Dark Sur		Redox Dark Surface (F6)		
Thick Dark Surface (A12)		Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydr	rophytic vegetation and
Sandy Muck Mineral (S1)	()	Redox Depressions (F8)	wetland hydro	logy must be present,
5 cm Mucky Peat or Peat				bed or problematic.
Restrictive Layer (if observ				
51.			Hydric Soil Present	? Yes 🔿 No 🖲
Depth (inches):				
Remarks:				
HYDROLOGY				
Wetland Hydrology Indica	tors:			
Primary Indicators (minimum		eck all that apply)	Secondary Inc	licators (minimum of two required)
Surface Water (A1)		Water-Stained Leaves (B9)		bil Cracks (B6)
High Water Table (A2)		Aquatic Fauna (B13)		Patterns (B10)
Saturation (A3)		True Aquatic Plants (B14)		n Water Table (C2)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)		urrows (C8)
Sediment Deposits (B2)				Visible on Aerial Imagery (C9)
		Oxidized Rhizospheres on Living Roo		
Drift Deposits (B3)		Presence of Reduced Iron (C4)		r Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils		hic Position (D2)
Iron Deposits (B5)	(07)	Thin Muck Surface (C7)	FAC-Neutr	al Test (D5)
Inundation Visible on Aer		Gauge or Well Data (D9)		
Sparsely Vegetated Conc	ave Surface (B8)	Other (Explain in Remarks)		
			r	
Field Observations:	Yes O No 🖲			
Surface Water Present?		Depth (inches):		
Water Table Present?	Yes 🔿 No 🖲	Depth (inches):	Wetland Usedas L. D.	t? Yes 🔿 No 🖲
Saturation Present?	Yes O No 🖲	Depth (inches):	Wetland Hydrology Presen	t? Yes ⊖ No ⊜
(includes capillary fringe) Describe Recorded Data (s		oring well, aerial photos, previous insp	ections), if available	
_ 500.120 H0001404 Data (3				
Remarks:				

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings C	City/County: N	Warren	5	Sampling Date	e: 06-Dec-17
Applicant/Owner: AEP		State: OH	Sampling F	Point: up	l-jbl-120617-02
Investigator(s): JBL, PJR	Section, Townsh	hip, Range: S 21	т <u>5</u> Е	r 3N	
Landform (hillslope, terrace, etc.): Hillside	Lc	ocal relief (concave, co	nvex, none): flat		
Slope: <u>0.0%</u> / <u>0.0</u> ° Lat.: <u>39.387581</u>	Long.: -8	84.159131		Datum:	NAD 83
Soil Map Unit Name: HrC2			NWI classification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	● No ○	(If no, explain in Re	marks.)		
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significantly di	listurbed?	Are "Normal Circur	mstances" present?	Yes	s 💿 No 🔿
Are Vegetation . , Soil , or Hydrology naturally prob	olematic?	(If needed, explain	n any answers in Re	emarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

		— Species?		
_Tree Stratum_(Plot size: )	Absolute	Rel.Strat.		Dominance Test worksheet:
	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:(B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL_EACW_ or EAC: 50.0% (A/B)
	0	= Total Cove	er	That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species x 1 =
3.	0	0.0%		FACW species $0 \times 2 = 0$
4.	0	0.0%		FAC species $30$ x 3 = $90$
5.	0	0.0%		FACU species $60   x   4 = 240$
	0	= Total Cove	er	UPL species $0$ $x 5 = 0$
Herb Stratum (Plot size:)				
1, Festuca arundinacea	30	33.3%	FACU	Column Totals: (A) (B)
2. Glechoma hederacea	15	16.7%	FACU	Prevalence Index = $B/A = 3.667$
3. Poa pratensis	30	33.3%	FAC	Hydrophytic Vegetation Indicators:
4. Trifolium repens	15	16.7%	FACU	1 - Rapid Test for Hydrophytic Vegetation
5	0	0.0%		$\sim$ 2 - Dominance Test is > 50%
6	0	0.0%		
7.	0	0.0%		$\boxed{}$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	90	= Total Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
<u> </u>	0	= Total Cove		Vegetation Present? Yes No •
			еі 	
Remarks: (Include photo numbers here or on a separate she	eet.)			

rofile Description: (Describe to the o	lepth needed to document t	he indicator or co	nfirm the	absence of indicators.	)
Depth Matrix	Redo	x Features		_	
(inches) Color (moist)	6 Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark
0-10 10YR 4/3	70				disturbed matrix
10YR 4/6 3	30				
ype: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered	or Coated Sand Gra	ains.	Aocation: PL=Pore Lini	ng. M=Matrix.
Hydric Soil Indicators:         Histosol (A1)         Histosol (A1)         Histosol (A1)         Black Histic (A3)         Hydrogen Sulfide (A4)         Stratified Layers (A5)         2 cm Muck (A10)         Depleted Below Dark Surface (A11)         Thick Dark Surface (A12)         Sandy Muck Mineral (S1)         5 cm Mucky Peat or Peat (S3)         estrictive Layer (if observed):         Type:	<ul> <li>Sandy Gleyed M</li> <li>Sandy Redox (S</li> <li>Stripped Matrix</li> <li>Loamy Mucky M</li> <li>Loamy Gleyed N</li> <li>Depleted Matrix</li> <li>Redox Dark Surf</li> <li>Depleted Dark S</li> <li>Redox Depression</li> </ul>	5) (S6) lineral (F1) Aatrix (F2) (F3) face (F6) Surface (F7)		Coast Prairie Rec Dark Surface (S7 Iron Manganese Very Shallow Dar Other (Explain in Indicators of hydr wetland hydrol unless disturb	) Masses (F12) rk Surface (TF12) Remarks) ophytic vegetation and ogy must be present, ed or problematic.
Depth (inches):				Hydric Soil Present?	Yes 🔾 No 🖲
emarks:					

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check	Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check         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)	all that apply)         Water-Stained Leaves (B9)         Aquatic Fauna (B13)         True Aquatic Plants (B14)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres on Living Roots         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (0         Thin Muck Surface (C7)         Gauge or Well Data (D9)	Surface Soil Cracks (B6)         Drainage Patterns (B10)         Dry Season Water Table (C2)         Crayfish Burrows (C8)         (C3)       Saturation Visible on Aerial Imagery (C9)         Stunted or Stressed Plants (D1)
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	
Field Observations:         Surface Water Present?       Yes       No         Water Table Present?       Yes       No         Saturation Present?       Yes       No         (includes capillary fringe)       Yes       No         Describe Recorded Data (stream gauge, monitor)	Depth (inches):	Wetland Hydrology Present? Yes O No O
Remarks:		

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings 0	City/County: War	rren	S	ampling Date:	06-Dec-17
Applicant/Owner: _AEP		State: OH	Sampling P	oint: <b>upl-jb</b>	I-120617-03
Investigator(s): JBL, PJR	Section, Township	, Range: S 21	т <u>5</u> Е	r 3N	-
Landform (hillslope, terrace, etc.): Flat	Local	I relief (concave, conve	ex, none): flat		
Slope:0.0% /0.0_ ° Lat.:39.388436	Long.: -84.	162246		Datum: NAD	) 83
Soil Map Unit Name: WsS1A1		N	NI classification:	N/A	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes	s 🖲 No 🔾 (	(If no, explain in Rema	rks.)		
Are Vegetation . , Soil , or Hydrology significantly of	disturbed?	Are "Normal Circums	ances" present?	Yes 🖲	) No 🔿
Are Vegetation . , Soil , or Hydrology naturally prof	blematic?	(If needed, explain a	ny answers in Re	marks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes O No O
Remarks: upland 3 in lawn				

Dominant

### **VEGETATION -** Use scientific names of plants.

	Absolut	<ul> <li>Species?</li> <li>e Rel.Strat.</li> </ul>	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:(A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4.	0	0.0%		
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
_Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $0 \times 1 = 0$
3.	0	0.0%		FACW species $0$ x 2 = $0$
4.	0	0.0%		FAC species $45$ x 3 = $135$
5.	0	0.0%		FACU species $50 \times 4 = 200$
	0	= Total Cove	er	UPL species $0 \times 5 = 0$
Herb Stratum (Plot size:)				
1, Poa pratensis	45	47.4%	FAC	Column Totals: <u>95</u> (A) <u>335</u> (B)
2. Festuca rubra	30	✔ 31.6%	FACU	Prevalence Index = $B/A = 3.526$
3. Trifolium repens	20	21.1%	FACU	Hydrophytic Vegetation Indicators:
4	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
5	0	0.0%		
6	0	0.0%		2 - Dominance Test is > 50%
7	0	0.0%		3 - Prevalence Index is ≤3.0 $^{1}$
8	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.	0	0.0%		
	95	= Total Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woodv Vine Stratum (Plot size:)				be present, unless disturbed or problematic.
1	0	0.0%		Hydrophytic
2	0	0.0%		Vogetation
	0	= Total Cove	er	Present? Yes No •
				I
Remarks: (Include photo numbers here or on a separate she	eet.)			

US Army Corps of Engineers

SOIL									Sampling Po	int: upl-ibl-120617-03
Profile Descr	ription: (De		he depth	needed to do				onfirm the	e absence of indicators.)	
Depth (inchos)	Color (	Matrix moist)	%	Color (m		K Featu %	res Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches) 0-14			<u></u> 99			1	C	-	Clay Loam	Rellidiks
U-14	10YR		99		4/4					
51		)=Depletion	, RM=Rec	Juced Matrix, C	S=Covered	or Coate	ed Sand Gr	ains.	Accation: PL=Pore Lining. Main Indicators for Problema	
Histic Epij Black Hist Hydrogen Stratified 2 cm Muc Depleted Thick Dar Sandy Mu	dric Soil Indicators:         Histosol (A1)       Sandy Gleyed Matrix (S4)         Histic Epipedon (A2)       Sandy Redox (S5)         Black Histic (A3)       Stripped Matrix (S6)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)         2 cm Muck (A10)       Depleted Matrix (F3)         Depleted Below Dark Surface (A11)       Redox Dark Surface (F6)         Thick Dark Surface (A12)       Depleted Dark Surface (F7)         Sandy Muck Mineral (S1)       Redox Depressions (F8)         5 cm Mucky Peat or Peat (S3)       Sandy Surface (S1)						Coast Prairie Redox (A16) Coast Prairie Red			
Restrictive L	ayer (if obs	erved):								
Type: Depth (inc	hes):								Hydric Soil Present?	Yes 🔿 No 🖲
Remarks:										
HYDROLC	DGY									

Wetland Hydrology Indica	ators:			
Primary Indicators (minimun	n of one is required; che	ck all that apply)		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9)         High Water Table (A2)       Aquatic Fauna (B13)         Saturation (A3)       True Aquatic Plants (B14)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Root         Drift Deposits (B3)       Presence of Reduced Iron (C4)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils         Iron Deposits (B5)       Thin Muck Surface (C7)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)			) C1) n Living Roots (C3) n (C4) ı Tilled Soils (C6)	Secondary Indicators (minimum of two required)          Surface Soil Cracks (B6)         Drainage Patterns (B10)         Dry Season Water Table (C2)         Crayfish Burrows (C8)         Saturation Visible on Aerial Imagery (C9)         Stunted or Stressed Plants (D1)         Geomorphic Position (D2)         FAC-Neutral Test (D5)
Sparsely Vegetated Cond	cave Surface (B8)	Other (Explain in Remarl	(S)	
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (	Yes ○ No ● Yes ○ No ● Yes ○ No ● stream gauge, monito	Depth (inches): Depth (inches): Depth (inches): pring well, aerial photos, pre	14	Hydrology Present? Yes O No 🔍 available:
Remarks:				

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings City/County:	Warren Sampling Date: 06-Dec-17
Applicant/Owner: AEP	State: OH Sampling Point: upl-jbl-120617-01
Investigator(s): JBL, PJR Section, Tox	wnship, Range: S 3 T 4E R 3N
Landform (hillslope, terrace, etc.): Flat	Local relief (concave, convex, none): flat
Slope:0.0% /0.0 ° Lat.: 39.402550 Long.:	-84.211753 Datum: NAD 83
Soil Map Unit Name:	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes $\odot$ No $\bigcirc$	(If no, explain in Remarks.)
Are Vegetation . , Soil , or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes $oldsymbol{igodol}$ No $igodol$
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? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No • No • No •	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

	Absolut	Species?     Rel Strat	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cove		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: 1 (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 5 (B)
4.	0	0.0%		
5.	0	0.0%		Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC:(A/B)
<u>Sapling/Shrub Stratum (</u> Plot size:)				Prevalence Index worksheet:
1. Rubus allegheniensis	10	33.3%	FACU	Total % Cover of: Multiply by:
2. Elaeagnus angustifolia	20	66.7%	FACU	OBL species x 1 =
3.	0	0.0%		FACW species $0 \times 2 = 0$
4.	0	0.0%		FAC species $20$ x 3 = $60$
5.	0	0.0%		FACU species $105 \times 4 = 420$
Herb Stratum (Plot size:)	30	= Total Cov	er	UPL species $0$ $x 5 = 0$
1, Dipsacus fullonum	55	57.9%	FACU	Column Totals: <u>125</u> (A) <u>480</u> (B)
2. Juncus tenuis	20	21.1%	FAC	
3. Festuca arundinacea	20	21.1%	FACU	Prevalence Index = B/A = <u>3.840</u>
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.		0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<u>Woodv Vine Stratum</u> (Plot size:)	95	= Total Cove	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0	0.0%		
1	0	0.0%		Hydrophytic
۷				Vegetation Present? Yes No •
	0	= Total Cov	er	Present? Yes V No V
Remarks: (Include photo numbers here or on a separate she	eet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the		
reme beschption. (Beschbe to the depth heeded to document the indicator of commit the	absence of indicators.)	
Depth Matrix Redox Features		
(inches) Color (moist) % Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-11 10YR 4/3 100	Clay Loam	
	Accation:       PL=Pore Lining. M=Ma         Indicators for Problematic         Coast Prairie Redox (A16)         Dark Surface (S7)         Iron Manganese Masses (         Very Shallow Dark Surface         Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic v         wetland hydrology must unless disturbed or pro	F12) e (TF12) s) egetation and be present,

### HYDROLOGY

Wetland Hydrology Indica	tors:			
Primary Indicators (minimum	of one is rec	uired; che	ck all that apply)	Secondary Indicators (minimum of two required)
Primary Indicators (minimum         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 Ae         Sparsely Vegetated Cond	rial Imagery	(B7)	ck all that apply)         Water-Stained Leaves (B9)         Aquatic Fauna (B13)         True Aquatic Plants (B14)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres on Living Roc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils         Thin Muck Surface (C7)         Gauge or Well Data (D9)         Other (Explain in Remarks)	Surface Soil Cracks (B6)         Drainage Patterns (B10)         Dry Season Water Table (C2)         Crayfish Burrows (C8)         Saturation Visible on Aerial Imagery (C9)         Stunted or Stressed Plants (D1)
		.00)	Other (Explain in Remarks)	r
Field Observations: Surface Water Present?	Yes O	No 🖲	Depth (inches):	
Water Table Present?	$_{\rm Yes}$ $\bigcirc$	No 💿	Depth (inches):	
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland Hydrology Present? Yes 🔾 No 🖲
Describe Recorded Data (	stream gaug	je, monito	pring well, aerial photos, previous insp	ections), if available:
Remarks:				

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings City/County:	Warren	Sampling Date: 05-Dec-17
Applicant/Owner: AEP	State: OH Sampling	Point: upl-jbl-120517-03
Investigator(s): JBL, PJR Section, Tov	vnship, Range: S <u>16</u> T <u>4E</u>	R <u>3N</u>
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): non	e
Slope: 0.0% / 0.0 ° Lat.: 39.413987 Long.:	-84.251314	Datum: NAD 83
Soil Map Unit Name: Pc	NWI classification	: <u>N/A</u>
Are climatic/hydrologic conditions on the site typical for this time of year? Yes $\odot$ No $\bigcirc$	(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 R	emarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks: pasture				

Dominant

### **VEGETATION -** Use scientific names of plants.

		— Species?		
Tree Stratum (Plot size: )	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 2 (B)
4.	0	0.0%		
5	0	0.0%		Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species $0 \times 1 = 0$
3.	0	0.0%		FACW species $0 \times 2 = 0$
4.	0	0.0%		FAC species $0$ x 3 = $0$
5.	0	0.0%		FACU species $90 \times 4 = 360$
Herb Stratum (Plot size: )	0	= Total Cove	er	UPL species $0 \times 5 = 0$
1. Poa annua	50	55.6%	FACU	Column Totals: 90 (A) 360 (B)
	40	44.4%	FACU	
2. Tritolium repens 3.	0	0.0%	TACU	Prevalence Index = B/A = 4.000
<u> </u>				Hydrophytic Vegetation Indicators:
4 5	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
	0	0.0%		2 - Dominance Test is > 50%
6	0	0.0%		$3 - Prevalence Index is \leq 3.0^{1}$
7.	0	0.0%		
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10.	0	0.0%		
Woody Vine Stratum (Plot size:)	90	= Total Cove	er	<sup>1</sup> . Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	0			
1	0	0.0%	·	Hydrophytic
2	0	0.0%		Vogetation
	0	= Total Cove	er	Present? Yes No 💿
	t )			1
Remarks: (Include photo numbers here or on a separate she	eet.)			

US Army Corps of Engineers

SOIL						Sampling Point:	upl-jbl-120517-03
Profile Descri	ption: (Describe	to the depth n	eeded to document	the indicator or	confirm the	e absence of indicators.)	
Depth .	Matrix	<u> </u>	Redo	ox Features		_	
(inches)	Color (moist)	%	Color (moist)	% Type	1 Loc <sup>2</sup>	Texture	Remarks
0-13	10YR 3/3	100	, ,			Loam	
51	•	tion, RM=Reduc	ed Matrix, CS=Covered	d or Coated Sand	Grains.	Location: PL=Pore Lining. M=Ma	itrix.
Hydric Soil Ir						Indicators for Problematic	Hydric Soils <sup>3</sup> :
Histosol (A			Sandy Gleyed N			Coast Prairie Redox (A16)	
Black Histic			Sandy Redox (S			Dark Surface (S7)	
	Sulfide (A4)		Stripped Matrix			Iron Manganese Masses (	F12)
Stratified L			Loamy Mucky N			Very Shallow Dark Surface	e (TF12)
2 cm Muck	<b>J</b>		Loamy Gleyed I			Other (Explain in Remarks	
Depleted B	Below Dark Surface	(A11)	Depleted Matrix	. ,		<u> </u>	,
Thick Dark	Surface (A12)		Redox Dark Sur	. ,		3	
Sandy Muc	k Mineral (S1)		Depleted Dark			<sup>3</sup> Indicators of hydrophytic vertice wetland hydrology must	egetation and be present
5 cm Muck	xy Peat or Peat (S3)					unless disturbed or pro	
Restrictive La	yer (if observed)	:					
Туре:							
Depth (inch	es):					Hydric Soil Present? Yes	; 🔿 No 🖲
HYDROLO	GY						
Wetland Hydr	ology Indicators	:					
Primary Indicat	tors (minimum of o	ne is required; o	heck all that apply)			Secondary Indicators (n	ninimum of two required)
Surface Wa	ater (A1)		Water-Staine	d Leaves (B9)		Surface Soil Cracks	(B6)
High Wate	r Table (A2)		Aquatic Fauna	a (B13)		Drainage Patterns (	310)
Saturation	(A3)		True Aquatic	Plants (B14)		Dry Season Water T	able (C2)
Water Mar	ks (B1)		Hydrogen Sul	lfide Odor (C1)		Crayfish Burrows (C	8)
Sediment [	Deposits (B2)		Oxidized Rhiz	ospheres on Livir	ng Roots (C3)	Saturation Visible or	n Aerial Imagery (C9)
Drift Depos	sits (B3)		Presence of R	Reduced Iron (C4)	)	Stunted or Stressed	Plants (D1)
	or Crust (B4)		Recent Iron F	Reduction in Tilled	d Soils (C6)	Geomorphic Position	n (D2)
Iron Depos			Thin Muck Su	ırface (C7)		FAC-Neutral Test (D	5)
	Visible on Aerial Ir		Gauge or We	ll Data (D9)			
Sparsely V	egetated Concave S	Surface (B8)	Other (Explain	n in Remarks)			
Field Observa	tions:						
Surface Water I		es O No 🤄	Depth (inch	ies):			
Water Table Pro		es O No 🖲					
Saturation Pres					Wet	land Hydrology Present? Ye	es 🔿 No 🖲
(includes capilla	V C	s O No 🖲	Depth (inch	ies):			
Describe Reco	orded Data (strea	m gauge, moi	nitoring well, aerial p	hotos, previous	s inspections	s), if available:	
Domortio							
Remarks:							

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Warren Sa	ampling Date: 05-Dec-17
State: OH Sampling Po	oint: upl-jbl-120517-02
ownship, Range: S <u>16</u> T <u>4E</u>	r <u>3N</u>
Local relief (concave, convex, none): rolling	9
.: -84.257190	Datum: NAD 83
NWI classification:	N/A
) (If no, explain in Remarks.)	
Are "Normal Circumstances" present?	Yes 💿 No 🔿
(If needed, explain any answers in Rer	narks.)
-	State:       OH       Sampling Po         Township, Range:       S       16       T       4E         Local relief (concave, convex, none):       rolling         I::       -84.257190         WI classification:       O         (If no, explain in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🔿 No 🖲
Remarks:				

Dominant

#### **VEGETATION -** Use scientific names of plants.

		— Species?		1
Tree Stratum_(Plot size:)	Absolute % Cove	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 2 (B)
4	0	0.0%		
5.	0	0.0%		Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species x 1 =
3.	0	0.0%		FACW species $0$ x 2 = $0$
4.	0	0.0%		FAC species $0 \times 3 = 0$
5.	0	0.0%		FACU species $100 \times 4 = 400$
Herb Stratum (Plot size:)	0	= Total Cov	er	UPL species $0 \times 5 = 0$
1. Trifolium pratense	50	✓ 50.0%	FACU	Column Totals: <u>100</u> (A) <u>400</u> (B)
2. Festuca arundinacea	50	✓ 50.0%	FACU	Prevalence Index = $B/A = 4.000$
3.	0	0.0%		
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	100	= Total Cov	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woodv Vine Stratum (Plot size:)				be present, unless disturbed or problematic.
1	0	0.0%		
2	0	0.0%		Hydrophytic Vegetation
	0	= Total Cov	er	Present? Yes No 🔍
Remarks: (Include photo numbers here or on a separate sh	eet.)			

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

US Army Corps of Engineers

SOIL				Sampling Point: upl-ibl-120517-02
Profile Descr	ription: (Descr	ibe to the depth	n needed to document the indicator or confirm	m the absence of indicators.)
Depth	Ma	atrix	Redox Features	
(inches)	Color (mo	ist) <u>%</u>	<u>Color (moist) % Type 1 Le</u>	oc <sup>2</sup> Texture Remarks
0-12	10YR	3/3 100	·	
			·	
			·	
			·	
			·	
Hydric Soil I		epletion, RM=Red	duced Matrix, CS=Covered or Coated Sand Grains.	
Histosol (			Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils <sup>3</sup> :
_ `	pedon (A2)		Sandy Redox (S5)	Coast Prairie Redox (A16)
Black Hist	tic (A3)		Stripped Matrix (S6)	Dark Surface (S7)
Hydrogen	n Sulfide (A4)		Loamy Mucky Mineral (F1)	Iron Manganese Masses (F12)
Stratified	Layers (A5)		Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12)
2 cm Muc	ck (A10)			Other (Explain in Remarks)
Depleted	Below Dark Surf	ace (A11)	Depleted Matrix (F3)	
	rk Surface (A12)		Redox Dark Surface (F6)	
	uck Mineral (S1)		Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
	cky Peat or Peat	(\$3)	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
	ayer (if observ			
Туре:				
Depth (inc	ches):			Hydric Soil Present? Yes O No 🖲
Remarks:				
HYDROLC	DGY			
	drology Indicat			Cooperative Indicators (minimum of two required)
_		or one is required	I; check all that apply)	Secondary Indicators (minimum of two required)
	Vater (A1)		Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
	er Table (A2)		Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation	n (A3)		True Aquatic Plants (B14)	Dry Season Water Table (C2)
Water Ma	arks (B1)		Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment	Deposits (B2)		Oxidized Rhizospheres on Living Roots	s (C3) Saturation Visible on Aerial Imagery (C9)
Drift Depo	osits (B3)		Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat	or Crust (B4)		Recent Iron Reduction in Tilled Soils (	(C6) Geomorphic Position (D2)
Iron Depo	osits (B5)		Thin Muck Surface (C7)	FAC-Neutral Test (D5)
	on Visible on Aer	al Imagery (B7)	Gauge or Well Data (D9)	
_	Vegetated Conca		Other (Explain in Remarks)	
	ations.			
Field Observ Surface Water		Yes O No	• Depth (inches):	
Water Table P		Yes O No		
Saturation Pre		Yes O No		Wetland Hydrology Present? Yes $\bigcirc$ No $oldsymbol{igodol}$
(includes capil Describe Rec			nonitoring well, aerial photos, previous inspec	ctions) if available.
Describe Rec		ireani gauge, n	ionitoring weir, dendi protos, previous inspec	
Remarks:				

# Upland 31

#### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hillsboro-Hutchings	City/County: Warro	en	Sa	ampling Date:	05-Dec-17
Applicant/Owner: AEP		State: OH	Sampling Po	oint: <b>upl-jb</b> l	-120517-01
Investigator(s): JBL, PJR	Section, Township,	Range: S 22	4E	r 3N	
Landform (hillslope, terrace, etc.): Flat	Local r	elief (concave, convex,	none): flat		
Slope: 0.0% / 0.0 ° Lat.: 39.417304	Long.: -84.27	0005		Datum: NAD	83
Soil Map Unit Name: RvB2		NWI	classification:	PEM1ch	
Are climatic/hydrologic conditions on the site typical for this time of year? $\ \ Y$	′es ● No ○ (If	no, explain in Remarks	.)		
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significant	ly disturbed?	Are "Normal Circumstand	ces" present?	Yes 🖲	No 〇
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any	answers in Rer	marks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes O Yes O Yes O	No	Is the Sampled Area within a Wetland?	Yes $\bigcirc$ No $ullet$
Remarks:				

Dominant

#### **VEGETATION -** Use scientific names of plants.

		— Species?		
_Tree Stratum_(Plot size:)	Absolute % Cove	Rel.Strat.		Dominance Test worksheet:
			518103	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 2 (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1	0	0.0%		Total % Cover of: Multiply by:
2	0	0.0%		OBL species x 1 =
3.	0	0.0%		FACW species $5$ x 2 = 10
4.	0	0.0%		FAC species $0 \times 3 = 0$
5.	0	0.0%		FACU species $95$ x 4 = $380$
Herb Stratum (Plot size:)	0	= Total Cov	er	UPL species $0$ x 5 = $0$
1. Phalaris arundinacea	5	5.0%	FACW	Column Totals: <u>100</u> (A) <u>390</u> (B)
2. Solidago altissima	30	30.0%	FACU	Prevalence Index = $B/A = 3.900$
3. Dipsacus fullonum	65	65.0%	FACU	
4.	0	0.0%		Hydrophytic Vegetation Indicators:
5.	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
6.	0	0.0%		2 - Dominance Test is > 50%
7.	0	0.0%		<b>3</b> - Prevalence Index is ≤3.0 $^{1}$
8.	0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woodv Vine Stratum (Plot size: )	100	= Total Cov	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		
2.	0	0.0%		Hydrophytic
	0	= Total Cov	rer	Vegetation Present? Yes O No 🖲
Remarks: (Include photo numbers here or on a separate sh	eet.)			1

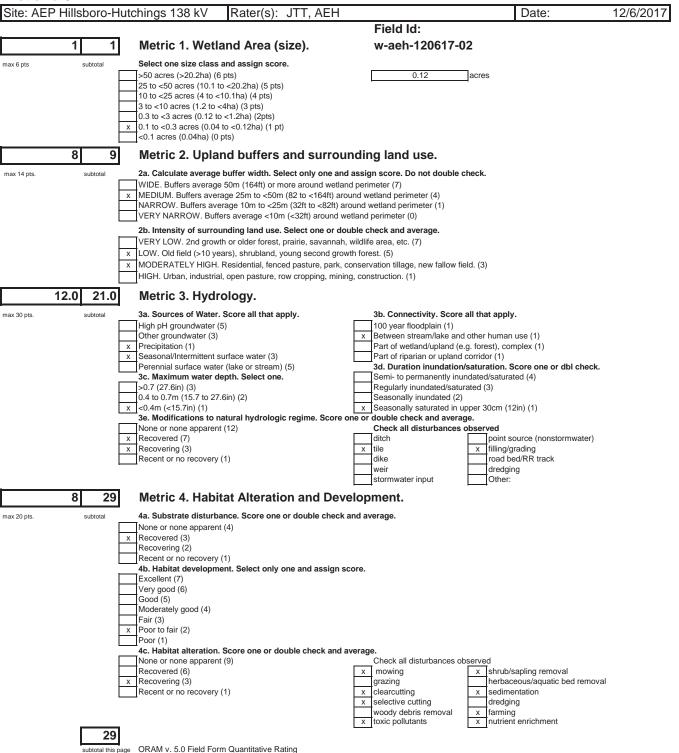
\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

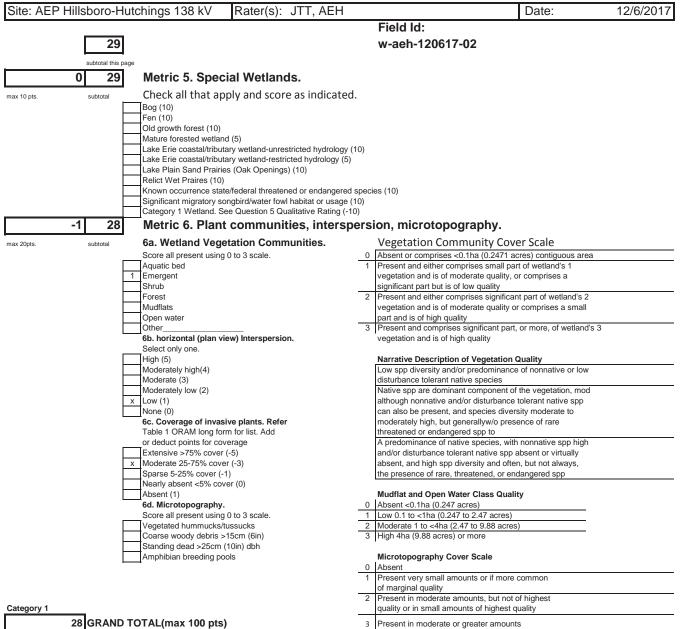
US Army Corps of Engineers

SOIL						Sampling Point	upl-ibl-120517-01
Profile Description:	(Describe to the de	pth needed to do	cument the ind	icator or co	nfirm the	e absence of indicators.)	
Depth	Matrix		Redox Feat	ures		_	
(inches) Col	or (moist) %	Color (m	oist) <u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-11 10YF	R 4/3 100					Clay Loam	
Type: C=Concentratio	n, D=Depletion, RM=	Reduced Matrix, CS		ted Sand Gra	ins.	Location: PL=Pore Lining. M=N	latrix.
Hydric Soil Indicato	• •					Indicators for Problemati	
Histosol (A1)		Sandy	Gleyed Matrix (S	(4)			
Histic Epipedon (A	(2)	Sandy	Redox (S5)			Coast Prairie Redox (A16	)
Black Histic (A3)		Stripp	ed Matrix (S6)			Dark Surface (S7)	
Hydrogen Sulfide	(A4)		y Mucky Mineral (	F1)		Iron Manganese Masses	
Stratified Layers (A	A5)		y Gleyed Matrix (F			Very Shallow Dark Surface	ce (TF12)
2 cm Muck (A10)			ted Matrix (F3)	2)		Other (Explain in Remark	(S)
Depleted Below D	ark Surface (A11)			~			
Thick Dark Surface			Dark Surface (Fe	,		2	
Sandy Muck Miner	. ,		ted Dark Surface			<sup>3</sup> Indicators of hydrophytic	
5 cm Mucky Peat	. ,	Redox	Depressions (F8	)		wetland hydrology mus unless disturbed or pr	
Restrictive Layer (if							
Type:	observeu).						
Depth (inches):						Hydric Soil Present? Ye	s 🔿 No 🖲
IYDROLOGY							
Wetland Hydrology							
Primary Indicators (mi							minimum of two required)
Surface Water (A1			er-Stained Leaves	s (B9)		Surface Soil Cracks	
High Water Table	(A2)	🛄 Aqu	atic Fauna (B13)			Drainage Patterns	(B10)
Saturation (A3)		Tru	e Aquatic Plants (	B14)		Dry Season Water	Table (C2)
Water Marks (B1)		L Hyd	rogen Sulfide Ode	or (C1)		Crayfish Burrows (	C8)
Sediment Deposits	s (B2)	Oxic	dized Rhizosphere	s on Living R	oots (C3)	Saturation Visible of	on Aerial Imagery (C9)
Drift Deposits (B3)	)	Pres	sence of Reduced	Iron (C4)		Stunted or Stresse	d Plants (D1)
Algal Mat or Crust		Rec	ent Iron Reductio	n in Tilled So	ils (C6)	Geomorphic Position	
Iron Deposits (B5)			n Muck Surface (C			FAC-Neutral Test (	
	on Aerial Imagery (B						
			ge or Well Data (				
Sparsely vegetate	d Concave Surface (B	3) 🗌 Oth	er (Explain in Ren	narks)			
Field Observations:	~						
Surface Water Present			epth (inches):				
Water Table Present?	$_{ m Yes}$ $\bigcirc$	No 💿 🛛 De	epth (inches):				res 🔿 No 🖲
Saturation Present?	Yes O	No 💿 🛛 De	epth (inches):		Wetl	land Hydrology Present?	res 🔾 No 🖲
(includes capillary fring Describe Recorded E				previous in	spections	s), if available:	
	sata (stroum gauge	, mormoring well	aona photos,	P1 0 010 00 111.			
Remarks:							

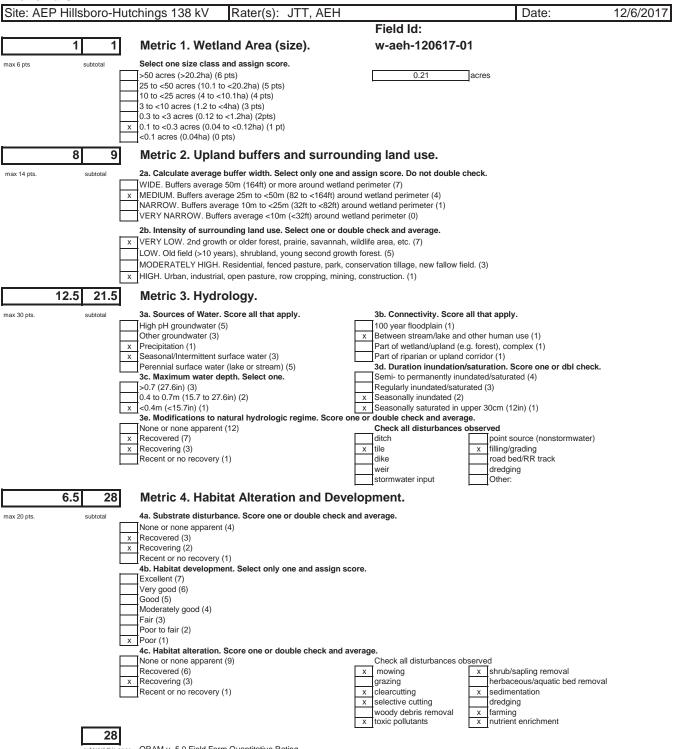
APPENDIX B

OEPA WETLAND ORAM FORMS

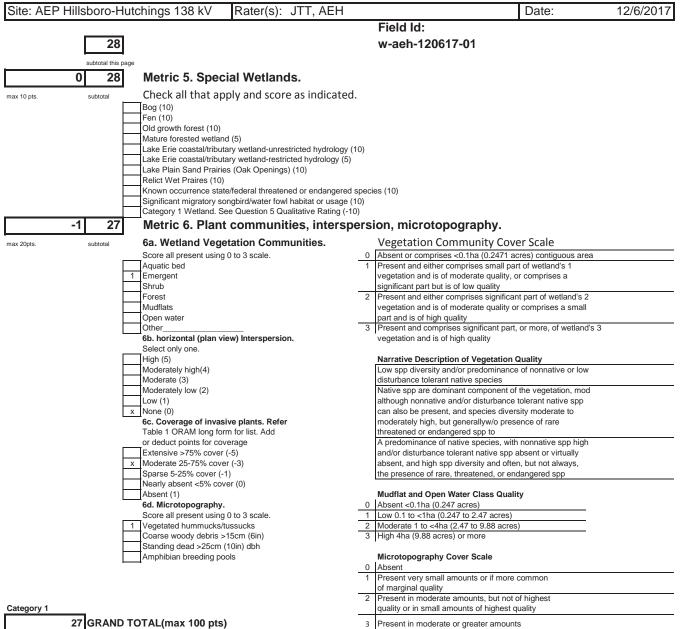




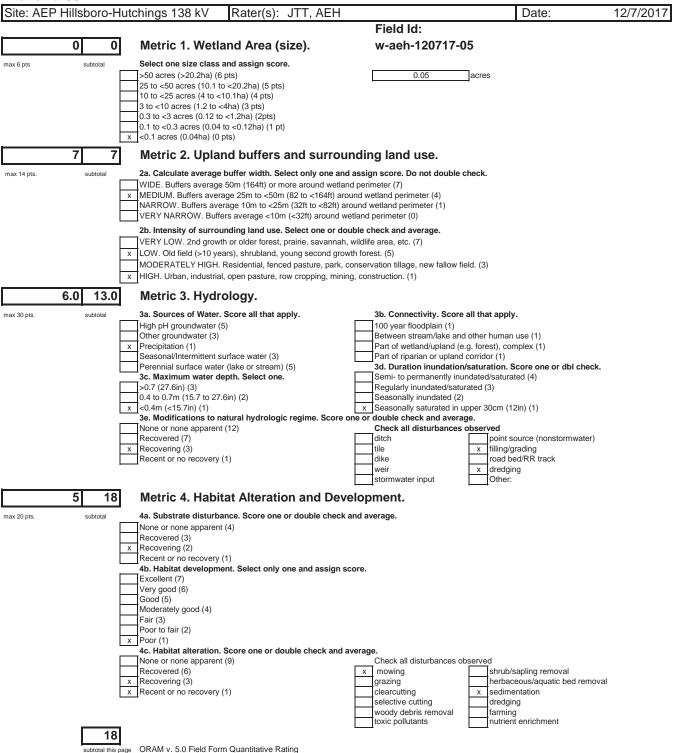
and of highest quality

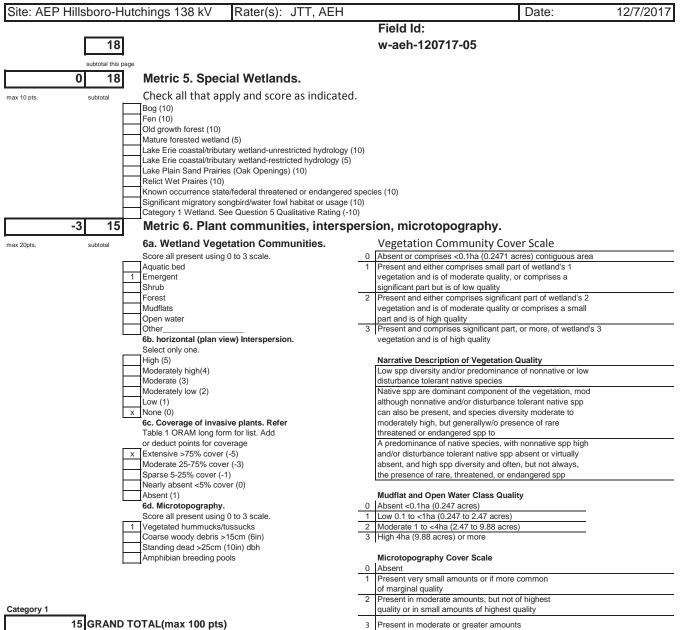


ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating

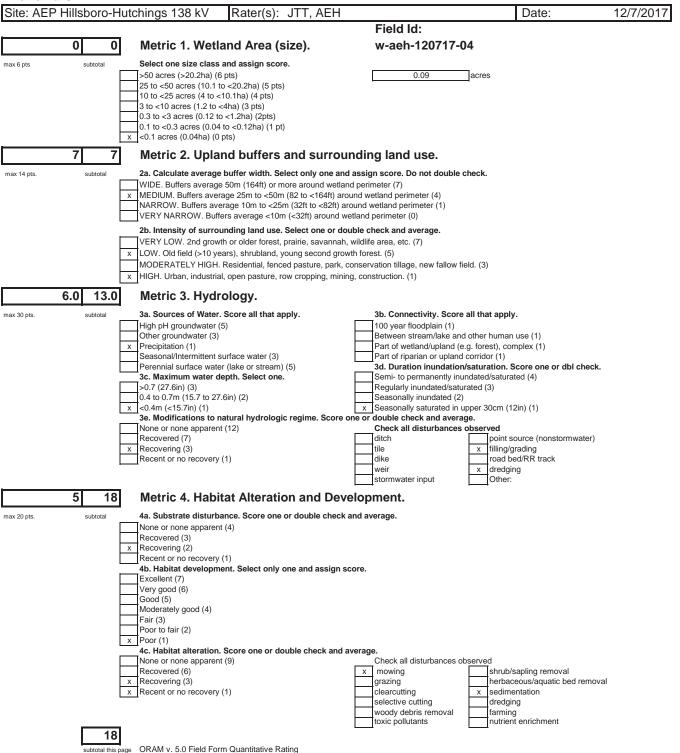


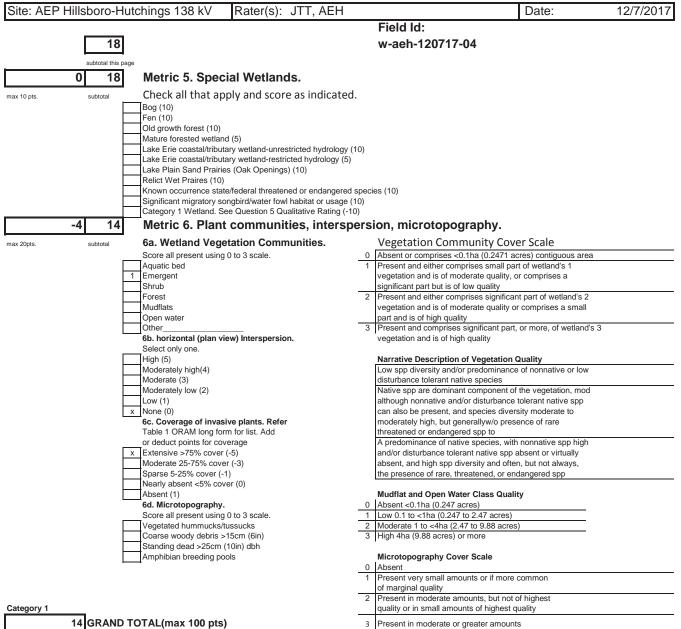
and of highest quality





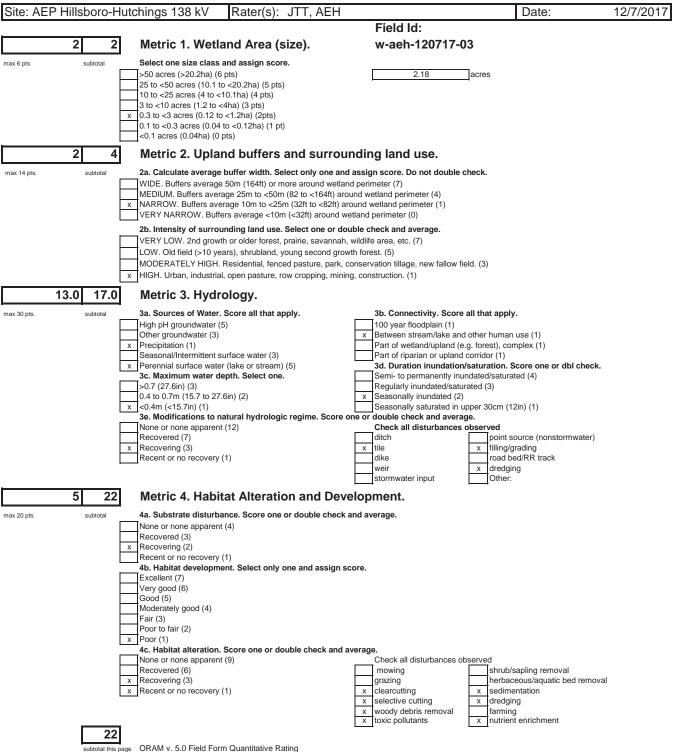
and of highest quality

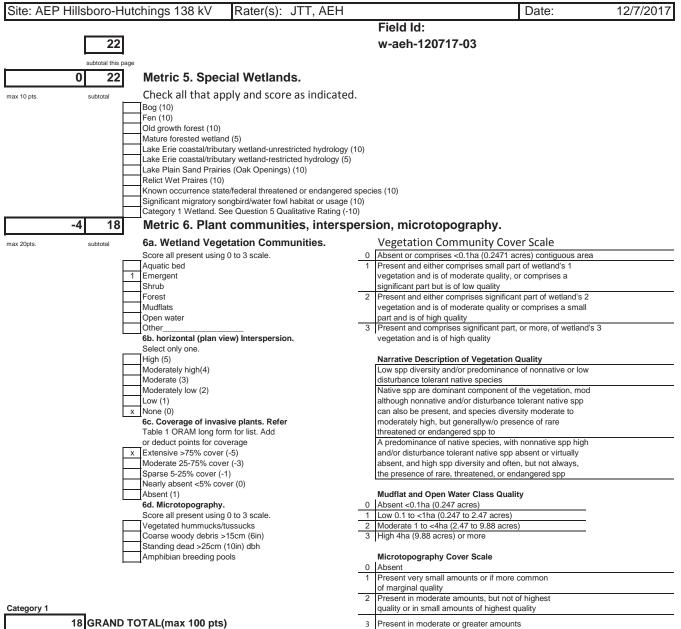


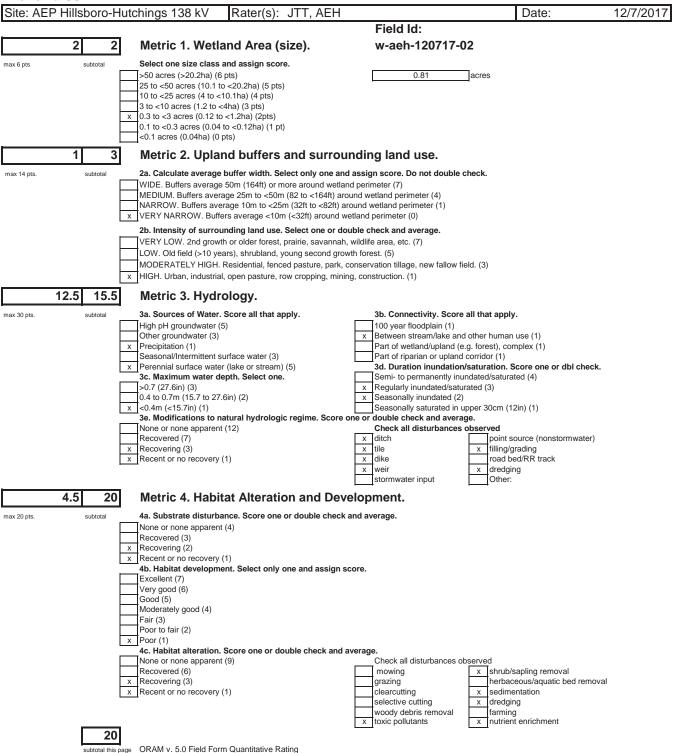


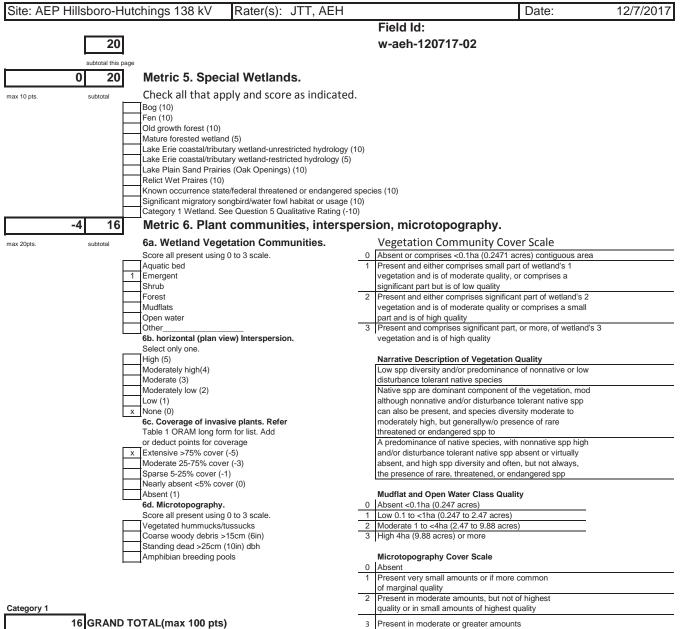
0

and of highest quality

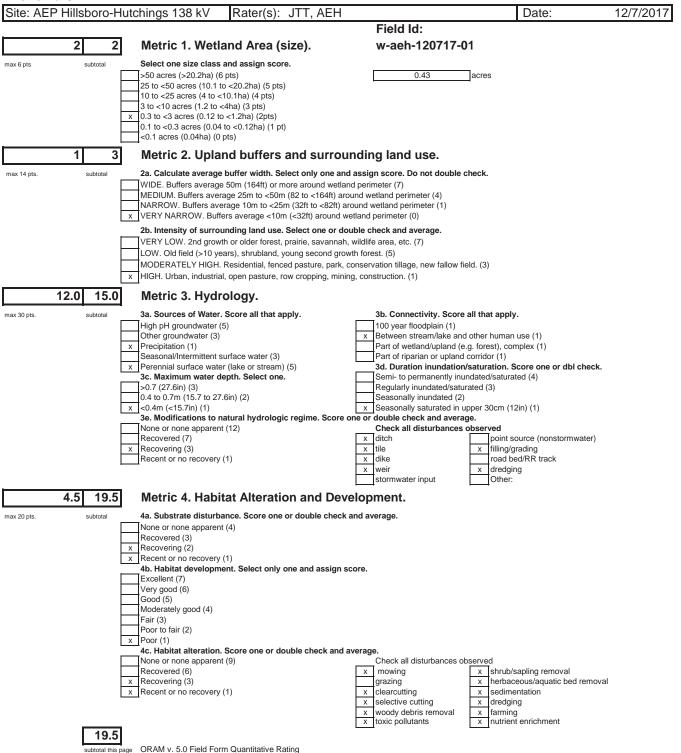








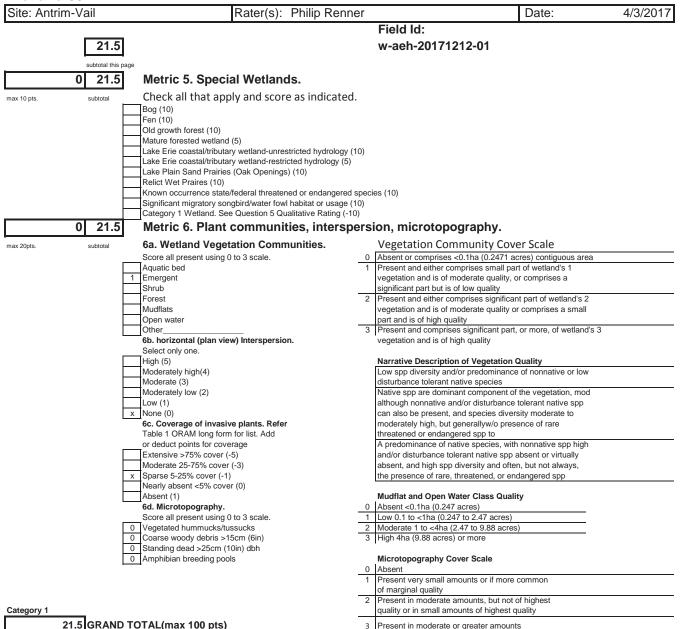
3



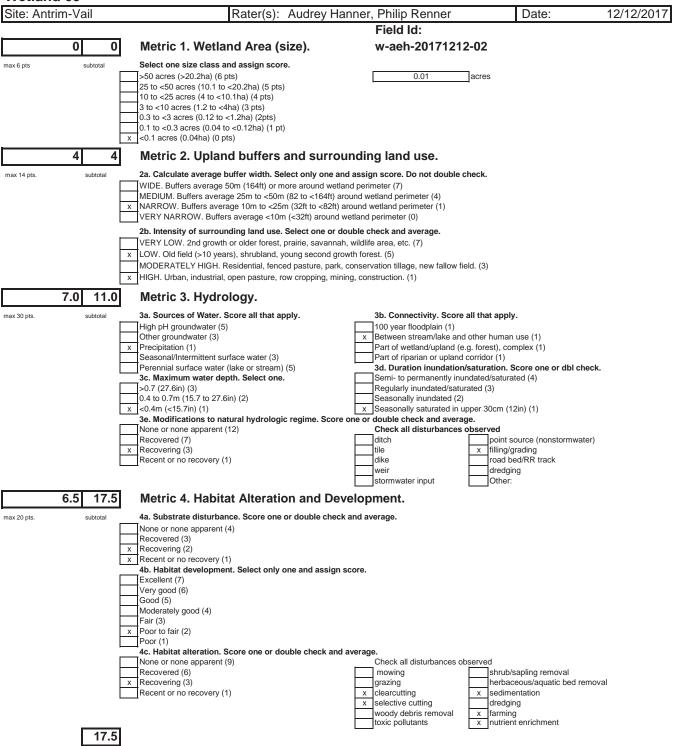
	Hillsboro-Hu	tchings 138 kV	Rater(s): JTT, AE	H		Date:	12/7/201
					Field Id:		
	19.5				w-aeh-120717-01		
	subtotal this page						
	0 19.5	Metric 5. Speci	al Wetlands.				
x 10 pts.	subtotal	Check all that app	oly and score as indica	ited.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland					
			ry wetland-unrestricted hydrol ry wetland-restricted hydrolog				
		Lake Plain Sand Prairies		y (J)			
		Relict Wet Praires (10)	(our openings) (ro)				
			/federal threatened or endang	ered speci	es (10)		
			ngbird/water fowl habitat or us				
			e Question 5 Qualitative Ratin	• • •			
	-4 15.5	Metric 6. Plant	communities, inte	rspersi	on, microtopography.		
20pts.	subtotal	6a. Wetland Vege	tation Communities.		Vegetation Community C	Cover Scale	
		Score all present using (	) to 3 scale.	0	Absent or comprises <0.1ha (0.247		
		Aquatic bed		1	Present and either comprises small		
	_1	1 Emergent			vegetation and is of moderate qual	ity, or comprises a	
		Shrub			significant part but is of low quality	ficant part of wateral's O	
		Forest Mudflats		2	Present and either comprises signi vegetation and is of moderate qual		
		Open water			part and is of high quality	ity of comprises a small	
		Other		3	Present and comprises significant	part. or more. of wetland's 3	
		6b. horizontal (plan vie	w) Interspersion.		vegetation and is of high quality		
		Select only one.					
		High (5)			Narrative Description of Vegetat		
		Moderately high(4)			Low spp diversity and/or predomin		
		Moderate (3)			disturbance tolerant native species		
		Moderately low (2) Low (1)			Native spp are dominant compone although nonnative and/or disturba		
	,	K None (0)			can also be present, and species of		
		6c. Coverage of invasi	ve plants. Refer		moderately high, but generallyw/o		
		Table 1 ORAM long form			threatened or endangered spp to		
		or deduct points for cove	erage		A predominance of native species,	with nonnative spp high	
	>	Extensive >75% cover (			and/or disturbance tolerant native s		
		Moderate 25-75% cover			absent, and high spp diversity and		
		Sparse 5-25% cover (-1			the presence of rare, threatened, o	r endangered spp	
		Nearly absent <5% cove Absent (1)	er (U)		Mudflat and Open Water Class Q	uality	
		6d. Microtopography.		0	Absent <0.1ha (0.247 acres)	aanty	
		Score all present using (	) to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acr	es)	
		Vegetated hummucks/tu		2	Moderate 1 to <4ha (2.47 to 9.88 a		
		Coarse woody debris >1		3	High 4ha (9.88 acres) or more		
		Standing dead >25cm (1					
		Amphibian breeding poo	ls	-	Microtopography Cover Scale		
				0	Absent		
				1	Present very small amounts or if m of marginal quality	iore common	
				2		not of highest	
				2			
tegory 1					quality or in small amounts of higher	est quality	

#### Wetland 08 Site: Antrim-Vail Rater(s): Philip Renner Date: 4/3/2017 Field Id: 0 0 Metric 1. Wetland Area (size). w-aeh-20171212-01 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.03 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrounding land use. 7 7 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 7.5 14.5 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. max 30 pts. subtota 3b. Connectivity. Score all that apply. High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) 3d. Duration inundation/saturation. Score one or dbl check. Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) х <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) х Х 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Recovering (3) tile filling/grading Recent or no recovery (1) dike road bed/RR track weir dredging stormwater input Other 7 21.5 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts. subtota None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) х Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing x shrub/sapling removal Recovering (3) grazing herbaceous/aquatic bed removal Recent or no recovery (1) clearcutting sedimentation х х Х selective cutting dredging farming nutrient enrichment woody debris removal toxic pollutants 21.5

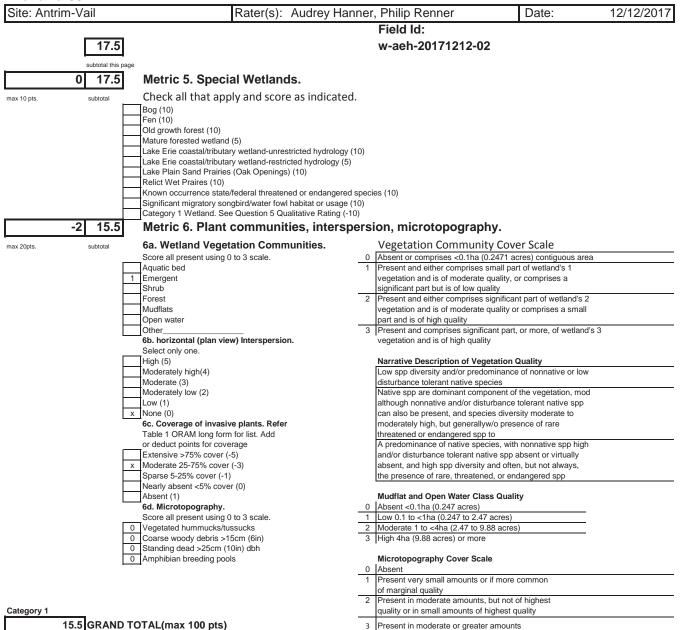


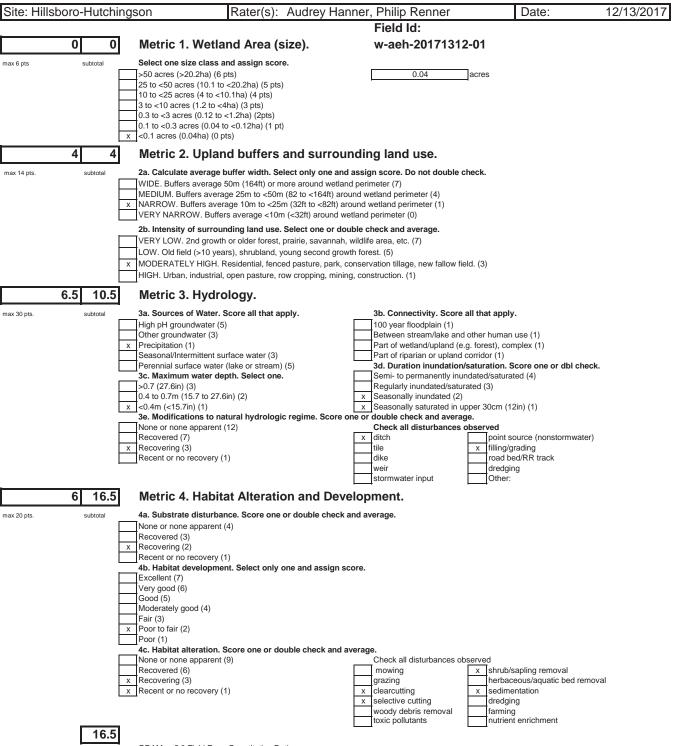


21.5 GRAND TOTAL(max 100 pts)



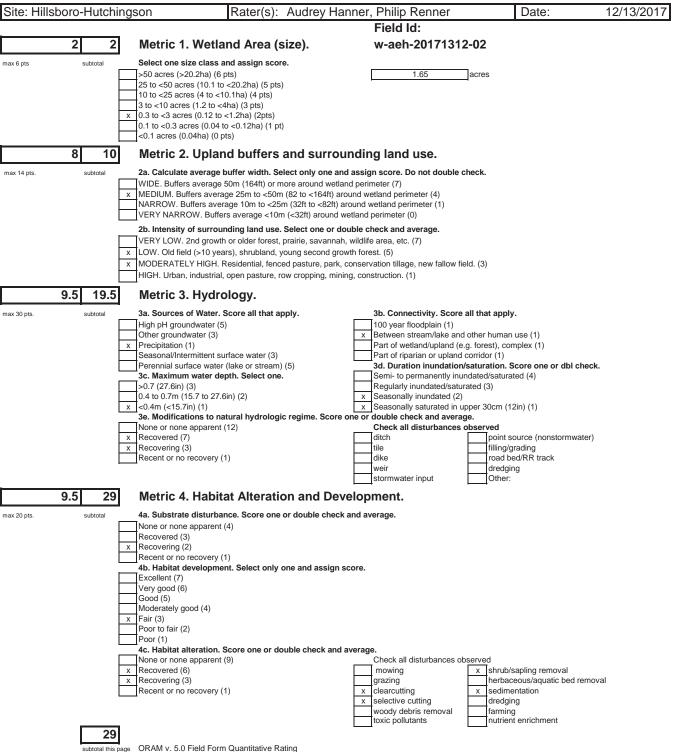
ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating



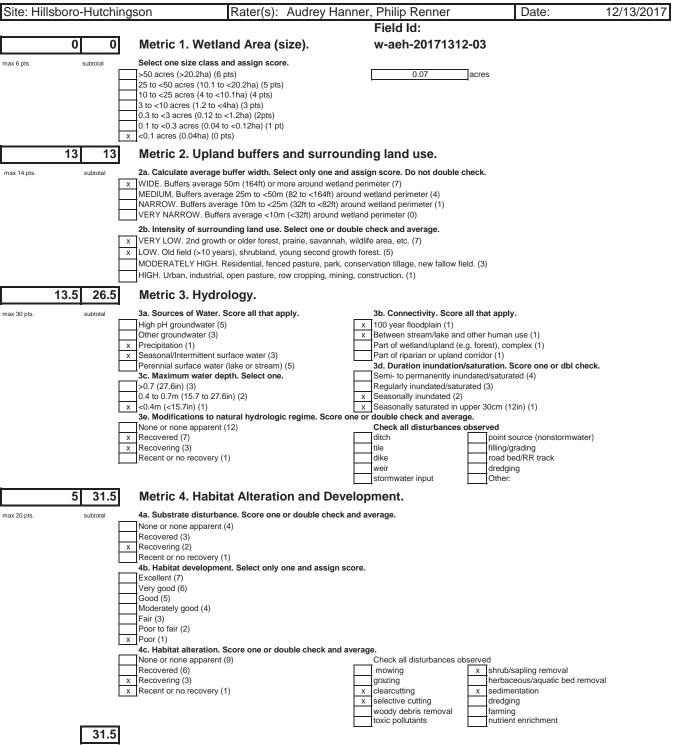


ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: Hillsboro-Huto	chingson	Rater(s): Audrey	y Hanner	, Philip Renner	Date:	12/13/201
				Field Id:		
16	.5			w-aeh-20171312-01		
subtotal						
0 16	.5 Metric 5. Sp	ecial Wetlands.				
x 10 pts. subtotal	Check all that	apply and score as indi	cated.			
	Bog (10)					
	Fen (10) Old growth forest (1	0)				
	Mature forested we					
		butary wetland-unrestricted hyd	rology (10)			
		butary wetland-restricted hydrol	ogy (5)			
		airies (Oak Openings) (10)				
	Relict Wet Praires (	state/federal threatened or enda	indered speci	es (10)		
		y songbird/water fowl habitat or		63 (10)		
		I. See Question 5 Qualitative Ra				
0 16	.5 Metric 6. Pla	int communities, int	erspers	ion, microtopograph	ıy.	
20pts. subtotal	6a. Wetland Ve	egetation Communities.		Vegetation Communit	y Cover Scale	
	Score all present us	ing 0 to 3 scale.	0	Absent or comprises <0.1ha (0.		
	Aquatic bed		1	Present and either comprises s		
	1 Emergent Shrub			vegetation and is of moderate of significant part but is of low qua		
	Forest		2	Present and either comprises s		
	Mudflats			vegetation and is of moderate of		
	Open water			part and is of high quality		_
	Other		3	Present and comprises signification	• • •	3
	Select only one.	n view) Interspersion.		vegetation and is of high quality	y	
	High (5)			Narrative Description of Vege	etation Quality	
	Moderately high(4)			Low spp diversity and/or predor		
	Moderate (3)			disturbance tolerant native spec		
	Moderately low (2) Low (1)			Native spp are dominant compo although nonnative and/or distu		
	x None (0)			can also be present, and specie		
	6c. Coverage of in	vasive plants. Refer		moderately high, but generallyw		
	Table 1 ORAM long			threatened or endangered spp		
	or deduct points for	•		A predominance of native spec		
	Extensive >75% co Moderate 25-75% c			and/or disturbance tolerant nati absent, and high spp diversity a		
	x Sparse 5-25% cove			the presence of rare, threatene		
	Nearly absent <5%	cover (0)				
	Absent (1)			Mudflat and Open Water Clas	s Quality	
	6d. Microtopograp Score all present us		0	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47	20100)	
	0 Vegetated hummud			Moderate 1 to <4ha (2.47 to 2.47		
	0 Coarse woody debr			High 4ha (9.88 acres) or more		
	0 Standing dead >250					
	0 Amphibian breeding	pools	•	Microtopography Cover Scale	e	
			0	Absent Present very small amounts or	if more common	
			I	of marginal quality		
			2	Present in moderate amounts,		
tegory 1				quality or in small amounts of h	ighest quality	
16 E C D A	ND TOTAL(max 100 p	ite)	3	Present in moderate or greater	amounts	



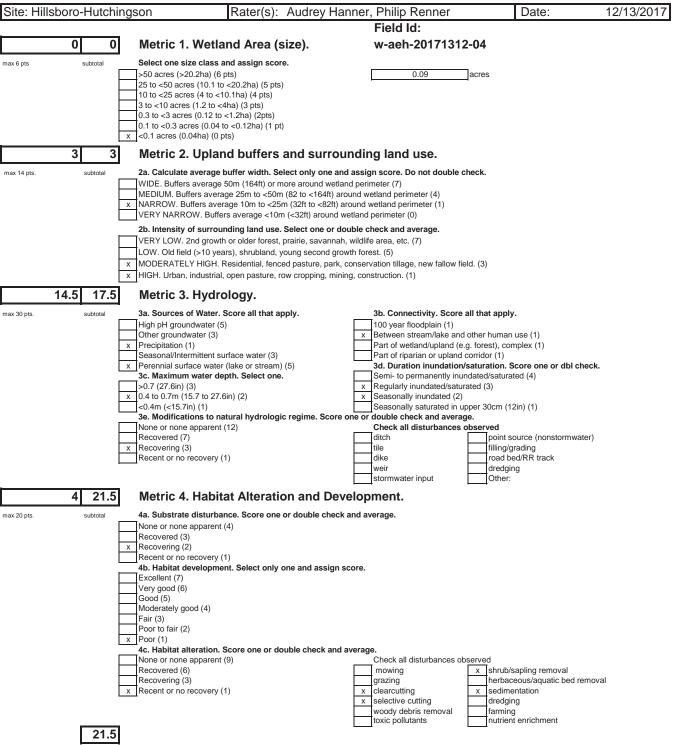
ite: Hillsboro-Hutchir	igson	Nater(3).	Ruarcy Harine	er, Philip Renner	Date:	12/13/201
				Field Id:		
29				w-aeh-20171312-	02	
					-	
subtotal this pa	-					
0 29	Metric 5. Specia	al Wetland	s.			
x 10 pts. subtotal	Check all that app	ly and score	as indicated.			
Ī	Bog (10)					
	Fen (10)					
	Old growth forest (10)	(=)				
	Mature forested wetland Lake Erie coastal/tributar		ricted bydrology (10)			
-	Lake Erie coastal/tributar					
	Lake Plain Sand Prairies					
	Relict Wet Praires (10)					
_	Known occurrence state/			cies (10)		
-	Significant migratory son Category 1 Wetland. See					
2 31				sion, microtopogra	nhv	
			, <b>.</b>	Vegetation Commu		
20pts. subtotal	6a. Wetland Veget Score all present using 0				a (0.2471 acres) contiguous area	
Г	Aquatic bed	to 3 scale.		Present and either comprise		
-	1 Emergent			vegetation and is of modera		
	Shrub		_	significant part but is of low	quality	
	Forest				es significant part of wetland's 2	
-	Mudflats			3	ate quality or comprises a small	
-	Open water Other			part and is of high quality	nificant part, or more, of wetland's	2
L	6b. horizontal (plan view	w) Interspersion		vegetation and is of high qu		3
	Select only one.			regetation and to or high qu		
[	High (5)			Narrative Description of V	egetation Quality	
	Moderately high(4)				edominance of nonnative or low	
-	Moderate (3)			disturbance tolerant native		
-	x Moderately low (2) Low (1)				Interpretation mod states and the segment of the vegetation, mod	
-	None (0)			can also be present, and sp		
L	6c. Coverage of invasiv	e plants. Refer		moderately high, but genera		
	Table 1 ORAM long form	for list. Add		threatened or endangered s		
г	or deduct points for cove	0			pecies, with nonnative spp high	
-	Extensive >75% cover (- Moderate 25-75% cover				native spp absent or virtually sity and often, but not always,	
-	x Sparse 5-25% cover (-1)			the presence of rare, threat		
	Nearly absent <5% cove					
	Absent (1)			Mudflat and Open Water 0		
	6d. Microtopography.			Absent <0.1ha (0.247 acres		
г	Score all present using 0 0 Vegetated hummucks/tus			Low 0.1 to <1ha (0.247 to 2 Moderate 1 to <4ha (2.47 to		
-	0 Coarse woody debris >1			High 4ha (9.88 acres) or m		
	0 Standing dead >25cm (1			- [····g······ (•·•• •••••) •····		
	0 Amphibian breeding pool	s		Microtopography Cover S	cale	
-			_(	) Absent		
				<ol> <li>Present very small amounts of marginal quality</li> </ol>	s or it more common	
				2 Present in moderate amour	nts, but not of highest	
tegory 2				quality or in small amounts	of highest quality	



ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating

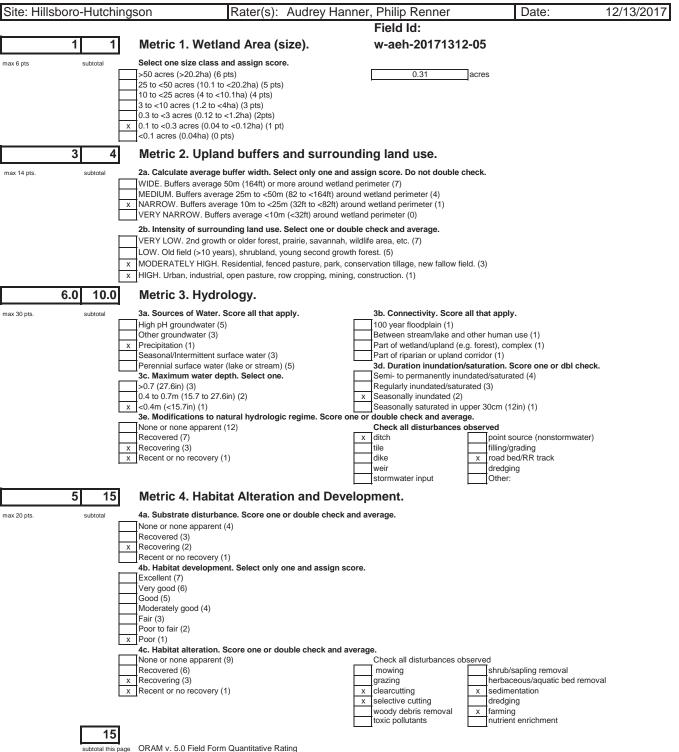
Site: Hillsboro-Hutch	lingson	Rater(s). Audrey	Hanner	, Philip Renner	Date:	12/13/201
				Field Id:		
31.5	5			w-aeh-20171312-03		
	-1					
subtotal this						
0 31.5	5 Metric 5. Spec	ial Wetlands.				
ax 10 pts. subtotal	Check all that ap	ply and score as indic	ated.			
	Bog (10)					
	Fen (10) Old growth forest (10)					
	Mature forested wetlan	d (5)				
		ary wetland-unrestricted hydro	ology (10)			
		ary wetland-restricted hydrolog	gy (5)			
	Lake Plain Sand Prairie					
	Relict Wet Praires (10)	e/federal threatened or endan	aarad shacii	as (10)		
		ingbird/water fowl habitat or us		33 (10)		
		ee Question 5 Qualitative Rati				
-4 27.5	Metric 6. Plant	communities, inte	erspersi	on, microtopograph	y.	
x 20pts. subtotal	6a. Wetland Vege	etation Communities.		Vegetation Community		
	Score all present using	0 to 3 scale.	0	Absent or comprises <0.1ha (0.2		
	Aquatic bed		1	Present and either comprises sr		
	1 Emergent Shrub			vegetation and is of moderate q significant part but is of low qual		
	Forest		2	Present and either comprises si		
	Mudflats			vegetation and is of moderate q		
	Open water			part and is of high quality		
	Other		3	Present and comprises signification and is of high quality	• • •	
	6b. horizontal (plan vi Select only one.	ew) interspersion.		vegetation and is of high quality		
	High (5)			Narrative Description of Vege	tation Quality	
	Moderately high(4)			Low spp diversity and/or predon		
	Moderate (3)			disturbance tolerant native spec		
	Moderately low (2) Low (1)			Native spp are dominant compo although nonnative and/or distur		
	x None (0)			can also be present, and specie		
	6c. Coverage of invas	ive plants. Refer		moderately high, but generallyw		
	Table 1 ORAM long for			threatened or endangered spp to		
	or deduct points for cov			A predominance of native specie		
	x Extensive >75% cover Moderate 25-75% cover			and/or disturbance tolerant nativ absent, and high spp diversity a		
	Sparse 5-25% cover (-			the presence of rare, threatened		
	Nearly absent <5% cov	ver (0)		· · ·		
	Absent (1)			Mudflat and Open Water Class	s Quality	
	6d. Microtopography. Score all present using			Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 a	20100	
	0 Vegetated hummucks/t			Moderate 1 to <4ha (2.47 to 9.8		
	0 Coarse woody debris >			High 4ha (9.88 acres) or more		
	0 Standing dead >25cm					
	0 Amphibian breeding po	ols	~	Microtopography Cover Scale	9	
			0	Absent Present very small amounts or i	if more common	
			1	of marginal quality		
			2	Present in moderate amounts, b		
ategory 1				quality or in small amounts of high	ghest quality	
	D TOTAL(max 100 pts)				amounts	

and of highest quality

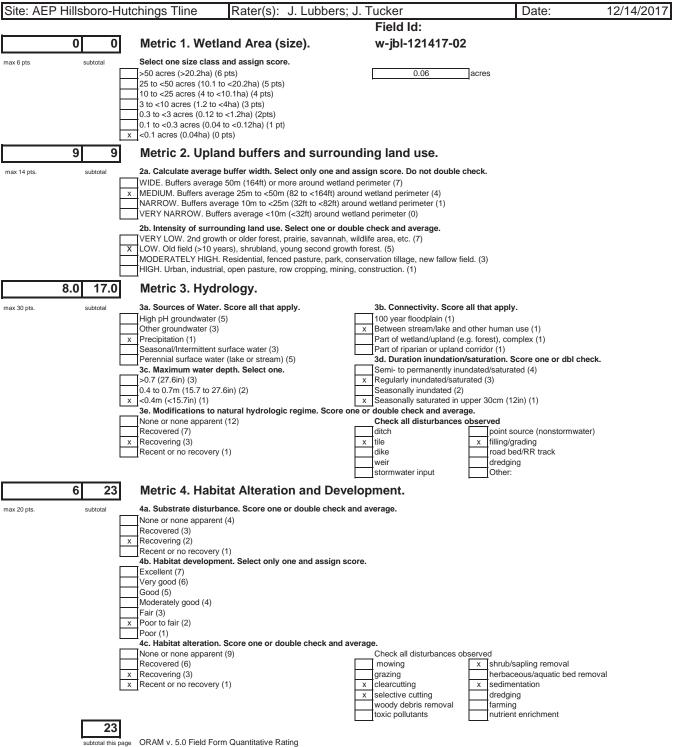


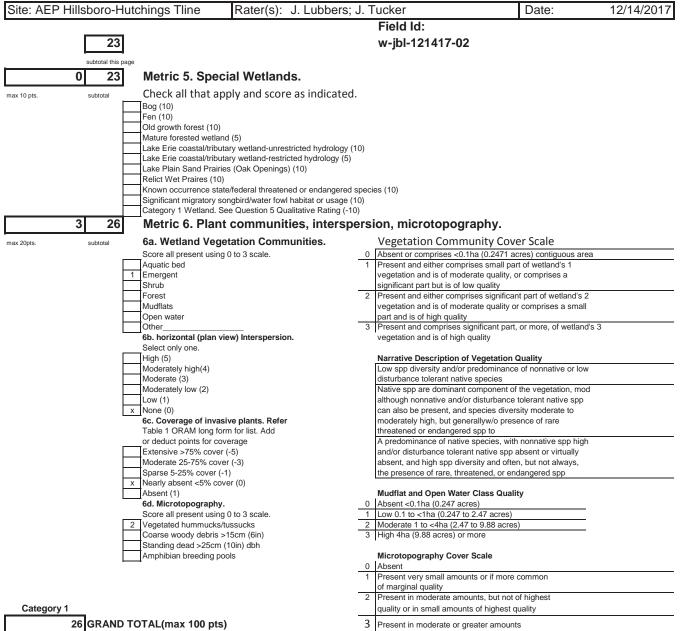
ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating

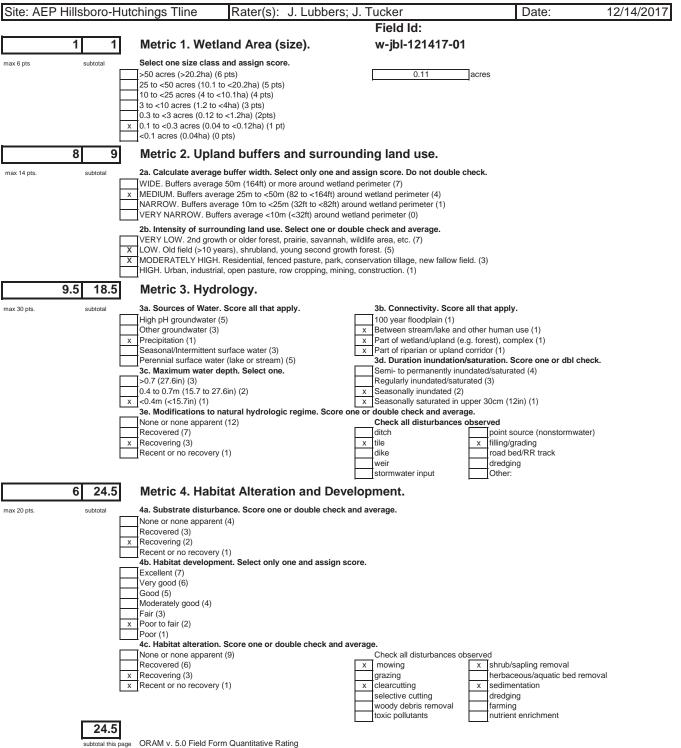
Site: Hillsboro-Hutcl	ningson	Rater(s): Audrey	Hanner	, Philip Renner	Date:	12/13/201
				Field Id:		
21.	5			w-aeh-20171312-04		
	-1					
subtotal th						
0 21.	5 Metric 5. Spec	ial Wetlands.				
ax 10 pts. subtotal	Check all that ap	ply and score as indic	cated.			
	Bog (10)					
	Fen (10)					
	Old growth forest (10) Mature forested wetlan	d (E)				
		ary wetland-unrestricted hydr	ology (10)			
		ary wetland-restricted hydrold				
	Lake Plain Sand Prairie					
	Relict Wet Praires (10)					
		e/federal threatened or endar		es (10)		
		ongbird/water fowl habitat or u ee Question 5 Qualitative Rat				
-4 17.				on, microtopograph	IV.	
x 20pts. subtotal		etation Communities.		Vegetation Community	-	
subiotal	Score all present using		0	Absent or comprises <0.1ha (0.		
	Aquatic bed		1	Present and either comprises s		
	1 Emergent			vegetation and is of moderate of	uality, or comprises a	
	Shrub			significant part but is of low qua		
	Forest		2	Present and either comprises s		
	Mudflats Open water			vegetation and is of moderate of part and is of high quality	quality or comprises a small	
	Other		3	Present and comprises significa	ant part, or more, of wetland's 3	
	6b. horizontal (plan vi	ew) Interspersion.		vegetation and is of high quality		
	Select only one.					
	High (5) Moderately high(4)			Narrative Description of Vege Low spp diversity and/or predor		
	Moderate (3)			disturbance tolerant native spec		
	Moderately low (2)			Native spp are dominant compo		
	Low (1)			although nonnative and/or distu		
	x None (0)			can also be present, and specie		
	6c. Coverage of invas			moderately high, but generallyw		
	Table 1 ORAM long for or deduct points for cov			threatened or endangered spp t A predominance of native speci		
	x Extensive >75% cover			and/or disturbance tolerant nation		
	Moderate 25-75% cove			absent, and high spp diversity a		
	Sparse 5-25% cover (-			the presence of rare, threatened	d, or endangered spp	
	Nearly absent <5% cov	ver (0)		Maridian and One in Water Olar	- 0	
	Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Clas Absent <0.1ha (0.247 acres)	s quality	
	Score all present using			Low 0.1 to <1ha (0.247 to 2.47	acres)	
	0 Vegetated hummucks/			Moderate 1 to <4ha (2.47 to 9.8		
	0 Coarse woody debris >		3	High 4ha (9.88 acres) or more		
	0 Standing dead >25cm					
	0 Amphibian breeding po	OIS	0	Microtopography Cover Scale Absent	9	
			0	Present very small amounts or	if more common	
				of marginal quality		
			2	Present in moderate amounts, I		
ategory 1				quality or in small amounts of h	ighest quality	
47 5 6 5 11	ID TOTAL(max 100 pts		3	Present in moderate or greater	amounta	



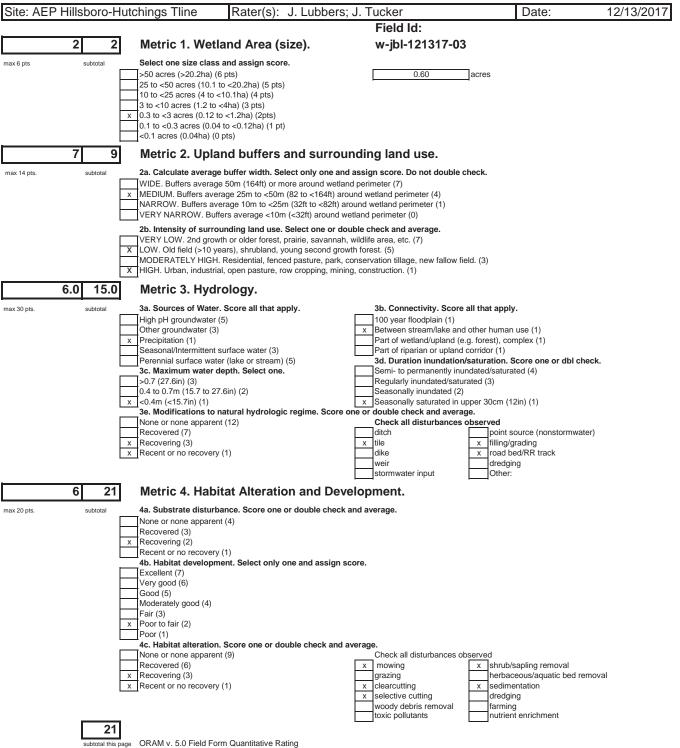
Site: Hillsbord	o-Hutchi	ngson	Rater(s): A	Audrey Hanne	r, Philip Renner	Date:	12/13/201
					Field Id:		
	15				w-aeh-20171312-0	5	
						•	
	subtotal this p	-					
0	0 15	Metric 5. Speci	al Wetlands	5.			
ax 10 pts.	subtotal	Check all that app	ly and score	as indicated.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland					
		Lake Erie coastal/tributa Lake Erie coastal/tributa					
		Lake Plain Sand Prairies					
	ľ	Relict Wet Praires (10)	(Our Openingo) (	10)			
		Known occurrence state	federal threatened	d or endangered spe	cies (10)		
		Significant migratory sor					
		Category 1 Wetland. See					
-4	4 11	Metric 6. Plant	communitie	es, intersper	sion, microtopograp	ohy.	
20pts.	subtotal	6a. Wetland Veget	ation Commu		Vegetation Commun		
	_	Score all present using (	to 3 scale.		Absent or comprises <0.1ha		
		Aquatic bed			Present and either comprises		
		1 Emergent			vegetation and is of moderate		
		Shrub		<u> </u>	significant part but is of low qu		
	-	Forest Mudflats		·		s significant part of wetland's 2 e quality or comprises a small	
		Open water			part and is of high quality	e quality of comprises a small	
		Other				icant part, or more, of wetland's	3
	L	6b. horizontal (plan vie	w) Interspersion.		vegetation and is of high qual	lity	
	r	Select only one.					
		High (5)			Narrative Description of Ve		
		Moderately high(4) Moderate (3)			disturbance tolerant native sp	lominance of nonnative or low	
	-	Moderately low (2)				ponent of the vegetation, mod	
		Low (1)			although nonnative and/or dis		
		x None (0)			can also be present, and spe		
	L	6c. Coverage of invasiv	e plants. Refer		moderately high, but generally	yw/o presence of rare	
		Table 1 ORAM long form			threatened or endangered sp		
	г	or deduct points for cove				ecies, with nonnative spp high	
	-	x Extensive >75% cover ( Moderate 25-75% cover			and/or disturbance tolerant na		
	-	Sparse 5-25% cover (-1)			absent, and high spp diversity the presence of rare, threater		
	ľ	Nearly absent <5% cove			the presence of fare, threater	ied, of chidangered opp	
		Absent (1)			Mudflat and Open Water Cla	ass Quality	
	-	6d. Microtopography.			Absent <0.1ha (0.247 acres)		
		Score all present using (			Low 0.1 to <1ha (0.247 to 2.4	,	
		0 Vegetated hummucks/tu			2 Moderate 1 to <4ha (2.47 to 9		
		0 Coarse woody debris >1 0 Standing dead >25cm (1			B High 4ha (9.88 acres) or more	e	
	ŀ	0 Amphibian breeding poo			Microtopography Cover Sca	ale	
	ŀ		-		Absent		
					Present very small amounts of	or if more common	
					of marginal quality		
					Present in moderate amounts		
ategory 1	-			_	quality or in small amounts of	highest quality	
11	1 GRAND	TOTAL(max 100 pts)		:	Present in moderate or greate	er amounts	
	_						

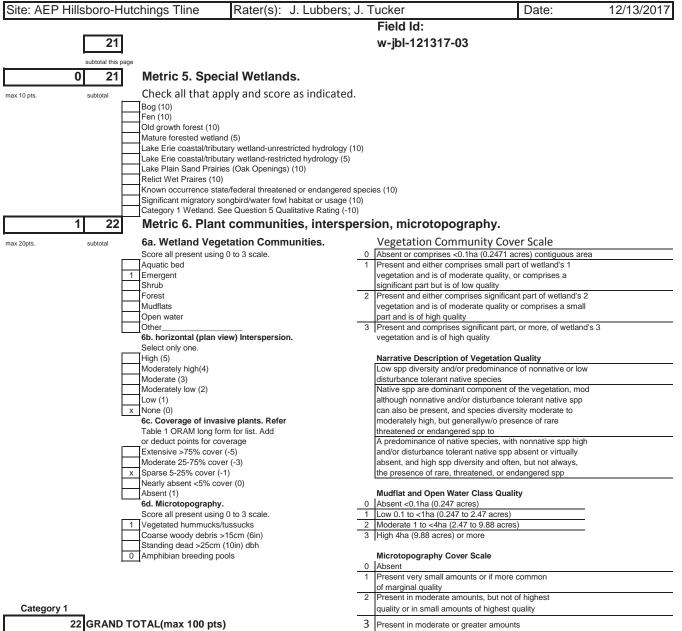


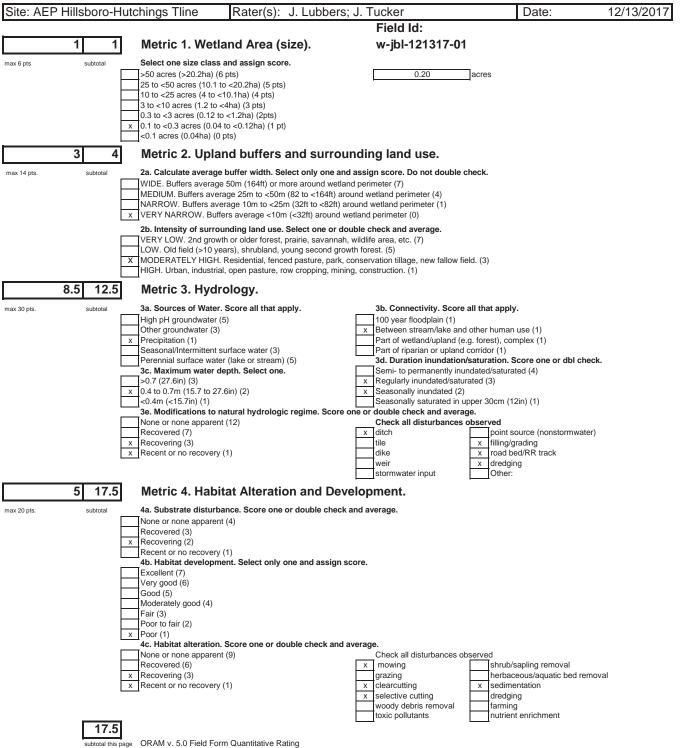




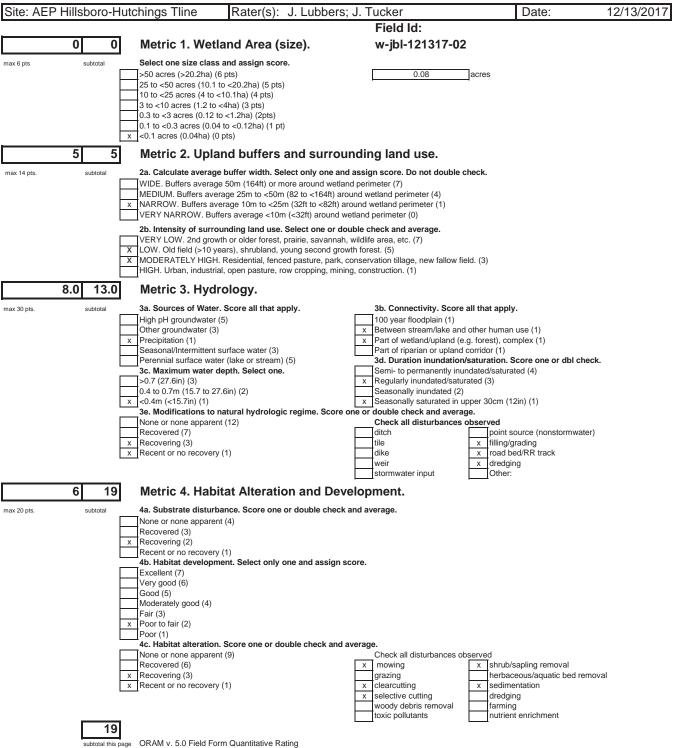
ITE: AEP HIII	lsboro-H	utchings Tline	Rater(s): J. Lubbe	ers; J. Tucker		Date:	12/14/201
				Field	ld:		
	24.5			w-ibl-	121417-01		
				<b>,</b>			
	subtotal this p						
	0 24.5	Metric 5. Spec	ial Wetlands.				
x 10 pts.	subtotal	Check all that ap	ply and score as indica	ated.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10) Mature forested wetland	۲ (E)				
			ary wetland-unrestricted hydro	logy (10)			
			ary wetland-restricted hydrolog				
		Lake Plain Sand Prairie					
		Relict Wet Praires (10)					
			e/federal threatened or endang				
			ngbird/water fowl habitat or us ee Question 5 Qualitative Ratir				
2	2 26.5		communities, inte		icrotopography		
20pts.	subtotal	6a. Wetland Vege	tation Communities.	Vegeta	ation Community	Cover Scale	
	_	Score all present using	0 to 3 scale.			171 acres) contiguous area	
		Aquatic bed			and either comprises sma		
		1 Emergent Shrub			on and is of moderate qua nt part but is of low quality		
		Forest				hificant part of wetland's 2	
		Mudflats				ality or comprises a small	
		Open water		part and	is of high quality		
	[	Other				t part, or more, of wetland's 3	
		6b. horizontal (plan vie	ew) Interspersion.	vegetatio	on and is of high quality		
	Г	Select only one. High (5)		Narrativ	e Description of Vegeta	tion Quality	
		Moderately high(4)				nance of nonnative or low	
		Moderate (3)			nce tolerant native specie		
		Moderately low (2)				ent of the vegetation, mod	
		Low (1)		-	nonnative and/or disturb		
	L	x None (0) 6c. Coverage of invasi	ive plants Refer		be present, and species by high, but generallyw/o		
		Table 1 ORAM long for			ed or endangered spp to		
	_	or deduct points for cov				s, with nonnative spp high	
		Extensive >75% cover			sturbance tolerant native		
		Moderate 25-75% cove			and high spp diversity and		
	-	Sparse 5-25% cover (-1 x Nearly absent <5% cov		the prese	ence of rare, threatened,	or endangered spp	
		Absent (1)		Mudflat	and Open Water Class	Quality	
		6d. Microtopography.			0.1ha (0.247 acres)		
	r	Score all present using			to <1ha (0.247 to 2.47 ac		
		1 Vegetated hummucks/to Coarse woody debris >			e 1 to <4ha (2.47 to 9.88 (9.88 acres) or more	acres)	
		Standing dead >25cm (		5 Triight Hig	(5.00 acres) or more		
		Amphibian breeding po		Microto	ography Cover Scale		
	٠			0 Absent			
					very small amounts or if r	more common	
				of margir		t not of highest	
Category 1				2 Present	n moderate amounts, but in small amounts of high	-	

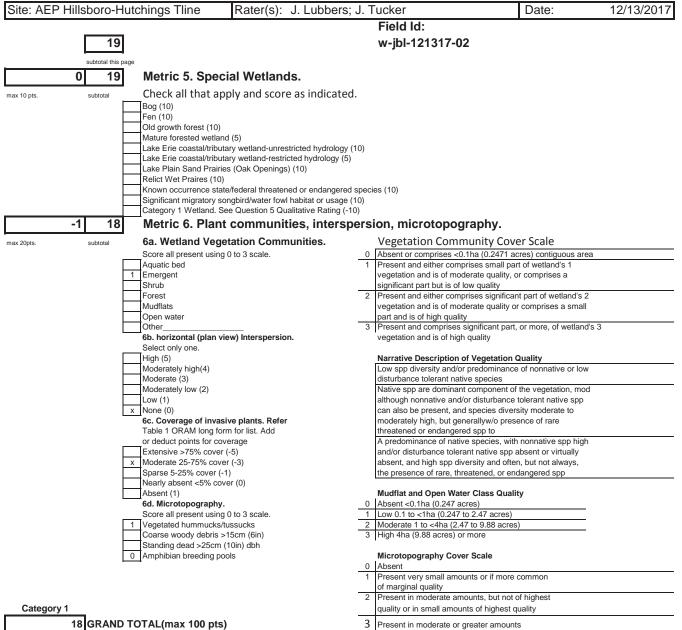


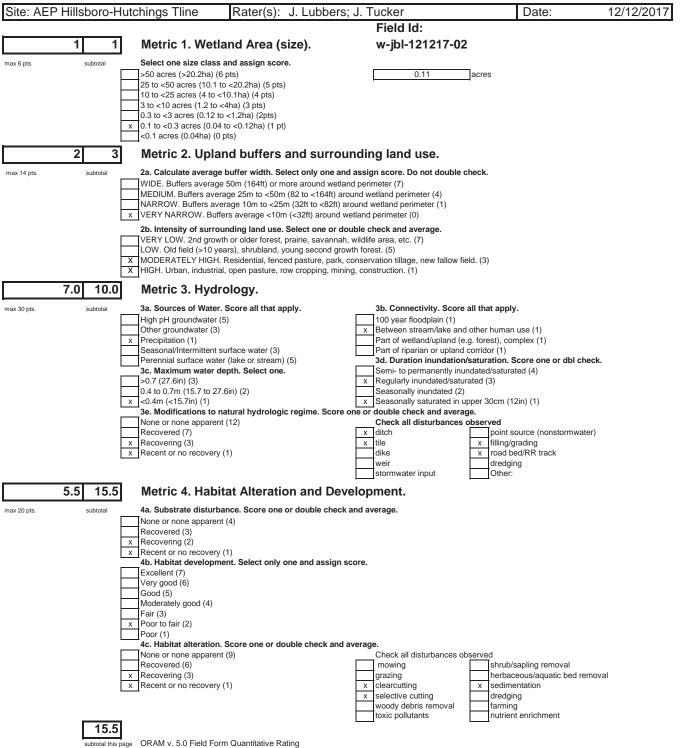




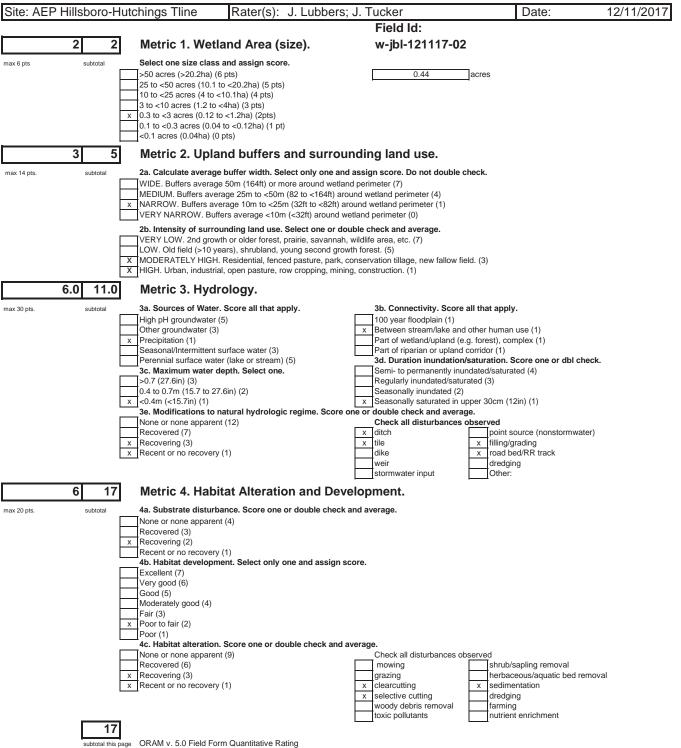
Site: AEP	Hillsboro-Hu	Itchings Tline	Rater(s): J. Lubbers;	J. Tucker	Date:	12/13/201
				Field Id:		
	17.5			w-jbl-121317-0	1	
	subtotal this page					
	0 17.5	Metric 5. Spec	cial wetlands.			
x 10 pts.	subtotal	Check all that ap	pply and score as indicated	l.		
		Bog (10)				
		Fen (10)				
		Old growth forest (10) Mature forested wetlar	nd (5)			
	-		tary wetland-unrestricted hydrology (	(10)		
		Lake Erie coastal/tribu	tary wetland-restricted hydrology (5)			
			es (Oak Openings) (10)			
		Relict Wet Praires (10	te/federal threatened or endangered	species (10)		
	-		ongbird/water fowl habitat or usage (			
	-		ee Question 5 Qualitative Rating (-1			
	-3 14.5	Metric 6. Plan	t communities, intersp	ersion, microtopog	iraphy.	
20pts.	subtotal	•	etation Communities.		nunity Cover Scale	
	F	Score all present using	0 to 3 scale.		.1ha (0.2471 acres) contiguous area	
		Aquatic bed 1 Emergent			prises small part of wetland's 1 derate quality, or comprises a	
	-	Shrub		significant part but is of		
		Forest			prises significant part of wetland's 2	
		Mudflats		0	derate quality or comprises a small	
		Open water Other		part and is of high qualit		2
	L	6b. horizontal (plan v	iew) Interspersion	vegetation and is of high	significant part, or more, of wetland's a quality	3
		Select only one.				
		High (5)		Narrative Description		
		Moderately high(4)			r predominance of nonnative or low	
	-	Moderate (3) Moderately low (2)		disturbance tolerant nati	t component of the vegetation, mod	
	-	Low (1)			or disturbance tolerant native spp	
		x None (0)		•	d species diversity moderate to	
		6c. Coverage of invas			nerallyw/o presence of rare	
		Table 1 ORAM long fo or deduct points for co		threatened or endanger	ed spp to /e species, with nonnative spp high	
	Г	x Extensive >75% cover			ant native spp absent or virtually	
		Moderate 25-75% cov			versity and often, but not always,	
		Sparse 5-25% cover (		the presence of rare, thr	reatened, or endangered spp	
	_	Nearly absent <5% co Absent (1)	ver (0)	Mudflat and Open Wat	or Class Quality	
	L	6d. Microtopography		0 Absent <0.1ha (0.247 a		
		Score all present using		1 Low 0.1 to <1ha (0.247		
		1 Vegetated hummucks/		2 Moderate 1 to <4ha (2.4		
		Coarse woody debris :		3 High 4ha (9.88 acres) of	rmore	
	F	O Amphibian breeding p		Microtopography Cove	er Scale	
	L		1010	0 Absent	5. 55415	
				1 Present very small amo	unts or if more common	
				of marginal quality		
Catagory	1			2 Present in moderate am		
Category			_	quality or in small amou	nis or nignest quality	
	14.5 GRAND	TOTAL(max 100 pts	)	3 Present in moderate or	greater amounts	
				and a first state and some life in		

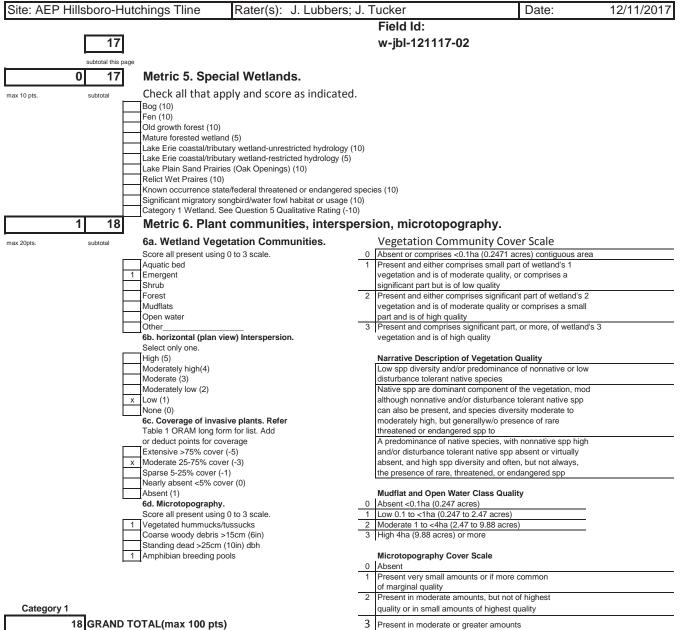


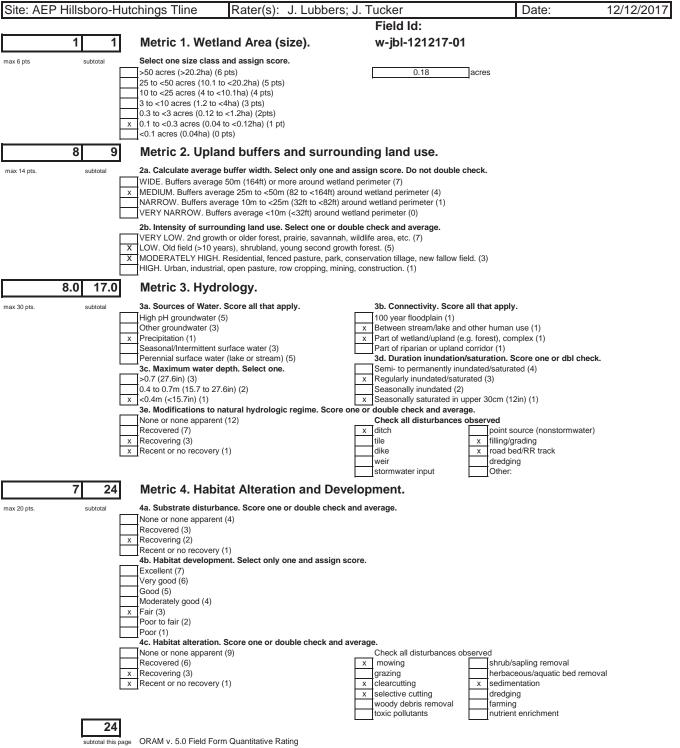


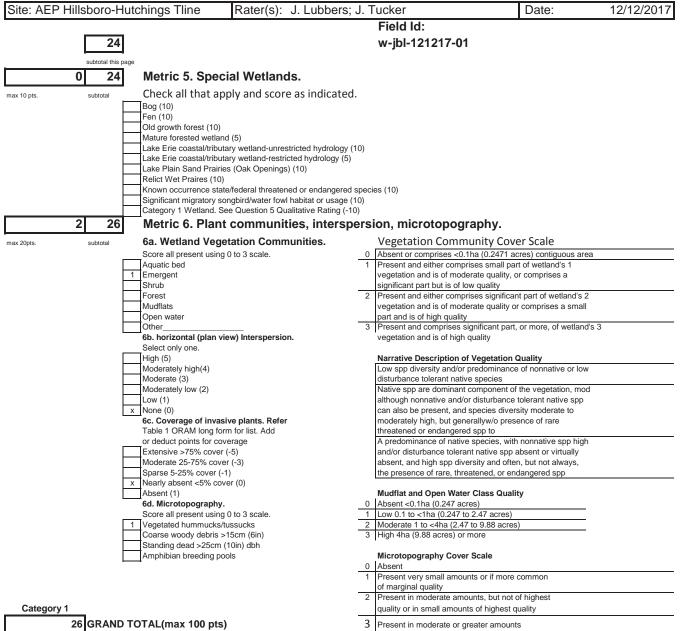


SITE: AEP I	HIIISDO	pro-Hut	tchings Tline	Rater(s):	J. Lubbers; J		Date:	12/12/201
						Field Id:		
		15.5				w-jbl-121217-	-02	
							-	
		otal this page						
	0	15.5	Metric 5. Spec	ial Wetland	s.			
: 10 pts.	subt	total	Check all that ap	ply and score	as indicated.			
			Bog (10)	, ,				
			Fen (10)					
			Old growth forest (10)					
			Mature forested wetland		rists of hydrology (10			
			Lake Erie coastal/tributa Lake Erie coastal/tributa					
			Lake Plain Sand Prairie					
			Relict Wet Praires (10)					
			Known occurrence state					
			Significant migratory so Category 1 Wetland. Se					
	1	16.5			• • •	sion, microtopo	ography.	
20pts.	subt		6a. Wetland Vege		· •	, <b>.</b>	nmunity Cover Scale	
20013.	300	total	Score all present using				<0.1ha (0.2471 acres) contiguous area	
			Aquatic bed		-		mprises small part of wetland's 1	
		1	Emergent				noderate quality, or comprises a	
			Shrub		_	significant part but is		
			Forest Mudflats				mprises significant part of wetland's 2	
			Open water			part and is of high qua	noderate quality or comprises a small ality	
			Other		-		es significant part, or more, of wetland's 3	
			6b. horizontal (plan vie	ew) Interspersion		vegetation and is of h	igh quality	
			Select only one.			Normative Description	n of Venetation Quality	
			High (5) Moderately high(4)				n of Vegetation Quality	
			Moderate (3)			disturbance tolerant n		
			Moderately low (2)				ant component of the vegetation, mod	
		×					nd/or disturbance tolerant native spp	
			None (0)				and species diversity moderate to	
			6c. Coverage of invasi Table 1 ORAM long for			threatened or endang	generallyw/o presence of rare	
			or deduct points for cov				ative species, with nonnative spp high	
			Extensive >75% cover				lerant native spp absent or virtually	
		×	Moderate 25-75% cove				diversity and often, but not always,	
			Sparse 5-25% cover (-1			the presence of rare,	threatened, or endangered spp	
			Nearly absent <5% cov Absent (1)	er (0)		Mudflat and Open W	later Class Quality	
		L	6d. Microtopography.			0 Absent <0.1ha (0.247		
			Score all present using			1 Low 0.1 to <1ha (0.24		
		2	2 Vegetated hummucks/t		_	2 Moderate 1 to <4ha (2		
			Coarse woody debris >			3 High 4ha (9.88 acres)	) or more	
		$\vdash$	Standing dead >25cm ( Amphibian breeding po			Microtopography Co	over Scale	
		L				0 Absent		
					-	1 Present very small an	nounts or if more common	
					_	of marginal quality		
Cata	4						amounts, but not of highest	
Category	1				_		ounts of highest quality	
1	16.5 GF	RAND T	OTAL(max 100 pts)			3 Present in moderate of	or greater amounts	
						and of highast quality		

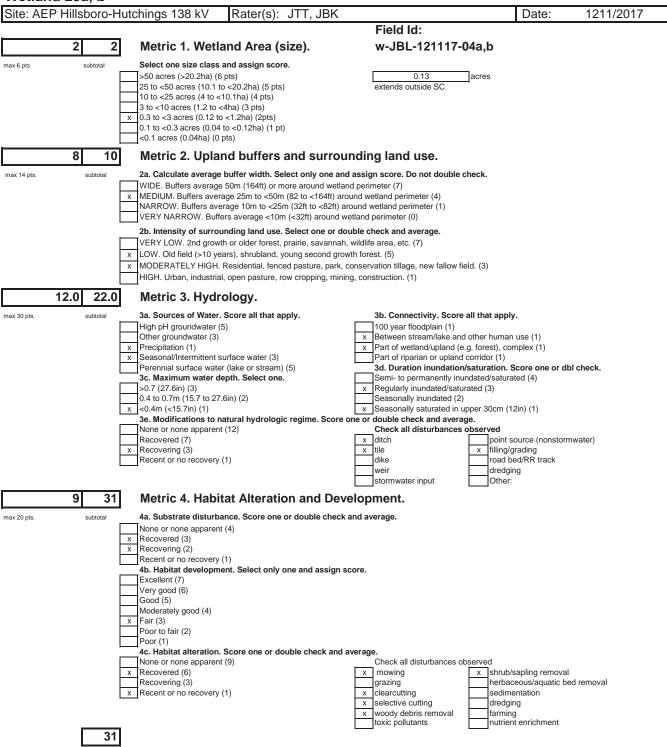






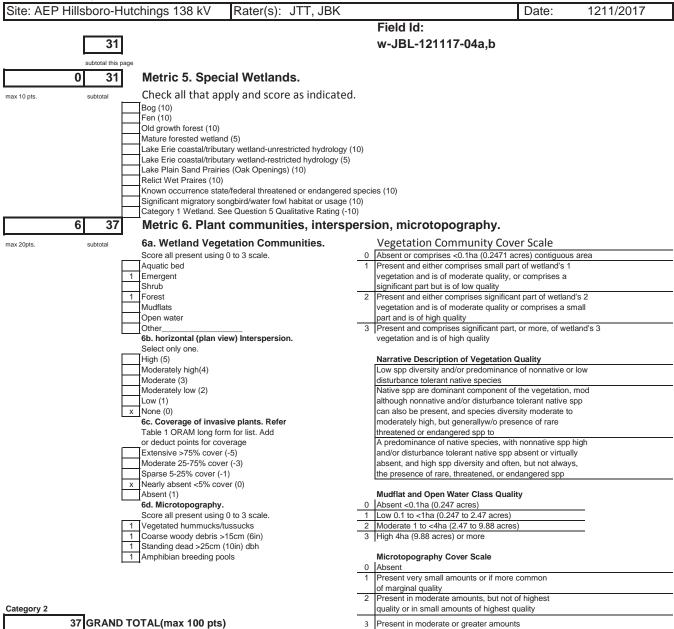


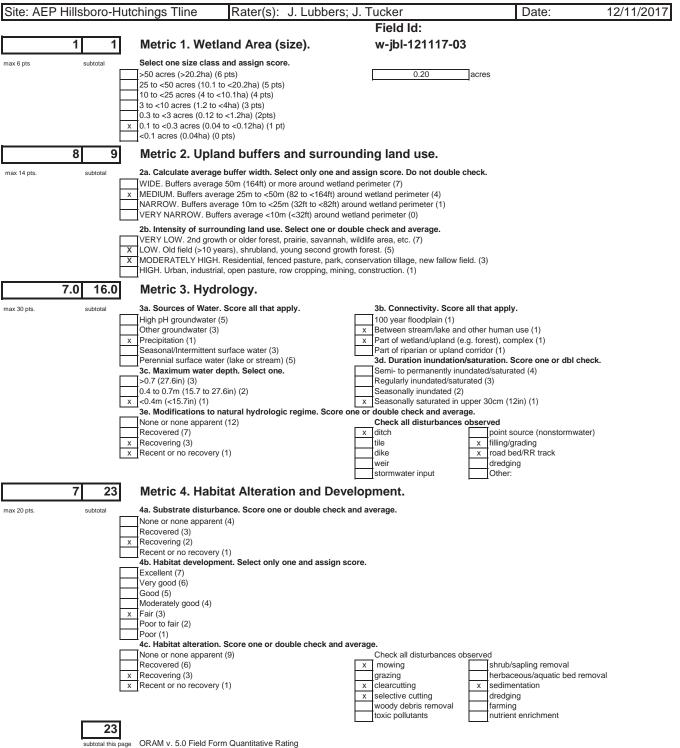
#### Wetland 23a, b

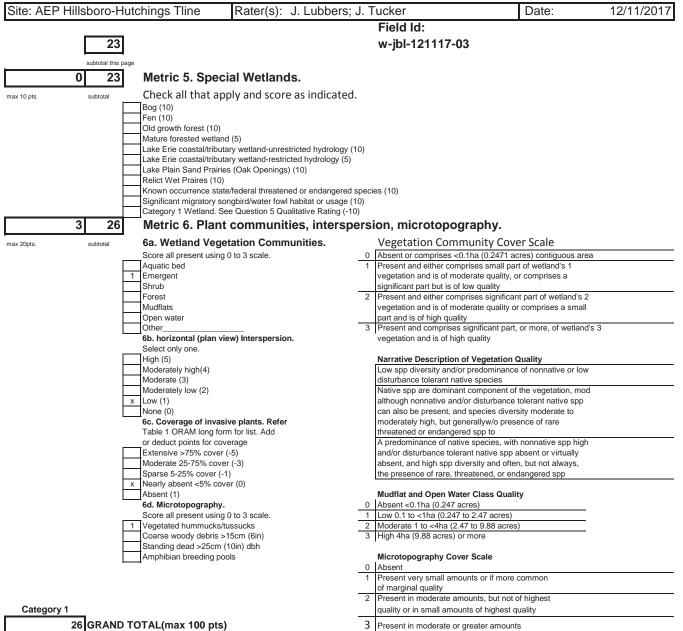


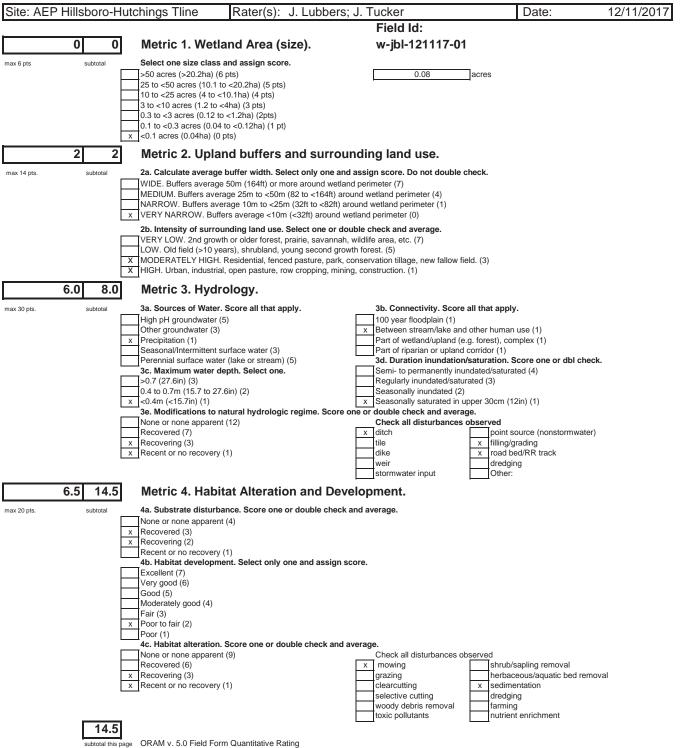
subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

#### Wetland 23a, b

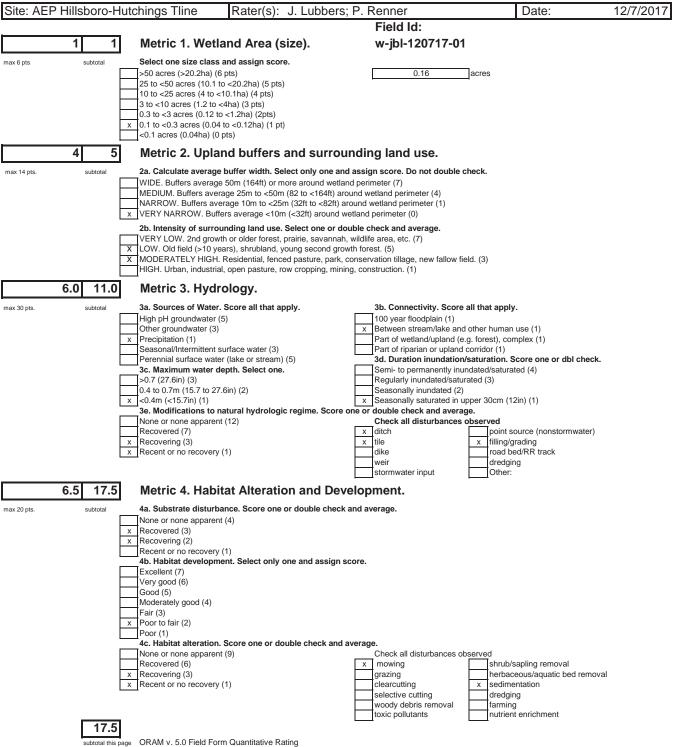




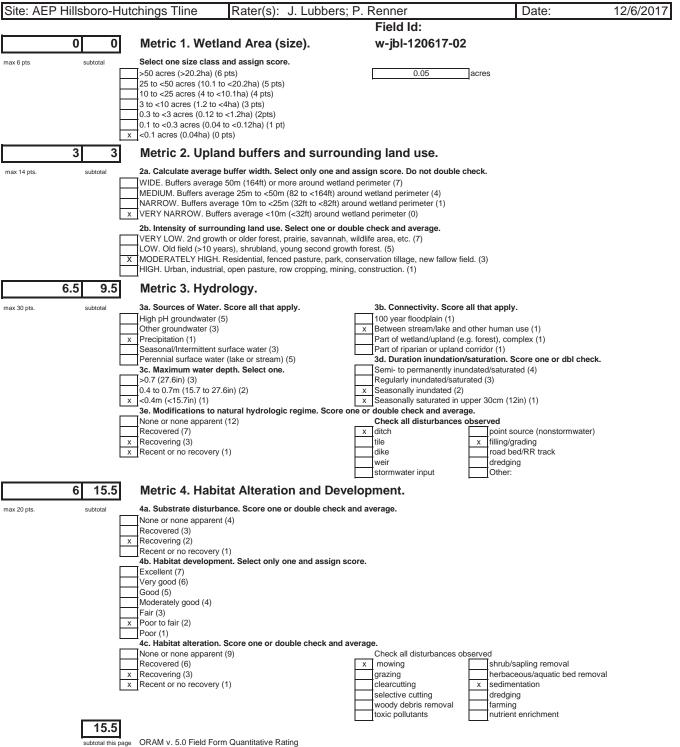




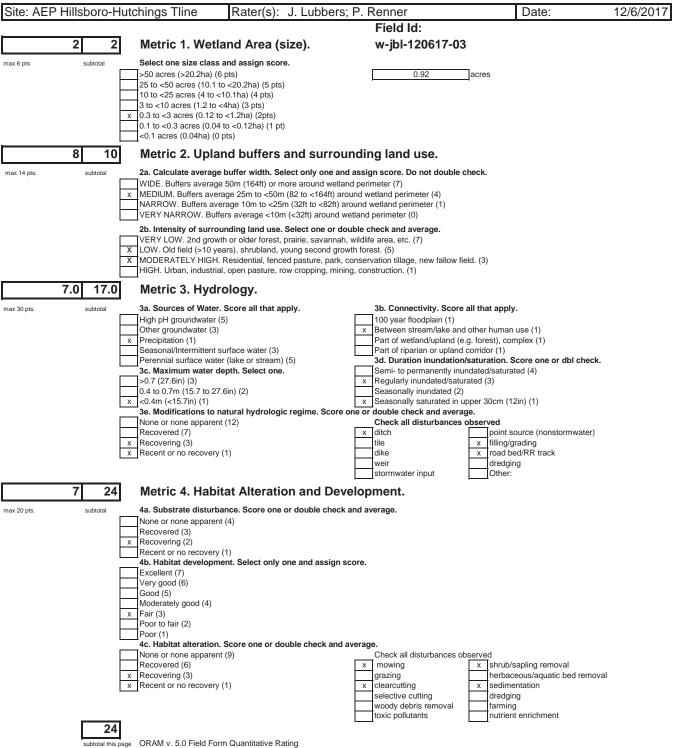
	SD010-H	lutchings Tline	Rater(s): J. Lubbers		Date:	12/11/201
				Field Id:		
	14.5			w-jbl-121117-01		
		1		,		
	subtotal this p	-				
0	14.5	Metric 5. Spec	ial Wetlands.			
( 10 pts.	subtotal	Check all that ap	ply and score as indicate	ed.		
	1	Bog (10)	. ,			
		Fen (10)				
		Old growth forest (10)				
		Mature forested wetland	a (5) ary wetland-unrestricted hydrology	(10)		
			ary wetland-restricted hydrology (			
		Lake Plain Sand Prairie		· /		
		Relict Wet Praires (10)				
			e/federal threatened or endangere			
			ngbird/water fowl habitat or usage ee Question 5 Qualitative Rating (			
1	15.5			persion, microtopogr	aphy.	
20pts.	subtotal	6a. Wetland Vege	tation Communities.	Vegetation Comm	unity Cover Scale	
		Score all present using		0 Absent or comprises <0.1	ha (0.2471 acres) contiguous area	
		Aquatic bed			ises small part of wetland's 1	
		1 Emergent			erate quality, or comprises a	
		Shrub Forest		significant part but is of lo	w quality ises significant part of wetland's 2	
		Mudflats			erate quality or comprises a small	
		Open water		part and is of high quality	1	
		Other			gnificant part, or more, of wetland's 3	
		6b. horizontal (plan vi	ew) Interspersion.	vegetation and is of high	quality	
	1	Select only one. High (5)		Narrative Description of	Vegetation Quality	
		Moderately high(4)			predominance of nonnative or low	
		Moderate (3)		disturbance tolerant nativ		
		Moderately low (2)			component of the vegetation, mod	
		Low (1)			r disturbance tolerant native spp	
		x None (0) 6c. Coverage of invasi	ive plants Refer	moderately high, but gene	species diversity moderate to	
		Table 1 ORAM long for		threatened or endangered		
		or deduct points for cov	erage	A predominance of native	species, with nonnative spp high	
		Extensive >75% cover	. ,		nt native spp absent or virtually	
		Moderate 25-75% cove			ersity and often, but not always,	
		x Sparse 5-25% cover (-1 Nearly absent <5% cov		the presence of fare, the	atened, or endangered spp	
		Absent (1)	- (-)	Mudflat and Open Wate	Class Quality	
		6d. Microtopography.		0 Absent <0.1ha (0.247 acr		
		Score all present using		1 Low 0.1 to <1ha (0.247 to		
		1 Vegetated hummucks/t Coarse woody debris >		2 Moderate 1 to <4ha (2.47 3 High 4ha (9.88 acres) or		
		Standing dead >25cm (		5   Flight 41a (9.00 acres) 01	nore	
		Amphibian breeding po		Microtopography Cover	Scale	
	,			0 Absent		
				1 Present very small amount	nts or if more common	
				of marginal quality		
				2 Present in moderate amo	unts but not of highest	
Category 1				2 Present in moderate amo quality or in small amount		

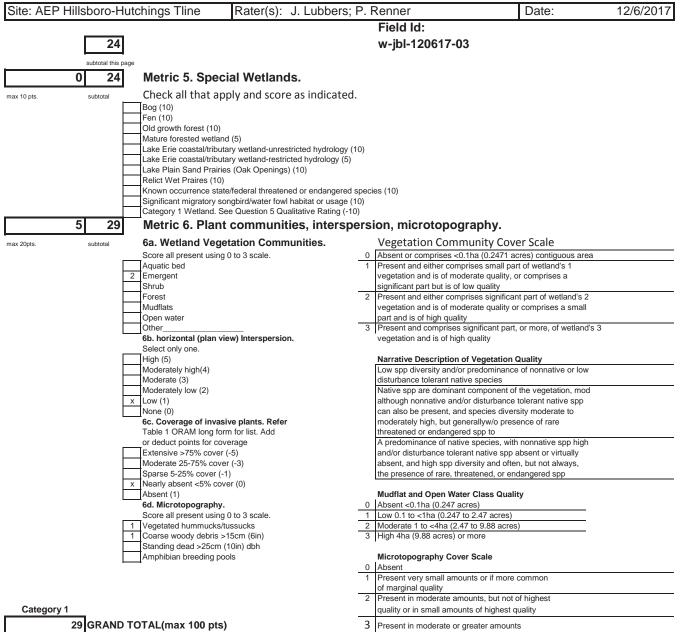


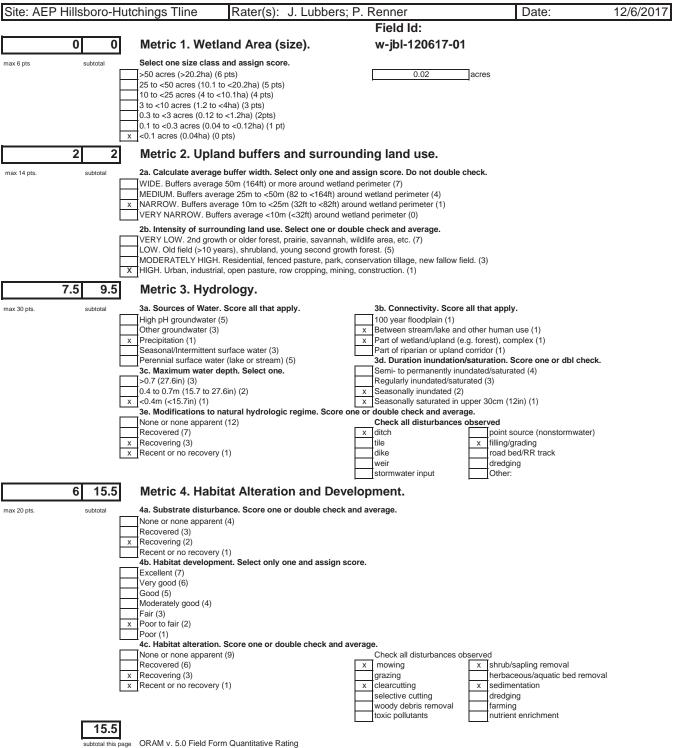
	sboro-Hu	tchings Tline	Rater(s): J. Lubb	ers; P. Renner	Date:	12/7/201
				Field Id:		
	17.5			w-jbl-12071	7-01	
					-	
	subtotal this pag					
0	) 17.5	Metric 5. Speci	al Wetlands.			
10 pts.	subtotal	Check all that app	oly and score as indic	ated.		
		Bog (10)				
		Fen (10)				
		Old growth forest (10) Mature forested wetland	L (E)			
			iry wetland-unrestricted hydro	blogy (10)		
	- F		ry wetland-restricted hydrolo			
		Lake Plain Sand Prairies				
		Relict Wet Praires (10)				
			/federal threatened or endan			
			ngbird/water fowl habitat or u e Question 5 Qualitative Rati			
3	3 20.5	÷ .		erspersion, microto	oography.	
20pts.	subtotal		tation Communities.		ommunity Cover Scale	
		Score all present using (	0 to 3 scale.	0 Absent or comprise	es <0.1ha (0.2471 acres) contiguous area	
		Aquatic bed			comprises small part of wetland's 1	
		1 Emergent			f moderate quality, or comprises a	
		Shrub Forest		2 Present and either	comprises significant part of wetland's 2	
	-	Mudflats			f moderate quality or comprises a small	
		Open water		part and is of high		
		Other			ises significant part, or more, of wetland's 3	-
		6b. horizontal (plan vie	ew) Interspersion.	vegetation and is o	f high quality	
		Select only one. High (5)		Narrative Description	tion of Vegetation Quality	
		Moderately high(4)			and/or predominance of nonnative or low	
		Moderate (3)		disturbance toleran		
		Moderately low (2)			ninant component of the vegetation, mod	
		Low (1)		÷	and/or disturbance tolerant native spp	
		x None (0) 6c. Coverage of invasiv	ve plants Refer		t, and species diversity moderate to ut generallyw/o presence of rare	
		Table 1 ORAM long forn		threatened or enda		
		or deduct points for cove			native species, with nonnative spp high	
		Extensive >75% cover (			tolerant native spp absent or virtually	
		Moderate 25-75% cover			op diversity and often, but not always,	
		Sparse 5-25% cover (-1 Nearly absent <5% cover		the presence of rar	e, threatened, or endangered spp	
		x Absent (1)	. (0)	Mudflat and Open	Water Class Quality	
		6d. Microtopography.		0 Absent <0.1ha (0.2		
	_	Score all present using (		1 Low 0.1 to <1ha (0		
	_	<ol> <li>Vegetated hummucks/tu Coarse woody debris &gt;1</li> </ol>		2 Moderate 1 to <4ha 3 High 4ha (9.88 acro		
	-	Standing dead >25cm (1		5 [Tilgit 41a (9.00 acti		
		Amphibian breeding poo		Microtopography	Cover Scale	
	<u> </u>			0 Absent		
					amounts or if more common	
				of marginal quality		
				2 Present in medarat	a amounts, but not of bigbost	
Category 1					e amounts, but not of highest mounts of highest quality	



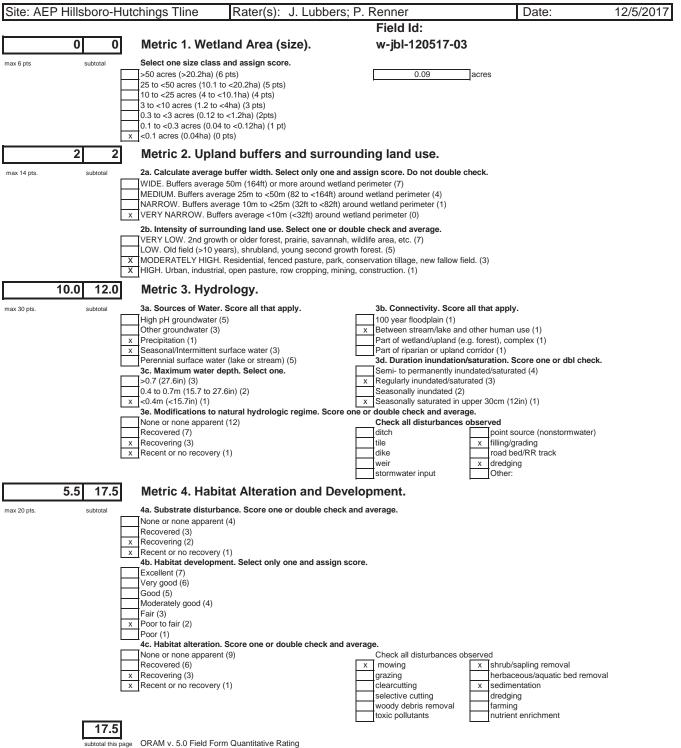
	sporo-Hu	tchings Tline	Rater(s): J. Lubb	pers; P. Renner		Date:	12/6/201
				Field lo	d:		
	15.5			w-jbl-1	20617-02		
	subtotal this pag						
0	15.5	Metric 5. Speci	ai wetiands.				
10 pts.	subtotal	Check all that app	oly and score as indic	cated.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10) Mature forested wetland	L (E)				
			iry wetland-unrestricted hydr	ology (10)			
			ry wetland-restricted hydrolo				
		Lake Plain Sand Prairies					
		Relict Wet Praires (10)					
			/federal threatened or endar				
			ngbird/water fowl habitat or u e Question 5 Qualitative Rat				
2	17.5		communities, inte	,	rotopography.		
20pts.	subtotal	6a. Wetland Vege	tation Communities.	Vegetat	ion Community Co	ver Scale	
		Score all present using (	0 to 3 scale.		comprises <0.1ha (0.2471		
		Aquatic bed			d either comprises small p		
		1 Emergent Shrub			and is of moderate quality part but is of low quality	, or comprises a	
	-	Forest			d either comprises signific	ant part of wetland's 2	
		Mudflats			and is of moderate quality		
		Open water		Ŭ	of high quality		
		Other			d comprises significant pa	rt, or more, of wetland's 3	
		6b. horizontal (plan vie	ew) Interspersion.	vegetation	and is of high quality		
	Г	Select only one. High (5)		Narrative	Description of Vegetation	Quality	
		Moderately high(4)			versity and/or predominan		
		Moderate (3)			e tolerant native species		
		Moderately low (2)			are dominant component		
	_	Low (1)		•	onnative and/or disturband		
		X None (0) 6c. Coverage of invasiv	ve plants Refer		e present, and species dive high, but generallyw/o pre		
		Table 1 ORAM long form			or endangered spp to		
		or deduct points for cove			nance of native species, w	ith nonnative spp high	
		Extensive >75% cover (			urbance tolerant native sp		
		Moderate 25-75% cover			d high spp diversity and of		
		Sparse 5-25% cover (-1 x Nearly absent <5% cover		the presen	ce of rare, threatened, or e	endangered spp	
	<u> </u>	Absent (1)	51 (0)	Mudflat ar	d Open Water Class Qua	ality	
		6d. Microtopography.			1ha (0.247 acres)	·	
		Score all present using (			<1ha (0.247 to 2.47 acres		
		1 Vegetated hummucks/tu			to <4ha (2.47 to 9.88 acre 9.88 acres) or more	es)	
		Coarse woody debris >1 Standing dead >25cm (1		3 High 4ha (	9.66 acres) of more		
		Amphibian breeding poo		Microtopo	graphy Cover Scale		
	<u> </u>	→ ' · · · · · · · · · · · · · · · · · ·		0 Absent	• • •		
					ry small amounts or if mor	e common	
				of margina			
				0 0 0	madarata amarcinte les t	t of high oot	
Category 1					moderate amounts, but no n small amounts of highest		





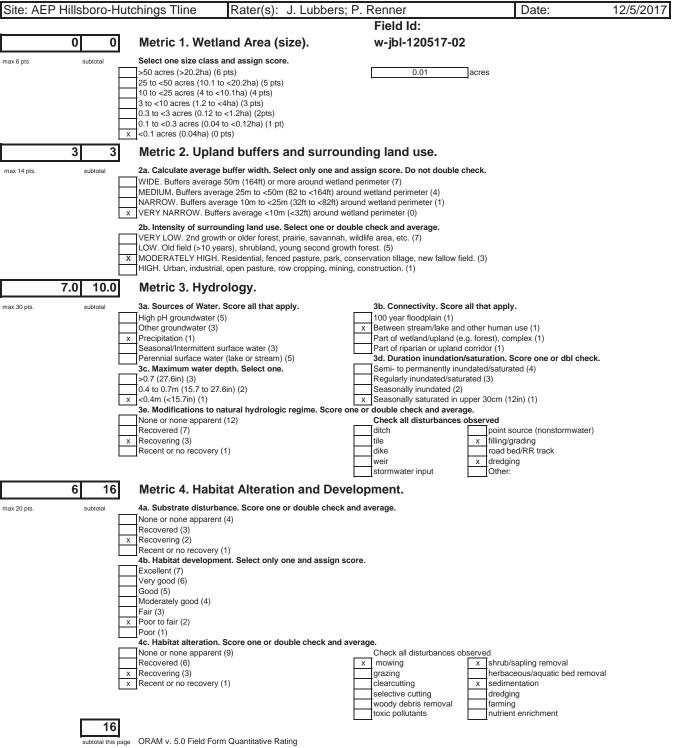


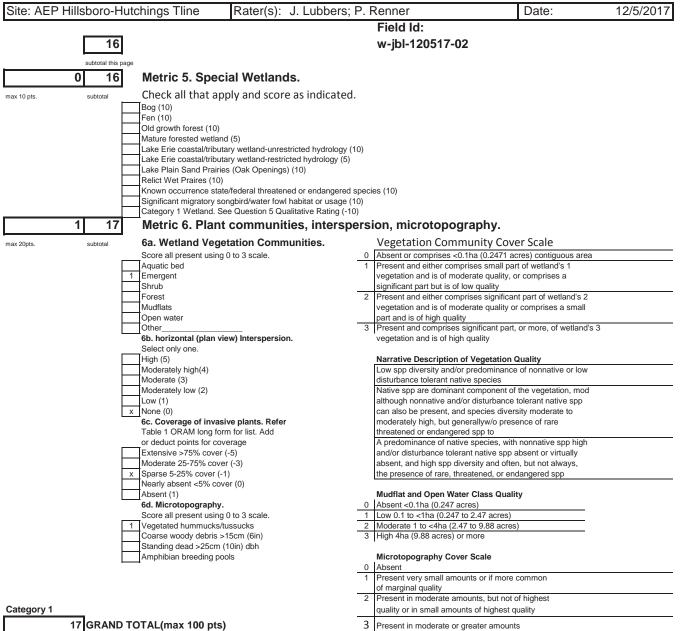
Site: AEP F	Hillsboro-H	utchings Tline	Rater(s): J. Lubb	bers; P. Rer	ner	Date:	12/6/201
				Fi	eld ld:		
	15.5			w	-jbl-120617-01		
	subtotal this p						
	0 15.5	Metric 5. Spec	ial Wetlands.				
10 pts.	subtotal	Check all that ap	ply and score as indic	cated.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetlan		rolo <i>m</i> (10)			
			ary wetland-unrestricted hydr ary wetland-restricted hydrolo				
	·	Lake Plain Sand Prairie		ogy (5)			
		Relict Wet Praires (10)					
		Known occurrence stat	e/federal threatened or endar	ingered species (1	0)		
			ongbird/water fowl habitat or u				
			ee Question 5 Qualitative Rat	- · ·			
	0 15.5	Metric 6. Plant	communities, int	erspersion	, microtopograph	y.	
20pts.	subtotal	•	etation Communities.		getation Community		
	r	Score all present using	0 to 3 scale.			2471 acres) contiguous area	
		Aquatic bed 1 Emergent			sent and either comprises sr etation and is of moderate q		
		Shrub			nificant part but is of low qual		
		Forest			sent and either comprises si		
		Mudflats			etation and is of moderate q		
		Open water		par	t and is of high quality		
		Other				ant part, or more, of wetland's 3	
		6b. horizontal (plan vi	ew) Interspersion.	veg	etation and is of high quality		
	г	Select only one. High (5)		No	rative Description of Vege	tation Quality	
	·	Moderately high(4)			spp diversity and/or predor		
		Moderate (3)			urbance tolerant native spec		
		Moderately low (2)		Nat	ive spp are dominant compo	onent of the vegetation, mod	
		x Low (1)		alth	ough nonnative and/or distu	rbance tolerant native spp	
	[	None (0)			also be present, and specie		
		6c. Coverage of invas			derately high, but generallyw		
		Table 1 ORAM long for			atened or endangered spp t		
	Г	or deduct points for cov Extensive >75% cover			redominance of native speci //or disturbance tolerant nativ		
		x Moderate 25-75% cover			ent, and high spp diversity a		
		Sparse 5-25% cover (-			presence of rare, threatened		
		Nearly absent <5% cov					
		Absent (1)			dflat and Open Water Class	s Quality	
		6d. Microtopography.			ent <0.1ha (0.247 acres)		
	г	Score all present using			0.1 to <1ha (0.247 to 2.47 a		
		1 Vegetated hummucks/ Coarse woody debris >			derate 1 to <4ha (2.47 to 9.8 h 4ha (9.88 acres) or more	8 acres)	
	·	Standing dead >25cm		5 Triig	11411a (9.00 acres) of more		
		Amphibian breeding po		Mic	rotopography Cover Scale	9	
	L			0 Abs	sent		
				1 Pre	sent very small amounts or i	if more common	
					narginal quality		
					sent in moderate amounts, b	•	
Category 1				qua	lity or in small amounts of hi	ghest quality	
1	5.5 GRAND	TOTAL(max 100 pts	)	3 Pre	sent in moderate or greater	amounts	
		•			of highost quality		

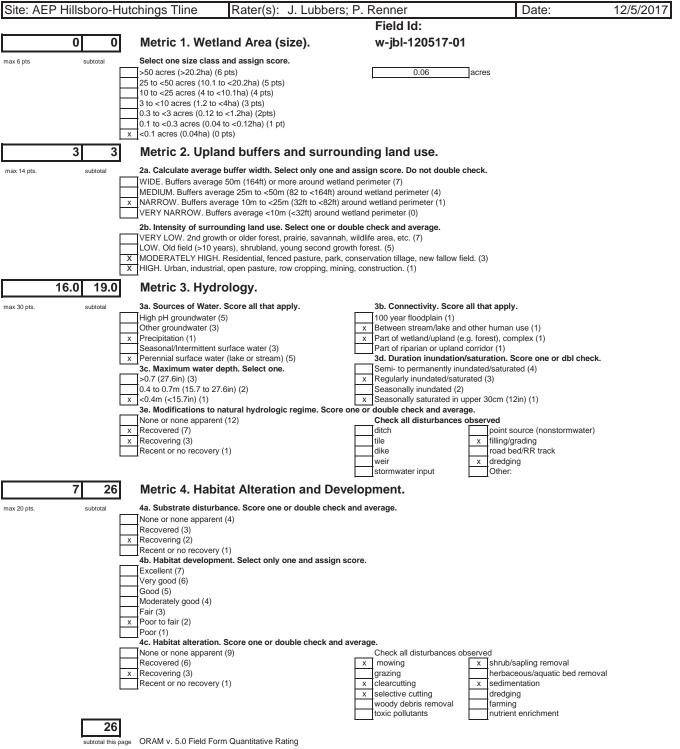


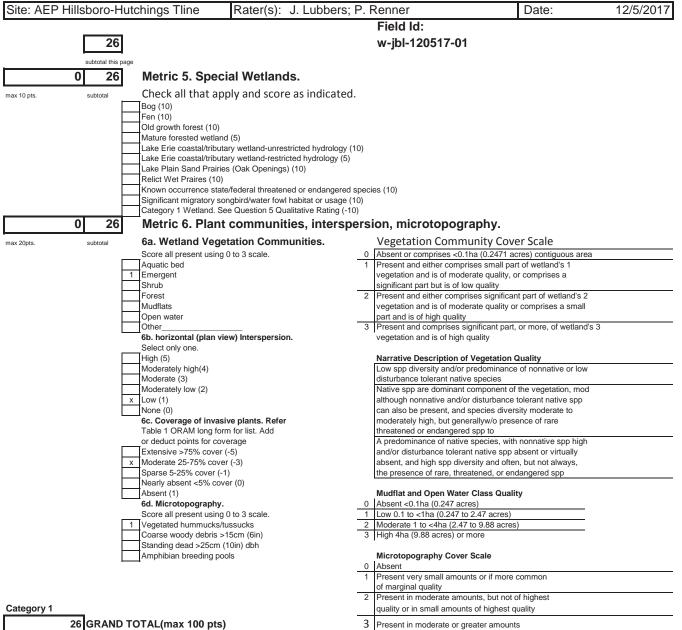
ORAM\_w-jbl-12052017-03.xlsm | test\_Field

	Isboro-Hu	tchings Tline	Rater(s): J. Lubb	ers; P. Renner	Date:	12/5/201
				Field Id:		
	17.5			w-jbl-120517	7-03	
	subtotal this pag					
0	0 17.5	Metric 5. Speci	al Wetlands.			
10 pts.	subtotal	Check all that app	oly and score as indic	ated.		
		Bog (10)				
		Fen (10)				
		Old growth forest (10) Mature forested wetland	L (E)			
			ary wetland-unrestricted hydro	blogy (10)		
	- F		ary wetland-restricted hydrolo			
		Lake Plain Sand Prairies				
		Relict Wet Praires (10)				
			/federal threatened or endan			
			ngbird/water fowl habitat or u e Question 5 Qualitative Rat			
-1	16.5	÷ .		erspersion, microtop	ography.	
20pts.	subtotal	6a. Wetland Vege	tation Communities.	Vegetation Co	mmunity Cover Scale	
		Score all present using (	0 to 3 scale.		s <0.1ha (0.2471 acres) contiguous area	
		Aquatic bed			comprises small part of wetland's 1	
	_	1 Emergent Shrub		vegetation and is of significant part but it	moderate quality, or comprises a	
	-	Forest			comprises significant part of wetland's 2	
	- F	Mudflats			moderate quality or comprises a small	
		Open water		part and is of high q		
		Other	<del></del>		ses significant part, or more, of wetland's 3	
		6b. horizontal (plan vie Select only one.	ew) Interspersion.	vegetation and is of	high quality	
		High (5)		Narrative Descript	ion of Vegetation Quality	
		Moderately high(4)			nd/or predominance of nonnative or low	
		Moderate (3)		disturbance tolerant		
		Moderately low (2)			inant component of the vegetation, mod	
		x Low (1)		5	and/or disturbance tolerant native spp	
	L	None (0) 6c. Coverage of invasion	ve plants Refer		and species diversity moderate to the generally w/o presence of rare	
		Table 1 ORAM long form		threatened or endar		
		or deduct points for cove	erage	A predominance of	native species, with nonnative spp high	
		x Extensive >75% cover (			tolerant native spp absent or virtually	
		Moderate 25-75% cover Sparse 5-25% cover (-1			p diversity and often, but not always, e, threatened, or endangered spp	
	-	Nearly absent <5% cover		the presence of fait	e, threatened, or endangered spp	
		Absent (1)		Mudflat and Open	Water Class Quality	
		6d. Microtopography.		0 Absent <0.1ha (0.24		
	_	Score all present using (		1 Low 0.1 to <1ha (0.1		
	_	<ol> <li>Vegetated hummucks/tu Coarse woody debris &gt;1</li> </ol>		2 Moderate 1 to <4ha 3 High 4ha (9.88 acre		
	-	Standing dead >25cm (1		5 Thigh tha (5.00 acre		
		1 Amphibian breeding poo		Microtopography	Cover Scale	
	-			0 Absent		
					amounts or if more common	
				of marginal quality 2 Present in moderate	e amounts, but not of highest	
Category 1					mounts of highest quality	









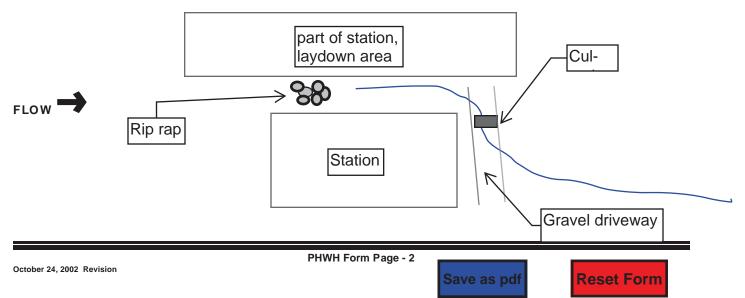
APPENDIX C

**OEPA QHEI & HHEI STREAM FORMS** 

Stream 01 Modified Class 1	
ChieEPA Primary Headwater Habitat Evaluation Form 28	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-03 SITE NUMBER 03 RIVER BASIN DRAINAGE AREA (mi²)	4
Length of stream read       (ft)       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       12/06/17       SCORER       JTT, AEH       COMMENTS       ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: culverted, channelized	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	IEI tric
BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         90%         Poi	
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	trate
COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%	= 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	;
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) (B) (B) (B) (B) (B)	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	Depth = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 4.00	
3BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Ban	kfull
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00 5	,
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old I V Urban or Industrial Field	
Narrow <5m         Residential, Park, New Field         Open Pasture, Row Crop	
V None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream 02 Modified Class 2	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form <b>40</b>	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-02 SITE NUMBER 02 RIVER BASIN DRAINAGE AREA (mi²)	_
Length of stream read       (ft)       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       12/06/17       SCORER       JTT, AEH       COMMENTS       intermittent	_
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	19
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: channelized, dumped in, tiling	ſ
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HEI tric
BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         30%         Poi	ints
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	strate
Image: Second problem         Image: Second problem	= 40
GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	5
Total of Percentages of 15.00% (A) Substrate Percentage 100% (B) A +	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
	Depth = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	;
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Ban	kfull
= > 4.0  meters  (> 13') [30  pts] = > 1.0  m - 1.5  m (> 3' 3" - 4' 8") [15  pts] = Wic  = 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] = 1.0  m (<=3' 3") [5  pts] = Max	
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 5.00 20	0
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R     (Per Bank)     L R     (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m     Residential, Park, New Field     Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u> :	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft)       Flat to Moderate       Moderate (2 ft/100 ft)       Moderate to Severe       Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Co	mpleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	tance from Evaluated Stream
CWH Name: Dist	ance from Evaluated Stream
EWH Name: Dist	ance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation: C	Quantity:0.00
Photograph Information:	
Elevated Turbidity? (Y/N): _ N Canopy (% open): _ 0%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and att	ach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOT ID number. Include appropriate field data sheets from the Primary H	
	pucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Ob Comments Regarding Biology:	served? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REAC	H (This must be completed):
Include important landmarks and other features of interest for site evaluation and a na	
swale	
T Lines	
FLOW Crop field	

PHWH Form Page - 2

hh

**Reset Form** 

Save as pdf

Stream 03 Modified Class 1	1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 17	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-01 SITE NUMBER 01 RIVER BASIN DRAINAGE AREA (mi²)	
Length of stream read       Lat.       LONG.       RIVER CODE       RIVER MILE         DATE       12/06/17       SCORER       JTT, AEH       COMMENTS       ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructio	ns
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	Y
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
TYPE PERCENT TYPE PERCENT ME	etric
BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         85%         PO           BOULDER (>256 mm) [16 pts]         0%         E         LEAF PACK/WOODY DEBRIS [3 pts]         15%	oints
BEDROCK [16 pt] 0% Sub Max	strate x = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%	-
SAND (<2 mm) [6 pts]	7
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A	+ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
	I Depth
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	x = 30
> 22.5 - 30 cm [30 pts]         ✓         < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	nkfull
	idth x=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 0.80	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH       FLOODPLAIN QUALITY         L_R       (Per Bank)       L_R         (Most Predominant per Bank)       L_R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Image: None     Imag	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe I o ft/100 ft)	

DHEI PERFORMED?       Vest       Na OHEI Scote       (If Yes, Attach Completed OHEI Form)         DWNT hame       Distance from Evaluated Stream       Distance from Evaluated Stream         WWN hame       Distance from Evaluated Stream       Distance from Evaluated Stream         WWN hame       Distance from Evaluated Stream       Distance from Evaluated Stream         WWN hame       Distance from Evaluated Stream       Distance from Evaluated Stream         WSS Guadrangle Name       NRCS Soil Map Page       NRCS Soil Map Stream Order         County:       Township / City:       Ouentity:       0.00         Photograph Information:       Quantity:       0.00         Photograph Information:       Canopy (% open):       0%         Were samples collected for water cheatistry? (VN)       N       (Note liab sample no. orid. and attach results) Lab Number.         Field Measures:       Tarpy (*O)       Dissolved Oxygen (mail)       pH (S.U)       Conductivity (µmhosicm)         Is the sampling meath representative of the stream (YAN)       If not please explain:           Biotic EVALUATION       Performed? (VN)       N       Voucher? (VN)       Voucher? (VN)       Voucher? (VN)         Problec Cleasened? (VN)       Voucher? (VN)       Aquatic Macroinverterbates Observed? (VN)       Voucher? (VN)       Voucher	ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
WH Name:       Distance from Evaluated Stream         CVHN Name:       Distance from Evaluated Stream         DVHN Name:       Distance from Evaluated Stream         MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION         USGS Guadrangle Name:       NRCS Soil Map Page         MISCELLANEOUS       NRCS Soil Map Page         Base Flow Conditions? (V/N)       Date of last precipitation:         Outority:       Township / City:         Base Flow Conditions? (V/N)       N         Cautograph Information:       Canopy (% open):         Floid Measures:       Temp (*C)         Distance from Evaluated for water chemistry? (V/N)       N         Kree samples collected for water chemistry? (V/N)       N         Biotric EVALUATION       Distance from Evaluate and indeervations.         Performed? (Y/N)       N       Use and indeervations.         Distance from Evaluation and a narrative description of biotry?       Noucher? (Y/N)         Price       Drawinds AND NARRATIVE DESCRIPTION OF STR	QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Atta	ch Completed QHEI Form)
OVHN Name:       Distance from Evaluated Stream         DeWN Name:       Distance from Evaluated Stream         MAPPING: ATTACH COPES OF MAPS, INCLUDING THE ENTIFE WATERSHED AREA. CLEALLY WARK THE STE LOCATION         USGS Quadrangle Name:       NRCS Solf Map Prage         NRCS Solf Map Prage       NRCS Solf Map Stream Order         County:       Township / City.         MISCELLANEOUS       Date of last precipitation:       Quantity:         Dividing Prage       NRCS Solf Map Prage       NRCS Solf Map Stream Order         Photograph Information:	DOWNSTREAM DESIGNATED USE(S)	
EVHN Name:       Distance from Evaluated Stream         MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIFE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION         USGS Quadrangle Name:       NRCS Soll Map Page.         MISCELLANEOUS         Base Flow Conditions? (Y/N):       Date of last precipitation.         Photograph Information:       NRCS Soll Map Page.         Photograph Information:       NRCS Soll Map Page.         Flevaled Turbidity? (Y/N):       Date of last precipitation.         Outanity:       0.00         Photograph Information:       NRCS Soll Map Page.         Flevaled Turbidity? (Y/N):       Canopy (% open):       0%         Wree samples collected for water chamistry? (Y/N):       N       (Note lab sample no. orid. and attach results) Lab Number:         Flevaled Turbidity? (Y/N):       Canopy (% open):       0%         Wree samples collected for water chamistry?       (Y/N):       N         Is the sampling reach representative of the stream (Y/N):       If not, please explain:		_ Distance from Evaluated Stream
MAPPING: ATTACH COPES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION         USGS Quadrangle Name:       NRCS Soil Map Page       NRCS Soil Map Stream Order         County:       Township / City.         MISCELLANEOUS       Quantity:       0.00         Base Flow Conditions? (Y/N):       Date of last precipitation:       Quantity:       0.00         Photograph Information:		
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order County: Township / City: NRCS Soil Map Stream Order County: Township / City: NISCELLANEOUS Base Flow Conditions? (Y/N): Date of last precipitation: Quantity: 0.00 Photograph Information: County: County: O% Wore samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (*C): Dissolved Oxygen (mg/t) pH(S.U): Conductivity (umhos/cm) is the sampling reach representative of the stream (Y/N) Y If not, please explain:  BioTic EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Youcher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habita: Assessment Manual) Fiel Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include Important landmarks and other features of Interest for site evaluation and a narrative description of the stream's location FLOW Grass path	EWH Name:	Distance from Evaluated Stream
County:	MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHEE	AREA. CLEARLY MARK THE SITE LOCATION
MSCELLANEOUS         Base Flow Conditions? (Y/N): V       Date of last precipitation: O         Photograph Information:	USGS Quadrangle Name: NRCS Soil Map P	age: NRCS Soil Map Stream Order
Base Flow Conditions? (Y/N): Y Date of last precipitation: Duantity: 0.00 Debuggaph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 0% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (*C) Dissolved Oxygen (mg/t) PH (S.U.) Conductivity (umhos/cm) Is the sampling reach representative of the stream (*/N) If not, please explain: BioTic EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include Important landmarks and other features of interest for site evaluation and a narrative description of the stream's location FLOW Grass path	County: Township / City:	
Base Flow Conductors (r(h)):	MISCELLANEOUS	
Elevated Tutbidity? (v/N): N Canopy (% open): 0% Were samples collected for water chemistry? (v/N): N (Note lab sample no. or id. and attach results) Lab Number. Field Measures: Temp (*C) Dissolved Oxygen (mg/t) pH (S.U.) Conductivity (umhos/cm) Is the sampling reach representative of the stream (v/N) T if not, please explain:  Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (v/N): N (If Yes, Record all observations. Voucher collections optional. NO TE: all vouchers amples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (v/N) Voucher? (v/N) N Vo	Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Elevated Tutbidity? (v/N): N Canopy (% open): 0% Were samples collected for water chemistry? (v/N): N (Note lab sample no. or id. and attach results) Lab Number. Field Measures: Temp (*C) Dissolved Oxygen (mg/t) pH (S.U.) Conductivity (umhos/cm) Is the sampling reach representative of the stream (v/N) T if not, please explain:  Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (v/N): N (If Yes, Record all observations. Voucher collections optional. NO TE: all vouchers amples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (v/N) Voucher? (v/N) N Vo	Photograph Information:	
Field Measures:       Temp (*C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)         Is the sampling reach representative of the stream (Y/N)       If not, please explain:	N	
Field Measures: Temp (*C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)   Is the sampling reach representative of the stream (Y/N) If not, please explain:   Additional comments/description of pollution impacts:   Additional comments/description of pollution impacts:   BIOTIC EVALUATION   Performed? (Y/N) N   (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)   Fish Observed? (Y/N) N   Voucher? (Y/N) N   You cher? Y/N)   N You cher? (Y/N)   N You cher? (Y/N)   N You cher?   Y/N You cher?   Y Y   Y Y   Y Y   Y Y   Y Y   Y Y	Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. a	and attach results) Lab Number:
Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (Y/N) N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher?		Conductivity (µmhos/cm)
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site D number. Include appropriate field data sheets from the Primary Headwater Habital Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location  FLOW FLOW Grass path	Is the sampling reach representative of the stream (Y/N) If not, please explain:	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site D number. Include appropriate field data sheets from the Primary Headwater Habital Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location  FLOW FLOW Grass path		
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N	Additional comments/description of pollution impacts:	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N		
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location T Lines FLOW Grass path	Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pri Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrat	mary Headwater Habitat Assessment Manual)
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location T Lines FLOW Grass path	DRAWING AND NARRATIVE DESCRIPTION OF STREAM R	FACH (This must be completed):
FLOW → Grass path		· <u> </u>
	FLOW	
	Grass path PHWH Form Page - 2	

**Reset Form** 

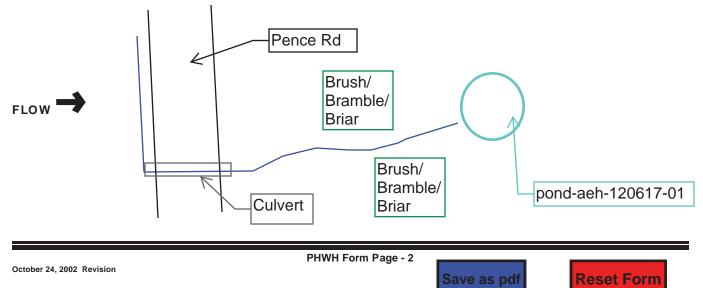
Save as pdf

Stream 04 Modified Cl	ass 1
<b>OhioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	18
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
DATE 12/06/17 SCORER COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	
MODIFICATIONS: culverted	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% 2 SILT [3 pt] 60%	Points
BOULDER (>256 mm) [16 pts]	Cubatasta
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	8
SAND (<2 mm) [6 pts]         0%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of D.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts] ✓ < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.50	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 0.50	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Field Open Pasture, Row Cro	p
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None $1.0$ $2.0$ $3.0$	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe	O ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Distance from Evaluated Stream	_
CWH Name: Distance from Evaluated Stream	_
EWH Name: Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order	
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00	
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):0%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with	the site
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)	
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N	
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)	
Comments Regarding Biology:	

## DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

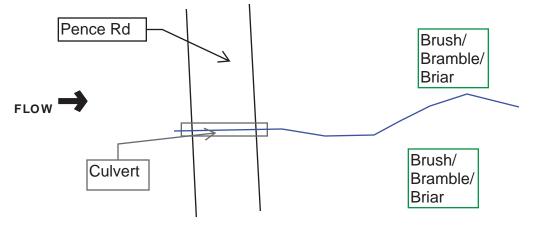
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream 05 Modified Class	s 1
ChieEPA Primary Headwater Habitat Evaluation Form 18	
HHEI Score (sum of metrics 1, 2, 3) :	,
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-09 SITE NUMBER 09 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT. LONG. RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER JTT, AEH COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE	ERY
MODIFICATIONS: culverted	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	HHEI Ietric
BLDR SLABS [16 pts] 0% SILT [3 pt] 60% P	oints
BEDROCK 116 Dt U% LIL FINE DETRITUS 13 Dts U%	ubstrate
COBBLE (65-256 mm) [12 pts]	lax = 40
GRAVEL (2-64 mm) [9 pts]         0%         MUCK [0 pts]         0%           SAND (<2 mm) [6 pts]	8
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	ol Depth lax = 30
evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       M         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	ax = 30
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	5
COMMENTSMAXIMUM POOL DEPTH (Inches): 1.00	
	Bankfull Width
= > 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = > 1.5  m - 3.0  m (> 9' 7" - 4' 8") [20  pts]$	/lax=30
	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
$\underline{L} \underline{R}$ (Per Bank) $\underline{L} \underline{R}$ (Most Predominant per Bank) $\underline{L} \underline{R}$	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field Field	
Narrow <5m	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe         Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Save as pdf

**Reset Form** 

Stream 06 Modified Clas	ss 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	8
HHEI Score (sum of metrics 1, 2, 3) :	0
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-07 SITE NUMBER 07 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT LONG RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER JTT, AEH COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	/ERY
MODIFICATIONS: Channelized, farming	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 90%	Points
BEDROCK 116 pt 0% FINE DETRITUS 13 pts 0%	Substrate
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	8
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 4.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3" 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3"$	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field Cross Posture Row Cross	
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS recent rain	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box):</u>	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE         ✓ Flat (0.5 ft/100 ft)         ✓ Flat to Moderate         ✓ Moderate (2 ft/100 ft)         ✓ Moderate to Severe	ft)

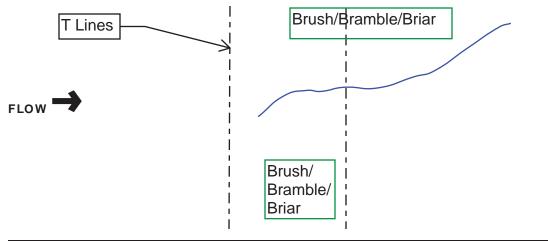
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Q
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
T Lines Brush/Bramþle/Briar
FLOW
Brush/ Bramble/
Briar
PHWH Form Page - 2 October 24, 2002 Revision Reset Form Reset Form

Stream 07 Modified Clas	ss 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form	8
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-06 SITE NUMBER 06 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT LONG RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER JTT, AEH COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	√ERY
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	Metric Points
□       BLDR SLABS [16 pts]       0%       ✓       SILT [3 pt]       70%         □       BOULDER (>256 mm) [16 pts]       0%       □       LEAF PACK/WOODY DEBRIS [3 pts]       30%	
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	IVIAX = 40
GRAVEL (2-64 mm) [9 pts]         0%         MUCK [0 pts]         0%	8
SAND (<2 mm) [6 pts]	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
	Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	Bankfull
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\leq 1.0$ m (<=3' 3") [5 pts]	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Immature Egrest Shrub or Old	
Field The field	
Narrow <5m     Residential, Park, New Field     Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial)	
COMMENTS recent rain	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (C</u> heck ONLY one box):	
None 1.0 2.0 3.0	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also b	e Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTI	RE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:N	IRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township	o / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): N (Note lab s	ample no. or id. and attach results) Lab Number:
Field Measures:     Temp (°C)     Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not, planet	ease explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
	ollections optional. NOTE: all voucher samples must be labeled with the sit heets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Obs Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic	erved? (Y/N) N Voucher? (Y/N) N Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



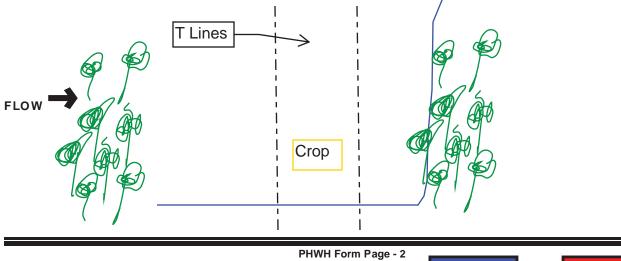
Save as pdf Reset Form

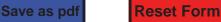
Stream 08 Modified Class	s 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 29	
HHEI Score (sum of metrics 1, 2, 3) :	'
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-05 SITE NUMBER 05 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft)	
DATE 12/06/17 SCORER JTT, AEH COMMENTS Intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	ERY
MODIFICATIONS: Channelized, farming	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	HHEI Netric
BLDR SLABS [16 pts] 0% 7 SILT [3 pt] 70%	Points
BEDROCK 16 pti V% LILI FINE DETRITUS 13 ptsi V70	ubstrate
CLAY or HARDPAN [0 pt]	/lax = 40
GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	9
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	ool Depth /lax = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.00	
	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 3.0  m (> 9' 7" - 4' 8") [20  pts]$	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet); 2.00	5
	<u> </u>
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m III Field IIII Open Pasture, Row Crop	
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS       recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): _ N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the si ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:

### DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Stream 09 Modified Class	s 1
ChieEPA Primary Headwater Habitat Evaluation Form 25	
HHEI Score (sum of metrics 1, 2, 3) :	<u></u>
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120617-04 SITE NUMBER 04 RIVER BASIN DRAINAGE AREA (mi²)	
DATE 12/06/17 SCORER JTT, AEH COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS: Channelized, farming	ERY
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	<i>l</i> etric Points
BOULDER (>256 mm) [16 pts]	ubstrate
BEDROCK 16 pt 0% LILE FINE DETRITUS 13 pts 07	lax = 40
GRAVEL (2-64 mm) [9 pts]	15
SAND (<2 mm) [6 pts]         0%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of D.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): N > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	/lax = 30
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 3.0  m (> 9' 7" - 4' 8") [20  pts]$	Max=30
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream         RIPARIAN WIDTH       FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Image: State of Nation and State of National State of Natio	
Image: Marrier work with a state of the stat	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
□ 0.5	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Indicate Indicate (2 ft/100 ft) Moderate to Severe Indicate (10 ft/100 ft)	

QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, A	ttach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map	Page: NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or ic	d. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not, please explain:	
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data sheets from the I         Fish Observed? (Y/N)         N         Voucher? (Y/N)         N	N N
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation	and a narrative description of the stream's location
	off-ROW wetland
FLOW Crop	
	T Lines
October 24, 2002 Revision PHWH Form Page - 2	Save as pdf Reset Form

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 10 Modified Class	2
ChieFPA Primary Headwater Habitat Evaluation Form 40	٦
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120717-04 SITE NUMBER 04 RIVER BASIN DRAINAGE AREA (mi²) 0.68	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.18824 LONG83.71205 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER JTT, AEH COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE	RY
grading, millig, chamenzed	
	IHEI
TYPE PERCENT TYPE PERCENT D	letric oints
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	ıbstrate ax = 40
GRAV/EL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	
SAND (<2 mm) [6 pts]	10
Total of Percentages of 5.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool	ol Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	ax = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 6.00	
······································	ankfull Nidth
$ \boxed{\qquad} > 3.0 \text{ m} - 4.0 \text{ m} (>9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (>9' 7" - 4' 8") [20 \text{ pts}] \\ \boxed{\qquad} \boxed{\qquad} \le 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ \boxed{\qquad} \boxed{\qquad} \boxed{\qquad} \boxed{\qquad} \boxed{\qquad} \boxed{\qquad} \boxed{\qquad} \boxed{\qquad}$	ax=30
	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial	
Image: None	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Subsurface flow with isolated pools (Interstitial)	
COMMENTS_recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

		(If Yes, Attach Compl	elea QHEI FORM)
DOWNSTREAM DESIGNATI	ED USE(S)	Distanc	ce from Evaluated Stream
			e from Evaluated Stream
EWH Name:		Distance	e from Evaluated Stream
MAPPING: ATTACH COPIES	OF MAPS, INCLUDING THE <u>E</u>	NTIRE WATERSHED AREA. C	CLEARLY MARK THE SITE LOCATION
SGS Quadrangle Name:		NRCS Soil Map Page:	NRCS Soil Map Stream Order
punty:	Town	ship / City:	
MISCELLANEOUS			
ase Flow Conditions? (Y/N):Y	Date of last precipitation:	Quar	ntity: 0.00
otograph Information:			
evated Turbidity? (Y/N):	Canopy (% open):	/o	
ere samples collected for water chem	istry? (Y/N): N (Note la	b sample no. or id. and attach	results) Lab Number:
eld Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.) C	conductivity (µmhos/cm)
the sampling reach representative of	the stream (Y/N) Y If not	, please explain:	
ditional comments/description of poll	ution impacts:		
	····		
ID numb	er. Include appropriate field da r? (Y/N) N Salamanders (	a sheets from the Primary Head	all voucher samples must be labeled with the s dwater Habitat Assessment Manual) her? (Y/N) N ved? (Y/N) N Voucher? (Y/N)
			(This <u>must</u> be completed):
	Pond		tive description of the stream's location
vay		herb	
Roadway			
<u> </u>			
		Herb	
			-
	I I		-

Lake

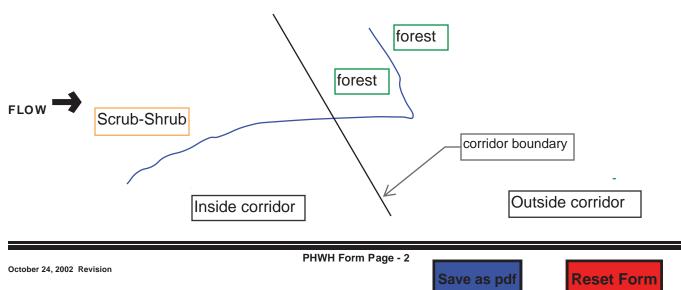
PHWH Form Page - 2

Save as pdf Reset Form

Stream 11 Modified Cl	ass 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form	18
HHEI Score (sum of metrics 1, 2, 3) :	10
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120717-03 SITE NUMBER 03 RIVER BASIN DRAINAGE AREA (mi²) 0.	16
LENGTH OF STREAM REACH (ft) 200 LAT. 39.18928 LONG83.71371 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER JTT, AEH COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ictions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING	OVERY
grading, ming, thannenzed	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         80%           BOULDER (>256 mm) [16 pts]         0%         EAF PACK/WOODY DEBRIS [3 pts]         20%	
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDRAN [0 pt]         0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       0%       0%       0%       0%	
SAND (<2 mm) [6 pts]	8
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
Bidr Slabs, Boulder, Cobble, Bedrock 0.0078 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY              \U00e9 NOTE: River Left (L) and Right (R) as looking downstream	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
✓       ✓       Narrow <5m	Ċ
None  Fenced Pasture      COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 1.0 2.0 3.0	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	0 ft)

ADDITIONAL STREAM INFORMATION (This Information Musi	t Also be Completed):
QHEI PERFORMED? - Yes Ves No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING TI	HE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: New Market	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland	Township / City:Hamer Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	:Quantity:0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	0%
Were samples collected for water chemistry? (Y/N): N (No	ote lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate fiel	oucher collections optional. NOTE: all voucher samples must be labeled with the site Id data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamand	lers Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N	Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPT	ION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream 12 Modified Class	2
ChieEPA Primary Headwater Habitat Evaluation Form 36	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120717-02 SITE NUMBER 02 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.19150 LONG83.71965 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER JTT, AEH COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructio	ns
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS: grading filling	ł۲
grading, ming	
	HEI
	etric bints
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 10%	
BEDROCK [16 pt] 0% III FINE DETRITOS [3 pts] Ma	ostrate x = 40
GRAV/EL (2-64 mm) [9 pts] 0% MUCK [0 pts] 0%	
SAND (<2 mm) [6 pts]         0%         ARTIFICIAL [3 pts]         0%	6
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A	+ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Poo	ol Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Ma 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	x = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 6.00	
	nkfull /idth
$ \boxed{ > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] } $	ax=30
	<b>_</b>
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Viban or Industrial	
Narrow <5m	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       Ø.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE	WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRC	S Soil Map Page: NRCS Soil Map Stream Order
County: Township / C	Dity:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	
N	ble no. or id. and attach results) Lab Number:
	pH (S.U.) Conductivity (µmhos/cm)
Y	e explain:
Additional comments/description of pollution impacts:	
ID number.         Include appropriate field data sheet           Fish Observed? (Y/N)         N         Salamanders Observed	ctions optional. NOTE: all voucher samples must be labeled with the site ts from the Primary Headwater Habitat Assessment Manual) ed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N croinvertebrates Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF S	STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site	
w-aeh-	120717-03
Scrub-Shrub	
FLOW	
PHWH Form October 24, 2002 Revision	
	Save as pdf Reset Form

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 13	Modified Class 1
ChieEPA Primary Headwater Habitat Eval	uation Form (sum of metrics 1, 2, 3) :
SITE NAME/LOCATION       Hillsboro Hutchings         hh-aeh-20171207-1       SITE NUMBER       RIVER BASIN         LENGTH OF STREAM REACH (ft)       200       LAT.       39.19340       LONG.       -83.72507         DATE       12/07/17       SCORER       aeh, jtt       COMMENTS       intermittent         NOTE:       Complete All Items On This Form - Refer to "Field Evaluation Manual for MODIFICATIONS:       NONE / NATURAL CHANNEL       RECOVERED       RECOVERED	
BEDROCK [16 pt]       0%       FINE DETRITUS         COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPA         GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]         SAND (<2 mm) [6 pts]	tric score is sum of boxes A & B.       HHEI         PERCENT       60%         60%       30%         (3 pts]       0%         N [0 pt]       0%         0%       0%         100%       (B)
2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (20 evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check OM         > 30 centimeters [20 pts]       > 5 cm - 10 cm [1         > 22.5 - 30 cm [30 pts]       > 5 cm - 10 cm [1         > 10 - 22.5 cm [25 pts]       > 0 WATER OR         COMMENTS         MAXIMUM         3.         A O meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3")	0 ft) evaluation reach at the time of LY one box):       Pool Depth Max = 30         15 pts]       15         MOIST CHANNEL [0 pts]       15         POOL DEPTH (Inches):       3.00         eck ONLY one box):       >3' 3" - 4' 8") [15 pts]
RIPARIAN WIDTH       FLOODPLAIN QUALITY         L       R       (Per Bank)       L       R       (Most Predominant per Bank)         Wide >10m       Immature Forest, Wetland       Immature Forest, Wetland       Immature Forest, Shrub or Old Field         Image: Stream Flowing       None       Fenced Pasture         Subsurface flow with isolated pools (Interstitial)       Moist Chapter Comments	L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop         Mining or Construction
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY or None 0.5 1.0 2.0 2.5 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) I Flat to Moderate I Moderate (2 ft/100 ft) Moderate	a.0         >3         te to Severe       Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Als	o be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
_	INTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: New Market	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland Town	nship / City:Hamer Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: <b>0.00</b>
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):10	%
Were samples collected for water chemistry? (Y/N): (Note la	ab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If no	t, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field da Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders of	er collections optional. NOTE: all voucher samples must be labeled with the site ta sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) N Voucher? (Y/N) N atic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
DRAWING AND NARRATIVE DESCRIPTION	NOF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for	or site evaluation and a narrative description of the stream's location
Shru	b/Scrub
Shrub/Scrub	
FLOW Shrub/Scrub	Wetland
Urban/Construction	
PHWH October 24, 2002 Revision	Form Page - 2
	Save as pdf Reset Form

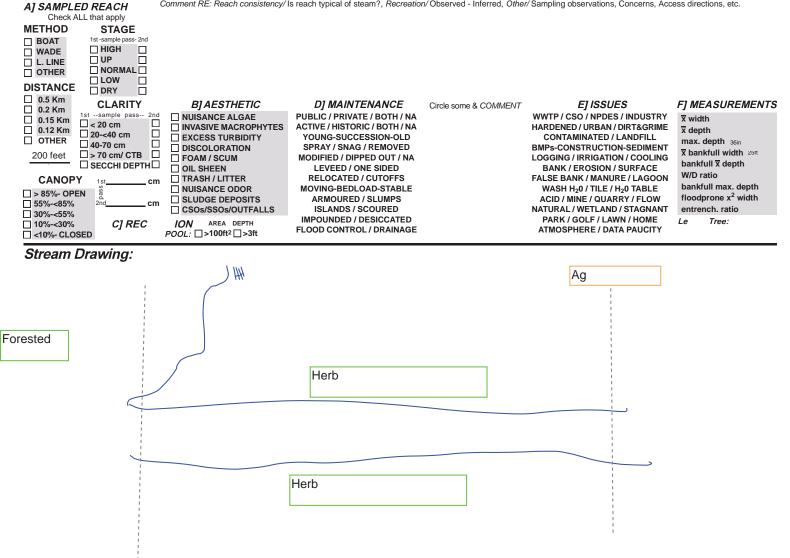
Stream 14 Modified Class	s 1
ChieEPA Primary Headwater Habitat Evaluation Form	2
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120717-06         SITE NUMBER         06         RIVER BASIN         DRAINAGE AREA (mi²)         0.20	<u> </u>
LENGTH OF STREAM REACH (ft) 200 LAT. 39.19639 LONG83.73243 RIVER CODE RIVER MILE DATE 12/07/17 SCORER JTT, AEH COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	lions
-	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERD MODIFICATIONS:	=RY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Netric
BLDR SLABS [16 pts] 0% SILT [3 pt] 90%	oints
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         S	ubstrate
COBBLE (65-256 mm) [12 pts]           0%           CLAY or HARDPAN [0 pt]	/lax = 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	8
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	ool Depth /lax = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 22.5 - 30 cm [30 pis]       > 30 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must be be a beaution in the	
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial Field	
Narrow <5m     Residential, Park, New Field     Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
V     None     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	,

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Distance from Evaluated Stream	
CWH Name: Distance from Evaluated Stream	
EWH Name: Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOO	
USGS Quadrangle Name: New Market NRCS Soil Map Page: NRCS Soil Map Stream C	rder
County: Highland Township / City: Hamer Township	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:QUANTITY:	
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labor ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Man Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N)	ual)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be complete	d):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream	-
	olocuton
Culvert Residential	
Line of trees/shrubs	
FLOW	
a	
Roadway	
Ag	
· · · · · · · · · · · · · · · · · · ·	
PHWH Form Page - 2	
October 24, 2002 Revision Save as pdf Reset I	orm

Stream 15 Modified Class 1	
ChieEPA Primary Headwater Habitat Evaluation Form 19	1
HHEI Score (sum of metrics 1, 2, 3):	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120717-07 SITE NUMBER 07 RIVER BASIN DRAINAGE AREA (mi²) 0.10	4
LENGTH OF STREAM REACH (ft) 200 LAT. LONG83.73000 RIVER CODE RIVER MILE DATE 12/07/17 SCORER JTT, AEH COMMENTS ephemeral	_
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ns
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	Y
MODIFICATIONS: Channelized, culvert	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
TYPE PERCENT TYPE PERCENT ME	etric
BLDR SLABS [16 pts]         0%         SILT [3 pt]         80%         PO           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%         10%	ints
BEDROCK [16 pt] 0% III FINE DETRITUS [3 pts] 0% Sub-	strate ( = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	<b>)</b>
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A	⊦ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       Max         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	( = 30
> 22.5 - 30 cm [30 pts]         ✓         < 5 cm [5 pts]	;
COMMENTSMAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bar	nkfull
	dth x=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Field Urban or Industrial	
Image: None       Image: Residential, Park, New Field       Image: Residential, Park, New Field       Image: Residential, Park, New Field         Image: None       Image: Residential, Park, New Field       Image: Residential, Park, New Field       Image: Residential, Park, New Field         Image: None       Image: Residential, Park, New Field       Image: Residential, Park, New Field       Image: Residential, Park, New Field	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:New Market NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland Township / City: Hamer Township
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location          Culvert       Ag         FLOW       FLOW
Ag
PHWH Form Page - 2
Save as pdf Reset Form

Stream 16		Goo	od Warmwater
<b>ChieEPA</b>	Qualitative Habitat E and Use Assessme		QHEI Score: 55.5
Stream & Location: AEP	Hillsboro-Hutchings 138 kV	RM:	<b>Date:</b> 12/07/17
q-aeh-120717-02	Scorers Fu	Ill Name & Affiliation:	
River Code:	STORET #:L	at./ Long.: 39.198855, -83.	735783 Office verified location
1] SUBSTRATE Check ONLY	<b>Two</b> substrate TYPE BOXES:		
	or note every type present RIFFLE OTHER TYPES POOL RIF		Dr 2 & average) QUALITY
BLDR /SLABS [10]			HEAVY [-2]
BOULDER [9] COBBLE [8]	DETRITUS [3]	ITILLS [1] S □ WETLANDS [0] S	GILT <sup>✓</sup> MODERATE [-1] Substrate
GRAVEL [7]		10 HARDPAN [0]	□ FREE [1] 12
✓         ✓         SAND [6]         45           □         □         BEDROCK [5]	ARTIFICIAL [0] (Score natural substrates; ic		EXTENSIVE [-2] Maximum
NUMBER OF BEST TYPE	aludas from point pour		
Comments	□ 3 or less [0]	SHALE [-1]	
• • •			
quality; 3-Highest quality in mode diameter log that is stable, well d <u>1</u> UNDERCUT BANKS [1] <u>1</u> OVERHANGING VEGETA SHALLOWS (IN SLOW W	TION [1] 1 ROOTWADS [1]	oulders in deep or fast water, large	Check ONE (Or 2 & average)         □ EXTENSIVE >75% [11]         ] ☑ MODERATE 25-75% [7]         [] □ SPARSE 5-<25% [3]
ROOTMATS [1] Comments			Cover Maximum 20
3] CHANNEL MORPHOLO SINUOSITY DEVELOI	GY Check ONE in each category (Or 2 & a PMENT CHANNELIZATION	average) STABILITY	
□ MODERATE [3] □ GOOD [ □ LOW [2] □ FAIR [3]		MODERATE [2]	
	1]	RY [1]	Channel Maximum 11
Comments			20
River right looking downstream	WIDE > 50m [4]       □       □       FORES         MODERATE 10-50m [3]       □       □       SHRUI         NARROW 5-10m [2]       □       □       RESID         VERY NARROW < 5m [1]	FLOOD PLAIN QUALITY ST, SWAMP [3] B OR OLD FIELD [2] ENTIAL, PARK, NEW FIELD [1] ED PASTURE [1]	<ul> <li>bank &amp; average)</li> <li>CONSERVATION TILLAGE [1]</li> <li>URBAN OR INDUSTRIAL [0]</li> <li>MINING / CONSTRUCTION [0]</li> <li>dicate predominant land use(s) ast 100m riparian.</li> <li>Riparian Maximum 10</li> </ul>
5] POOL / GLIDE AND RIF	FIF/RUNQUALITY		
MAXIMUM DEPTH           Check ONE (ONLY!)           □ > 1m [6]         ☑ PO           ☑ 0.7-<1m [4]	CHANNEL WIDTH Check ONE (Or 2 & average) OOL WIDTH > RIFFLE WIDTH [2] TORF OOL WIDTH = RIFFLE WIDTH [1] VER OOL WIDTH > RIFFLE WIDTH [0] FAST MOD	CURRENT VELOCITY Check ALL that apply RENTIAL [-1] SLOW [1] Y FAST [1] INTERSTITIAL [- T [1] INTERMITTENT DERATE [1] EDDIES [1] licate for reach - pools and riffles.	
Indicate for functional	l riffles; Best areas must be larg	e enough to support a po	oulation
of riffle-obligate speci	Check ONE (Or 2	& average).	✓ NO RIFFLE [metric=0]
RIFFLE DEPTH □ BEST AREAS > 10cm [2] □	RUN DEPTH RIFFLE / RU MAXIMUM > 50cm [2] STABLE (e.g., C		
BEST AREAS 5-10cm [1]	$MAXIMUM < 50 cm [1] \square MOD. STABLE (e.g., c)$	(e.g., Large Gravel) [1]	
BEST AREAS < 5cm [metric=0] Comments	UNSTABLE (e.g	I., Fine Gravel, Sand) [0]	MODERATE [0] Riffle / Run EXTENSIVE [-1] Maximum 8
6] GRADIENT ( 21.4 ft/mi	) 🗌 VERY LOW - LOW [2-4]	%POOL: 15 %G	
DRAINAGE AREA (7.57 mi <sup>2</sup> )	MODERATE [6-10]	$\succ$	FLE: 0 Gradient 10
EPA 4520			06/16/06



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream 17 Modifie	d Class 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form	18
HHEI Score (sum of metrics 1, 2, 3):	10
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-aeh-120717-05 SITE NUMBER 05 RIVER BASIN DRAINAGE AREA (mi <sup>2</sup>	0.10
LENGTH OF STREAM REACH (ft) 200 LAT. 39.20001 LONG83.73747 RIVER CODE RIVER MIL DATE 12/07/17 SCORER JTT, AEH COMMENTS ephemeral	<u> </u>
DATE 12/07/17 SCORER JII, AEH COMMENTS ephemeral NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ir	ctructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO F	ECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxe	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         90%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%	Max = 40
GRAVEL (2-64 mm) [9 pts]     0%     MUCK [0 pts]     0%       SAND (<2 mm) [6 pts]	8
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]         ✓         < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\checkmark$ > 1.0 m (<=3' 3") (5 pts] $\checkmark$	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.0	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ជNOTE: River Left (L) and Right (R) as looking downstream Å	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillag	3
Field Field	_
Narrow <5m Residential, Park, New Field Open Pasture, Row	Crop
Vone Fenced Pasture Mining or Construct	on
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial)	ent)
COMMENTS_recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	) ft/100 ft)

QHEI PERFORMED? - Yes Vo QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
CWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:New Market	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland Towns	ship / City: Dodson Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	6
Were samples collected for water chemistry? (Y/N): N (Note lat	b sample no. or id. and attach results) Lab Number:
· · · · · · · · · · · · · · · · · · ·	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not,	please explain:
Additional comments/description of pollution impacts:	
ID number.         Include appropriate field data           Fish Observed? (Y/N)         N         Salamanders C	er collections optional. NOTE: all voucher samples must be labeled with the site a sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) N Voucher? (Y/N) N tic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
	OF STREAM REACH (This <u>must</u> be completed): r site evaluation and a narrative description of the stream's location
FLOW	Channel disappears
Scrub-Shrub	-

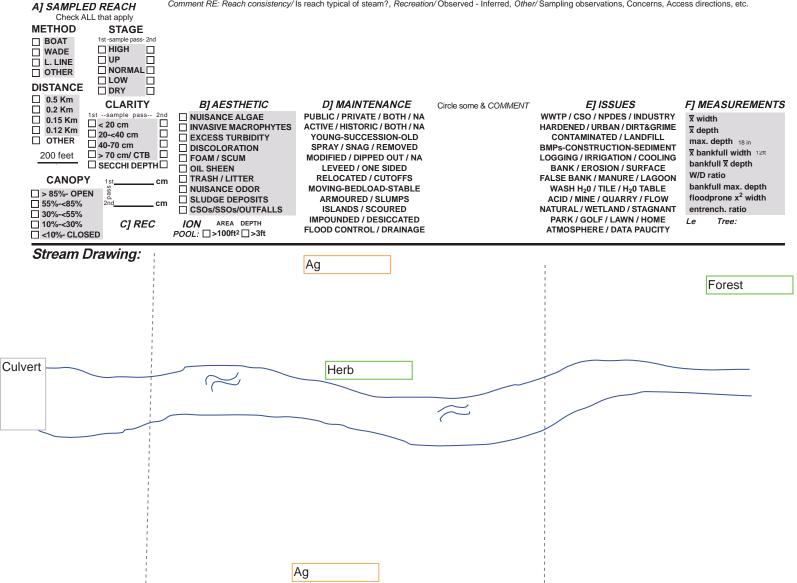
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

PHWH Form Page - 2

Save as pdf

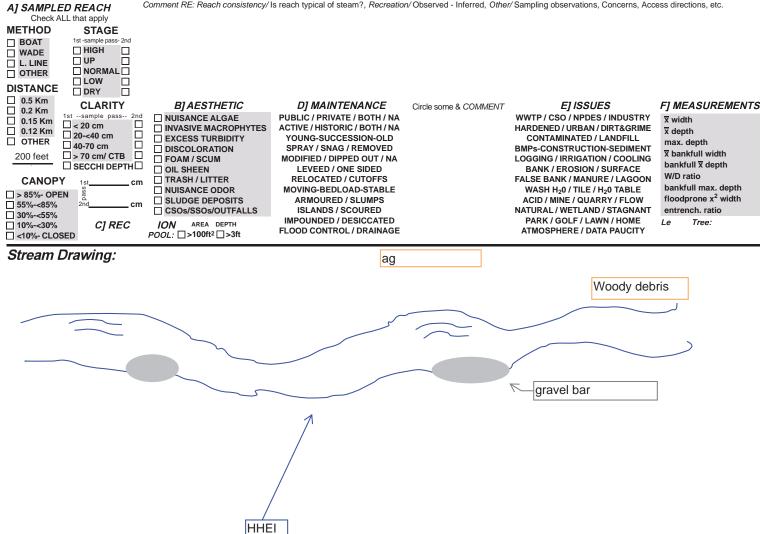
**Reset Form** 

Stream 18		Fair Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation and Use Assessment Field Sh	
Stream & Location: AEP Hillst	poro-Hutchings 138 kV	<b>RM: Date:</b> 12/07/17
q-aeh-120717-01 - Dodson Creek	Scorers Full Name & Affil	
<i>River</i> Code:		0333, -83.743532 Office verified location
	substrate TYPE BOXES; every type present	Check ONE (Or 2 & average)
BLDR /SLABS [10]	Image: Description of the second s	NE [1] DS [0] N [0] DNE [0] [0] IRINE [0] I] HEAVY [-2] MODERATE [-1] I NORMAL [0] FREE [1] MODERATE [-1] EXTENSIVE [-2] MODERATE [-1] I NORMAL [0] MODERATE [-1] I NORMAL [0] MODERATE [-1] MODERATE [-1] I NORMAL [0] MODERATE [-1] I NORMAL [0] MODERATE [-1] I NORMAL [0] MODERATE [-1] I NORMAL [0] I NORMAL [0] MODERATE [-1] I NORMAL [0] MODERATE [-1] I NORMAL [0] MODERATE [-1] I NORMAL [0] I NORMAL [0] MODERATE [-1] I NORMAL [0] I NORMAL [0] I NORMAL [0] MODERATE [-1] I NORMAL [0] I NORMAL [0] I NORMAL [0] MODERATE [-1] I NORMAL [0] I NORMAL [0] I NORMAL [0] I NORMAL [0] I NORMAL [0] I NORMAL [0] I NORMAL [0] MODERATE [-1] MODERATE [-1] MODERATE [-1] MODERATE [-1] I NORMAL [0] I NORMAL [0]
quality; <b>3</b> -Highest quality in moderate of		amounts of highest ast water, large unctional pools. <b>EXTENSIVE &gt;75% [11]</b>
3] CHANNEL MORPHOLOGY	heck ONE in each category (Or 2 & average)	
SINUOSITY         DEVELOPMEI           HIGH [4]         EXCELLENT           MODERATE [3]         GOOD [5]           LOW [2]         FAIR [3]           NONE [1]         POOR [1]           Comments         Fair [3]	NT CHANNELIZATION STABIL	3] RATE [2]
River right looking downstream RIF	Y NARROW < 5m [1] 🗌 🗍 FENCED PASTURE [1]	QUALITY  R CONSERVATION TILLAGE [1]  2] W FIELD [1] Indicate predominant land use(s)
Comments		ROP [0] past 100m riparian. Riparian Maximum 10
Check ONE (ONLY!)         Check           □ > 1m [6]         ☑ POOL W           □ 0.7-<1m [4]	IANNEL WIDTH     CURRENT VEL       CONE (Or 2 & average)     Check ALL that a       IDTH > RIFFLE WIDTH [2]     TORRENTIAL [-1]     SI       IDTH = RIFFLE WIDTH [1]     VERY FAST [1]     IN       IDTH > RIFFLE WIDTH [0]     FAST [1]     IN	Apply -OW [1] ITERSTITIAL [-1] TERMITTENT [-2] DDIES [1] Primary Contact Secondary Contact (circle one and comment on back) Primary Contact (circle one and comment on back)
of riffle-obligate species: RIFFLE DEPTH RUI □ BEST AREAS > 10cm [2] □ MAXIM	es; Best areas must be large enough to su Check ONE (Or 2 & average). N DEPTH RIFFLE / RUN SUBSTRATE //UM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2 //UM < 50cm [1] MOD. STABLE (e.g., Large Gravel WNSTABLE (e.g., Fine Gravel, Sand	Image: spectrum point a population         Image: spectrum population
· · · / <u>=</u>	VERY LOW - LOW [2-4] %POOL:	20 %GLIDE: Gradient
	MODERATE [6-10] HIGH - VERY HIGH [10-6] %RUN:	55 %RIFFLE: 25 Maximum 10
EPA 4520		06/16/06



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

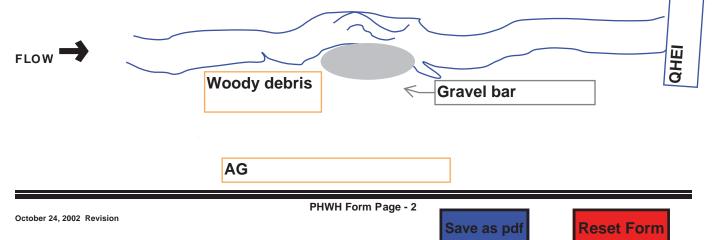
Stream 19			Fair Warmwater	
<b>ChieEPA</b>	Qualitative Habita and Use Assessm	t Evaluation Index nent Field Sheet	QHEI Score	: 48
Stream & Location: AEP - Hi	Isboro-Hutchingson		RM:Date: 12	2/12/2017
qh-aeh-20171212-01		Full Name & Affiliation:		
River Code:	STORET #:	Lat./ Long.: 39.210735,	-83.759483	Office verified location
1] SUBSTRATE Check ONLY Two estimate % or not	substrate <i>TYPE BOXES</i> ; e every type present	Check Ol	NE (Or 2 & average)	
Comments	HARDPAN [4]	sources) 🔲 LACUSTURINE [0] SHALE [-1] COAL FINES [-2]	□ NONE [1]	2] TE [-1] Substrate [0] 10
2] INSTREAM COVER Indicate quality; 3-Highest quality in moderate diameter log that is stable, well develor 1 UNDERCUT BANKS [1] 1 OVERHANGING VEGETATION SHALLOWS (IN SLOW WATER ROOTMATS [1]	Proderate amounts, but not of hig or greater amounts (e.g., very larg oped rootwad in deep / fast water, of POOLS > 70cm [2] [1] ROOTWADS [1]	le boulders in deep or fast water,	Iarge       Check ONE (Or         bools.       EXTENSIVE :         RS [1]       MODERATE :         ES [1]       SPARSE 5-	2 & average) >75% [11] 25-75% [7] 25% [3]
Comments			Ν	Maximum 10
3] CHANNEL MORPHOLOGY         SINUOSITY       DEVELOPME         HIGH [4]       EXCELLENT         MODERATE [3]       GOOD [5]         LOW [2]       FAIR [3]         NONE [1]       POOR [1]         Comments	ENT CHANNELIZATIO	N STABILITY ☐ HIGH [3] ☑ MODERATE [2] ☐ LOW [1]		Channel Iaximum 20
	PARIAN WIDTH         R           DE > 50m [4]         Image:	FLOOD PLAIN QUALIT REST, SWAMP [3] IRUB OR OLD FIELD [2] SIDENTIAL, PARK, NEW FIELD I	Y R CONSERVATION U URBAN OR IND U URBAN OR IND I MINING / CONST Indicate predominant lar past 100m riparian.	USTRIAL [0] RUCTION [0]
Check ONE (ONLY!)         Check           □ > 1m [6]         □ POOL \           □ 0.7-<1m [4]	HANNEL WIDTH ck ONE (Or 2 & average) WIDTH > RIFFLE WIDTH [2]	CURRENT VELOCITY Check ALL that apply ORRENTIAL [-1] SLOW [1] (ERY FAST [1] INTERSTIT AST [1] INTERMITT ODERATE [1] EDDIES [1] Indicate for reach - pools and riffi	ENT [-2]	Contact Contact
of riffle-obligate species: RIFFLE DEPTH RU BEST AREAS > 10cm [2] MAX BEST AREAS 5-10cm [1] MAX BEST AREAS < 5cm [metric=0] Comments	IN DEPTH RIFFLE / I IMUM > 50cm [2] □ STABLE (e.g IMUM < 50cm [1] ☑ MOD. STAB □ UNSTABLE	Dr 2 & average). RUN SUBSTRATE RIFF g., Cobble, Boulder) [2] LE (e.g., Large Gravel) [1] (e.g., Fine Gravel, Sand) [0]	LE / RUN EMBEDDE	Riffle / Run Jaximum 8
DRAINAGE AREA	VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]	$\succ$		Gradient Maximum 10 06/16/06



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream 20 Class II	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 57	7
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.78	3
LENGTH OF STREAM REACH (ft)       200       LAT.       39.21078       LONG.       -83.75954       RIVER CODE       RIVER MILE         DATE       12/12/17       SCORER       AEH, PJR       COMMENTS       intermittent	
DATE 12/12/17 SCORER AEH, PJR COMMENTS Intermittent NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL       Image: None / Natural Channel       Image: Recovered       Image: Recovering       Image: Recovering	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 35%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         5%	Substrate
COBBLE (65-256 mm) [12 pts] 10% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]       35%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	17
Total of Percentages of (A) Substrate Recording (B)	
Bidr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage 100% (B) (B)(B) (B) (B) (B) (B) (B)(B)(B) (B) (B)	A + B
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	ool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 6.00	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] $ $ \leq 1.0 \text{ m} (<=3' 3'') [5 \text{ pts}] $	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 4.50	15
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Image: Norw <5m     Image: Residential, Park, New Field     Image: Residential, Park, New Field       Image: None     Image: Residential, Park, New Field     Image: Residential, Park, New Field	
COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe I Severe (10 ft/100 ft)	)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Comple	eted QHEI Form)
CWH Name: Distance	e from Evaluated Stream
USGS Quadrangle Name: Lynchburg Quadrangle NRCS Soil Map Page:	NRCS Soil Map Stream Order
County:     Highland County     Township / City:     Dodson County	
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: Quan	tity: <b>0.00</b>
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach	results) Lab Number:
Is the sampling reach representative of the stream (Y/N) If not, please explain: Additional comments/description of pollution impacts:	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: al ID number. Include appropriate field data sheets from the Primary Head Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Vouch Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observ Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (	water Habitat Assessment Manual) er? (Y/N) N ed? (Y/N) N Voucher? (Y/N)
Include important landmarks and other features of interest for site evaluation and a narrati	ve description of the stream's location



Stream 21 Modified Cl	ass II
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	57
HHEI Score (sum of metrics 1, 2, 3) :	57
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.	.86
LENGTH OF STREAM REACH (ft) 200 LAT. 39.21449 LONG83.76908 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER AEH, PJR COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	OVERY
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]         0%         SILT [3 pt]         80%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	12
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
✓       > 22.5 - 30 cm [30 pts]         ✓       > 10 - 22.5 cm [25 pts]         ✓       NO WATER OR MOIST CHANNEL [0 pts]	30
COMMENTS MAXIMUM POOL DEPTH (Inches): 10.00	
	Bankfull
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] $\leq$ 1.0 m (<=3' 3") [5 pts]	Max=30
	15
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.30	
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY SNOTE: River Left (L) and Right (R) as looking downstream SRIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial	
	a
	þ
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
<b>SINUOSITY</b> (Number of ben <u>ds</u> per 61 m (200 ft) of channel) (Check ONLY one box):	
$\checkmark$ None       1.0       2.0       3.0         0.5       1.5       2.5       >3	
STREAM GRADIENT ESTIMATE	)0 ft)

	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg Quadrangle	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland Town	nship / City: <b>Dodson Township</b>
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 09	%
Were samples collected for water chemistry? (Y/N): N (Note la	ab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (μmhos/cm)
Y	t, please explain:
	<u></u>
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
ID number. Include appropriate field dat           Fish Observed? (Y/N)         N         Salamanders (Y/N)	er collections optional. NOTE: all voucher samples must be labeled with the ta sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) N Voucher? (Y/N) N
DRAWING AND NARRATIVE DESCRIPTION	N OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest fo	or site evaluation and a narrative description of the stream's location
Ag	
Herbaceous	
•	
FLOW	
Herbaceous	
Ag	
PHWH October 24, 2002 Revision	Form Page - 2
	Save as pdf Reset Form

Stream 22	Modified Class II	
<b>ChieEPA</b> Primary Headw	vater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) :	
AED Hillsborg Hutobings		<u>I</u>
SITE NAME/LOCATION AEP Hillsboro-Hutchingso		
hh-aeh-20171212-03 SITE NUMBER		1
	21972 LONG83.78358 RIVER CODE RIVER MILE	1
DATE 12/12/17 SCORER AEH, PJR CO	OMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer t	o "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions	
STREAM CHANNEL NONE / NATURAL CHA	ANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	
1. SUBSTRATE (Estimate percent of every type of s	substrate present. Check ONLY two predominant substrate TYPE boxes	
	te types found (Max of 8). Final metric score is sum of boxes A & B.	
TYPE PERCENT	TYPE PERCENT Metric Points	
□         BLDR SLABS [16 pts]         0%           □         BOULDER (>256 mm) [16 pts]         0%	SILT [3 pt]         60%         FOIL13           LEAF PACK/WOODY DEBRIS [3 pts]         5%         5%	.5
BEDROCK [16 pt]	FINE DETRITUS [3 pts] 0% Substrat	
COBBLE (65-256 mm) [12 pts]	CLAY or HARDPAN [0 pt]         0%	+0 
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts] 0% 14	
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	
Total of Percentages of <b>0.00%</b> Bldr Slabs, Boulder, Cobble, Bedrock	(A) Substrate Percentage 100% (B) A + B	
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYP	PES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum po	bol depth within the 61 meter (200 ft) evaluation reach at the time of Pool Dep	nth.
evaluation. Avoid plunge pools from road culverts or		•
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	7
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	< 5 cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts] 25	
COMMENTS	MAXIMUM POOL DEPTH (Inches): 5.00	
3. BANK FULL WIDTH (Measured as the average of	f 3-4 measurements) (Check ONLY one box): Bankful	ıll
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	✓     ≤ 1.0 m (<=3' 3") [5 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 3.00 5	
Th RIPARIAN ZONE AND FLOODPLAIN QUA	his information <u>must</u> also be completed LITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
	PLAIN QUALITY	
L R (Per Bank) L R	(Most Predominant per Bank) L R	
Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Field Urban or industrial	
✓ ✓ Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop	
None	Fenced Pasture Mining or Construction	
COMMENTS		
FLOW REGIME (At Time of Evaluation) (C		
Stream Flowing Subsurface flow with isolated pools (Interstitia	al) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
COMMENTS		
SINUOSITY (Number of ben <u>ds per 61 m (20</u>	10 ft) of channel) (Check ONLY one box):	
None 1.0	2.0 3.0	
0.5 1.5	2.5 >3	
STREAM GRADIENT ESTIMATE	erate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name:       Distance from Evaluated Stream         EWH Name:       Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg Quadrangle NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland County Township / City: Dodson Township
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
Ag
ဂါစာ
FLOW
li H
Pine trees
Ag
PHWH Form Page - 2 October 24, 2002 Revision
Save as pdf Reset Form

Stream 23 Modified Clas	ss II
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form	Λ
HHEI Score (sum of metrics 1, 2, 3) :	4
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.1	5
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22218 LONG83.78999 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER AEH, PJR COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	/ERY
MODIFICATIONS: Culvert, Channelized	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
	Metric
BLDR SLABS [16 pts]         0%         SILT [3 pt]         55%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%	Points
BEDROCK [16 pt] 0% DIA FINE DETRITUS [3 pts] 0%	Substrate
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts]       35%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	14
Total of Percentages of a coord (A) Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 4.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Image: Norw <5m	
COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None $1.0$ $2.0$ $3.0$ $0.5$ $1.5$ $2.5$ $3.0$	
STREAM GRADIENT ESTIMATE	ft)

QHEI PERFORMED? - Yes 🗸 No QHEI	Score (If Yes, Attac	h Completed QHEI Form)		
DOWNSTREAM DESIGNATED USE(S)				
WWH Name:		Distance from Evaluated Stream		
		Distance from Evaluated Stream		
EWH Name:		Distance from Evaluated Stream		
MAPPING: ATTACH COPIES OF MAPS, INCLU	DING THE <u>ENTIRE</u> WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION		
USGS Quadrangle Name: Lynchburg Quadrangle	NRCS Soil Map Pa	ge: NRCS Soil Map Stream Order		
County: Highland County	Township / City: Dodson	County		
MISCELLANEOUS				
Base Flow Conditions? (Y/N):Y Date of last precip	bitation:	Quantity: 0.00		
Photograph Information:				
Elevated Turbidity? (Y/N): Canopy (% ope	n): <b>0%</b>			
Were samples collected for water chemistry? (Y/N):	(Note lab sample no. or id. a	nd attach results) Lab Number:		
Field Measures: Temp (°C) Dissolved Oxyger	pH (S.U.)	Conductivity (µmhos/cm)		
Is the sampling reach representative of the stream (Y/N)	f If not, please explain:			
<u></u>				
Additional comments/description of pollution impacts:				
ID number. Include approp	iate field data sheets from the Primamanders Observed? (Y/N)	NOTE: all voucher samples must be labeled with the site hary Headwater Habitat Assessment Manual) Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)		
DRAWING AND NARRATIVE DESC Include important landmarks and other features o				
FLOW	Herb	Herb		
	Ag			
October 24, 2002 Revision	PHWH Form Page - 2	Save as pdf Reset Form		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 24	Modified Class II
<b>ChieEPA</b> Primary Headw	vater Habitat Evaluation Form 37
	HHEI Score (sum of metrics 1, 2, 3) :
SITE NAME/LOCATION AEP Hillsboro-Hutchings	on
hh-aeh-20171212-04SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²) 0.15
LENGTH OF STREAM REACH (ft) 200 LAT. 39.2	22729 LONG83.80194 RIVER CODE RIVER MILE
DATE 12/12/17 SCORER AEH, PJR CC	MMENTS intermittent
NOTE: Complete All Items On This Form - Refer t	o "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
·	
STREAM CHANNEL NONE / NATURAL CHA MODIFICATIONS: Culvert, channelized	
Culvert, channelized	
	substrate present. Check ONLY two predominant substrate TYPE boxes e types found (Max of 8). Final metric score is sum of boxes A & B.
(Max of 32). Add total number of significant substrat TYPE PERCENT	e types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT HHEI Metric
BLDR SLABS [16 pts]	SILT [3 pt] Points
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts] 5%
BEDROCK [16 pt] 0%	FINE DETRITUS [3 pts]
COBBLE (65-256 mm) [12 pts]	CLAY or HARDPAN [0 pt]         0%           MUCK [0 pts]         0%
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]
Bldr Slabs, Boulder, Cobble, Bedrock	(A) Substrate Percentage 100% (B) A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYP	PES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 5
2. Maximum Pool Depth (Measure the maximum po	bol depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depti
evaluation. Avoid plunge pools from road culverts of	storm water pipes) (Check ONLY one box): Max = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	<ul> <li>✓ &gt; 5 cm - 10 cm [15 pts]</li> <li>&lt; 5 cm [5 pts]</li> </ul>
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]
COMMENTS	MAXIMUM POOL DEPTH (Inches): 2.00
3. BANK FULL WIDTH (Measured as the average of	3-4 measurements) (Check ONLY one box): Bankfull
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width < 1.0 m (<=3' 3") [5 pts] Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	✓       ≤ 1.0 m (<=3' 3") [5 pts]
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 2.00 5
I P RIPARIAN ZONE AND FLOODPLAIN QUA	iis information <u>must</u> also be completed LITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆
	PLAIN QUALITY
L R (Per Bank) L R	(Most Predominant per Bank) L R
Wide >10m	Mature Forest, Wetland Conservation Tillage
Moderate 5-10m	Field Orban or Industrial
✓ ✓ Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop
None 🔲	Fenced Pasture Mining or Construction
COMMENTS	
FLOW REGIME (At Time of Evaluation) (C	
Stream Flowing Subsurface flow with isolated pools (Interstitia	Al) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)
SINUOSITY (Number of ben <u>ds per 61 m (20</u>	0 ft) of channel) (Check ON/ Yone box):
None 1.0	2.0 3.0
0.5 1.5	2.5 >3
STREAM GRADIENT ESTIMATE	erate (2 ft/100 ft) Moderate to Severe

QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes	s, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATER	SHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg Quadrangle NRCS Soil	Map Page: NRCS Soil Map Stream Order
County: Highland County Township / City:	Dodson Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: <b>0.00</b>
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. o	or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.	U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain	in:
Additional comments/description of pollution impacts:	
ID number.         Include appropriate field data sheets from the voucher? (Y/N)           N         Voucher? (Y/N)         N         Salamanders Observed? (Y/N)	N
DRAWING AND NARRATIVE DESCRIPTION OF STRE	AM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluati	ion and a narrative description of the stream's location
Ag	Culvert
Artificial Shrub	
FLOW →	00
· · · · · · · · · · · · · · · · · · ·	
Ag	
October 24, 2002 Revision	2 Save as pdf Reset Form

I

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

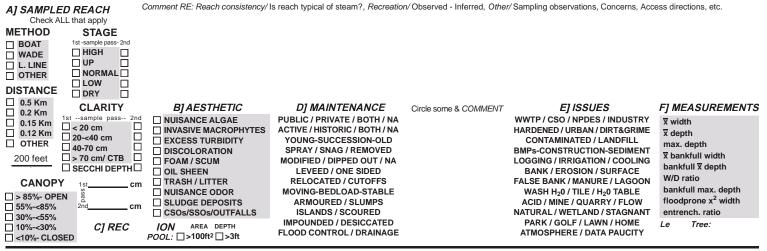
Stream 25 Class i	
ChioEPA Primary Headwater Habitat Evaluation Form	)
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-05SITE NUMBERRIVER BASINDRAINAGE AREA (mi²) 0.01	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22513 LONG83.79757 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER AEH, PJR COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS:	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	<i>letric</i> Points
BLDR SLABS [16 pts]       0%       ✓       SILT [3 pt]       60%       ✓         BOULDER (>256 mm) [16 pts]       0%       ✓       LEAF PACK/WOODY DEBRIS [3 pts]       25%	••
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         St	ubstrate lax = 40
COBBLE (65-256 mm) [12 pts]	
GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%         SAND (-2 mm) [6 pts]       0%       0%       0%	9
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of Po	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	/lax = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
	Width Max=30
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 1.5  m - 3.0  m (> 9' 7" - 4' 8") [20  pts]$	nax=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information <u>must</u> also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	
Narrow <5m     Residential, Park, New Field     Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Subsurface flow with isolated pools (Interstitial)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None I.O 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate (2 ft/100 ft) Severe (10 ft/100 ft)	

	es, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
CWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATE	RSHED AREA. CLEARLY MARK THE SITE LOCATION
SGS Quadrangle Name: Lynchburg Quadrangle NRCS Soil	Map Page: NRCS Soil Map Stream Order
ounty: Highland County Township / City:	Dodson Township
MISCELLANEOUS	
Y	Quantity: 0.00
se Flow Conditions? (Y/N): Date of last precipitation:	Quantity: <b>U.UU</b>
otograph Information:	
evated Turbidity? (Y/N): Canopy (% open):	
Ν	or id. and attach results) Lab Number:
eld Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S	Conductivity (µmhos/cm)
the sampling reach representative of the stream (Y/N) Y If not, please expla	ain:
Iditional comments/description of pollution impacts:	
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from voucher? (Y/N) Salamanders Observed? (Y/N)	
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Oucher? (Y/N) N Aquatic Macroinverted (Y/N) N Aqua	the Primary Headwater Habitat Assessment Manual)
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Oucher? (Y/N) N Aquatic Macroinverted (Y/N) N Aqua	the Primary Headwater Habitat Assessment Manual)
crformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Observed? (Y/N) N Aquatic Macroinvert	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
rformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinver mments Regarding Biology:	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Oucher? (Y/N) N Aquatic Macroinver omments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STRE	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Oucher? (Y/N) N Aquatic Macroinver omments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STRE	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
rformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Aquatic Macroinver of mments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREE Include important landmarks and other features of interest for site evalua	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
In the second all observations. Voucher collections of the propriate field data sheets from the observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Salamanders Observed? (Y/N) N Aquatic Macroinver of the propriate field data sheets from voucher? (Y/N) N Salamanders Observed? (Y/N) N Aquatic Macroinver of the propriate field data sheets from voucher? (Y/N) N Aquatic Macroinver of the propriate field data sheets from the proprint field data sheets from the proprise field data	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
Informed? (Y/N):       N       (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from Sh Observed? (Y/N)         ID number.       Include appropriate field data sheets from Statements Observed? (Y/N)         ID number.       Voucher? (Y/N)         ID number.       Salamanders Observed? (Y/N)         ID number.       Voucher? (Y/N)         Index of the second	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
Informed? (Y/N):       N       (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from Sh Observed? (Y/N)         ID number.       Include appropriate field data sheets from Statements Observed? (Y/N)         ID number.       Voucher? (Y/N)         ID number.       Salamanders Observed? (Y/N)         ID number.       Voucher? (Y/N)         Index of the second	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
Informed? (Y/N):       N       (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from Sh Observed? (Y/N)         ID number.       Include appropriate field data sheets from Statements Observed? (Y/N)         ID number.       Voucher? (Y/N)         ID number.       Salamanders Observed? (Y/N)         ID number.       Voucher? (Y/N)         Index of the second	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Oucher? (Y/N) N Aquatic Macroinver omments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STRE	the Primary Headwater Habitat Assessment Manual)         /N)       N         Voucher? (Y/N)       N         voucher? (Y/N)       N         AM REACH (This must be completed):         tion and a narrative description of the stream's location
erformed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from sh Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y or operation of the second	the Primary Headwater Habitat Assessment Manual) /N) N Voucher? (Y/N) N Voucher? (Y/N) N Prtebrates Observed? (Y/N) N Voucher? (Y/N)

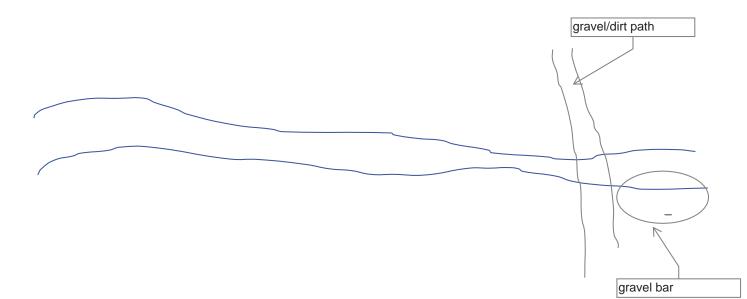
PHWH Form Page - 2

Save as pdf Reset Form

Stream 26			Good Warmwater	
<b>ChieEPA</b>	Qualitative Habitat and Use Assessm		QHEI Score	<u>s: (56.5)</u>
Stream & Location: Hilsboro-h	utchinson		RM:Date: 1	2/12/2017
qh-aeh-12122017-02 East Fork Little Miami River		Full Name & Affiliation:		
River Code:	SCORET #:	Lat./ Long.: 39.22884, -8	3 807049	Office verified
11 SLIBSTRATE Check ONLY Two	substrate TYPE BOXES; every type present		NE (Or 2 & average)	
BEST TYPES       POOL RIFFL         BLDR /SLABS [10]	E OTHER TYPES HARDPAN [4] DETRITUS [3] SILT [2] ARTIFICIAL [0] (Score natural substrates 4 or more [2] sludge from point-s 3 or less [0]	LIMESTONE [1]	□ NONE [1]	2] TE [-1] Substrate . [0]
2] INSTREAM COVER Indicate pr quality; 3-Highest quality in moderate of diameter log that is stable, well develop 2 UNDERCUT BANKS [1] 1 OVERHANGING VEGETATION   SHALLOWS (IN SLOW WATER) 2 ROOTMATS [1] Comments	r greater amounts, but hot of high or greater amounts (e.g., very large bed rootwad in deep / fast water, o POOLS > 70cm [2] [1] ROOTWADS [1]	e boulders in deep or fast water,	Iarge       Check ONE (0)         Jarge       EXTENSIVE         Sools.       EXTENSIVE         RS [1]       MODERATE         ES [1]       SPARSE 5-         RIS [1]       NEARLY AB	r 2 & average) >75% [11] 25-75% [7]
3] CHANNEL MORPHOLOGY C SINUOSITY DEVELOPMEN HIGH [4] EXCELLENT   MODERATE [3] GOOD [5] LOW [2] FAIR [3] NONE [1] POOR [1] Comments	NT CHANNELIZATION	N STABILITY HIGH [3] MODERATE [2] LOW [1]		Channel Maximum 20
	PARIAN WIDTH         L         R           E > 50m [4]         I         I         FOF           DERATE 10-50m [3]         I         I         SHF           ROW 5-10m [2]         I         I         RES           Y NARROW < 5m [1]	FLOOD PLAIN QUALIT REST, SWAMP [3] RUB OR OLD FIELD [2] SIDENTIAL, PARK, NEW FIELD [	Y R CONSERVATIO CONSERVATIO CURBAN OR INE CURBAN OR IN CURBAN OR IN CURBAN OR INE CURBAN OR INE CURBAN OR INE CURB	OUSTRIAL [0] TRUCTION [0]
Check ONE (ONLY!)         Check           □ > 1m [6]         □ POOL W           ☑ 0.7-<1m [4]	IANNEL WIDTH         CONE (Or 2 & average)         IDTH > RIFFLE WIDTH [2]         IDTH = RIFFLE WIDTH [1]         VE         IDTH > RIFFLE WIDTH [1]         VE         IDTH > RIFFLE WIDTH [0]         IDTH > RIFFLE WIDTH [0]	CURRENT VELOCITY Check ALL that apply RRENTIAL [-1] SLOW [1] RY FAST [1] INTERSTITI ST [1] INTERMITT DERATE [1] EDDIES [1] Indicate for reach - pools and riffl	AL [-1] ENT [-2]	y Contact
BEST AREAS > 10cm [2] MAXIM	Check ONE (Or           N DEPTH         RIFFLE / R           MUM > 50cm [2]         STABLE (e.g.           MUM < 50cm [1]	r 2 & average). RUN SUBSTRATE RIFF ., Cobble, Boulder) [2]	population         Image: Design of the second system         Image: Design of the second system <td>RIFFLE [metric=0] EDNESS</td>	RIFFLE [metric=0] EDNESS
DRAINAGE AREA	VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]	$\succ$	%GLIDE: 65 %RIFFLE: 20	Gradient Maximum 10

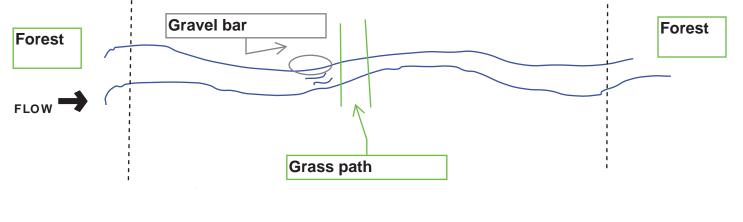


Stream Drawing:



Objecters       Primary Headwater Habitat Evaluation Form Hell Score (sum of metrics 1, 2, 3):       20         SITE NAME/LOCATION       AEP Hillsboro-Hutchingson Inh-aeh-2017/1212-08       SITE NUMBER       River BASIN       DRAINAGE AREA (mi <sup>2</sup> )       0.14         Inh-aeh-2017/1212-08       SITE NUMBER       River BASIN       DRAINAGE AREA (mi <sup>2</sup> )       0.14         Inh-aeh-2017/1212-08       SITE NUMBER       River BASIN       DRAINAGE AREA (mi <sup>2</sup> )       0.14         Inh-aeh-2017/1212-08       SITE NUMBER       River BASIN       DRAINAGE AREA (mi <sup>2</sup> )       0.14         Inhomoder       Stream REACH (th)       200       LAT.       39.22998       LONG.       8.8.81002       River CODE       River MILE       DATE         DATE       12/12/17       SCORER       AEH, PJR       COMMENTS       Intermittent       NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       NONE / NATURAL CHANNEL       RECOVERED       RECENT OR NO RECOVERY       Solution
HHEI Score (sum of metrics 1, 2, 3) :       Image: Complex Stress in the image: Complex Stre
hh-aeh-20171212-08       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi*)       0.14         hh-aeh-20171212-08       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi*)       0.14         DATE       12/12/17       SCORER       AEH, PJR       COMMENTS       Intermittent         NOTE:       Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       HHEI         TYPE       BLDR SLABS [16 pts]       0%
hh-aeh-20171212-08       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi <sup>2</sup> )       0.14         LENGTH OF STREAM REACH (ft)       200       LAT. 39.22998       LONG.       -83.81002       RIVER CODE       RIVER MILE         DATE       12/12/17       SCORER       AEH, PJR       COMMENTS       intermittent         NOTE:       Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       HHEI         TYPE       BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]       0%       20%       20%       0%
LENGTH OF STREAM REACH (ft)       200       LAT.       39.22998       LONG.       63.81002       RIVER CODE       RIVER MILE         DATE       12/12/17       SCORER       AEH, PJR       COMMENTS       intermittent         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       INONE / NATURAL CHANNEL       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       INONE / NATURAL CHANNEL       RECOVERING       RECENT OR NO RECOVERY         1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.       HHEI         TYPE       BLDR SLABS [16 pts]       0%       0%       0%       0%         BOULDER (>256 mm) [12 pts]       0%       0%       0%       0%       0%         COBBLE (65-256 mm) [12 pts]       0%       0%       0%       0%       0%       0%       0%       0%         SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       6       TOTAL NUMBER OF SUBSTRATE TYPEs:       4       Pool Depth (Max = 30         Notic Slabs, Boulder, Cobble, Bedrock       0.00%       (A)       Score of two MOST PREDOMINATE SUBSTRATE TYPES:       5 cm -10 cm [15 pt
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         Stream Channel       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         Image: Contract of the stream of significant substrate types of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       PERCENT       PERCENT         Image: Contract of the stream of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       PERCENT       Stream of the stream of boxes A & B.       PERCENT         Image: Contract of the stream of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       PERCENT       Stream of the stream of boxes A & B.       PERCENT         Image: Contract of the stream of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       PERCENT       Stream of the stream of boxes A & B.       PERCENT         Image: Contract of the stream of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       PERCENT       Stream of the stream of boxes A & B.       Substrate the stream of boxes A & B.         Image: Contract of the stream of substrate types for the stream of the s
STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       Recovering       Recovering       Recent or NO Recovery         Image: Stream Channel Metric Store (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.       Recent or NO Recovery         Image: Stream Channel Metric Store (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.       Recent or NO Recovery         Image: Stream Channel Metric Store (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.       Recent or NO Recovery         Image: Stream Channel Metric Store (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.       Recent or NO Recovery         Image: Stream Channel Metric Store (Max of 8). Final metric score is sum of boxes A & 8.       Recent or NO Recovery         Image: Stream Channel Metric Store (Max of 8). Final metric score is sum of boxes A & 8.       Recent or NO Recovery         Image: Store Of Two MOST PREDOMINATE SUBSTRATE TYPE:       Image: Store Percentage for NO NO Store (Max of 9).       NOME or NO NO Store (Max of 9).         Image: Store (Max of Percentages of Store (Max of 9).       NOM       Image: Store (Max of 9).       Image: Store (Max of 9).         Image: Store (Max of Percentages of Store (Max of 9).       NOM <t< td=""></t<>
MODIFICATIONS:         1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       BLDR SLABS [16 pts]       PERCENT         BUD SUDDER (>256 mm) [16 pts]       0%       1         BEDROCK [16 pt]       0%       0%       0%         COBBLE (65-256 mm) [12 pts]       0%       0%       0%         COBBLE (65-256 mm) [12 pts]       0%       0%       0%         Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock       0.00%       (A)       Substrate Percentage       100%       (B)         Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock       0.00%       (A)       Substrate Percentage       100%       (A)       10         A + B       Total of Percentages of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       4       Pool Depth         A so contimeters [20 pts]       5 cm (15 pts]       5 cm (5 pts]       5 cm (5 pts]       Max = 30
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       BLDR SLABS [16 pts]       PERCENT       TYPE       SILT [3 pt]       PERCENT       Sold       S
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       HHEI Metric 55%         TYPE       BLDR SLABS [16 pts]       0%       Image: Sill T [3 pt]       PERCENT         BOULDER (>256 mm) [16 pts]       0%       Image: Sill T [3 pt]       PERCENT       55%         BEDROCK [16 pt]       0%       Image: Sill T [3 pt]
TYPE       BLDR SLABS [16 pts]       PERCENT       TYPE       SILT [3 pt]       PERCENT       SULT [3 pt]       Description       Desc
Image: Display and the problem of t
BEDROCK [16 pt]       0%       FINE DETRITUS [3 pts]       0%         COBBLE (65-256 mm) [12 pts]       0%       0%       0%       0%         GRAVEL (2-64 mm) [9 pts]       20%       0%       0%       0%       0%         SAND (<2 mm) [6 pts]
COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] Check ONLY one box): > 5 cm - 10 cm [15 pts] < 5 cm [5 pts]
Image: Strate (2:04 min) [5 pts]       5%       Image: ARTIFICIAL [3 pts]       0%         Image: Strate St
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock       0.00% (A)       Substrate Percentage       100% (B)       A + B         SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       6       TOTAL NUMBER OF SUBSTRATE TYPES:       4         2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 5 cm - 10 cm [15 pts]       > 5 cm [5 pts]         > 22.5 - 30 cm [30 pts]       ✓       > 5 cm [5 pts]        > 5 cm [5 pts]
Bidr Slabs, Boulder, Cobble, Bedrock 0.0078 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 22.5 - 30 cm [30 pts]
<ul> <li>2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> </ul>
evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       Max = 30         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]          > 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bankfull
> 4.0 meters (> 13') [30 pts]
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] $
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 5
This information must also be completed
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY
L R (Per Bank) L R (Most Predominant per Bank) L R
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial
Narrow <5m
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>
COMMENTS
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):
None     1.0     2.0     3.0       0.5     1.5     2.5     >3
STREAM GRADIENT ESTIMATE

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



PHWH Form Page - 2

Save as pdf Reset Form

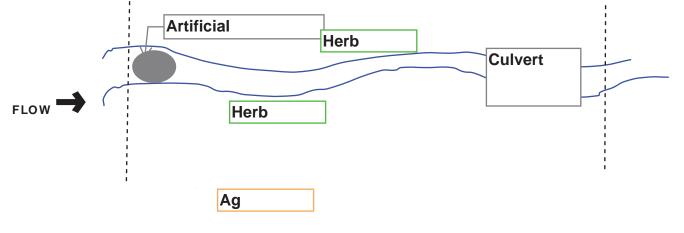
Stream 28	Modified Class I
<b>ChieEPA</b> Primary Headw	ater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-aeh-20171212-07SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²) 0.17
	23088 LONG83.81374 RIVER CODE RIVER MILE
DATE 12/12/17 SCORER AEH, PJR CC	MMENTS Intermittent
NOTE: Complete All Items On This Form - Refer t	o "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
	NNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
MODIFICATIONS: Artificial substrate, channelized	INNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
	<b>Substrate present.</b> Check ONLY two predominant substrate TYPE boxes e types found (Max of 8). Final metric score is sum of boxes A & B.
TYPE PERCENT	TYPE PERCENT Metric
BLDR SLABS [16 pts]	SILT [3 pt] 55% Points
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts] 0% Substrate
BEDROCK [16 pt] 0% COBBLE (65-256 mm) [12 pts] 5%	FINE DETRITUS [3 pts]     0%     Max = 40       CLAY or HARDPAN [0 pt]     0%
GRAVEL (2-64 mm) [9 pts]	
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]
Total of Percentages of 5 00%	(A) Substrate Percentage 100% (B)
Bldr Slabs, Boulder, Cobble, Bedrock	Check 100%
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYP	PES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5
	ol depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth
evaluation. Avoid plunge pools from road culverts of > 30 centimeters [20 pts]	storm water pipes)         (Check ONLY one box):         Max = 30           > 5 cm - 10 cm [15 pts]
> 22.5 - 30 cm [30 pts]	S cm = 10 cm [15 pis] < 5 cm [5 pts]
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts] 5
COMMENTS	MAXIMUM POOL DEPTH (Inches): 2.00
3. BANK FULL WIDTH (Measured as the average of	
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width ≤ 1.0 m (<=3' 3") [5 pts] Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 2.00 5
······	
Th	is information must also be completed
RIPARIAN ZONE AND FLOODPLAIN QUA	
	PLAIN QUALITY (Mast Prodominant per Bank)
L R (Per Bank) L R Wide >10m	(Most Predominant per Bank) L R Mature Forest, Wetland Conservation Tillage
	Immature Forest, Shrub or Old
	Field Open Pasture Row Crop
V Narrow <5m	Residential, Park, New Field
COMMENTS	Fenced Pasture Mining or Construction
FLOW REGIME (At Time of Evaluation) (C	heck ONLY one box): Moist Channel, isolated pools, no flow (Intermittent)
Subsurface flow with isolated pools (Interstitia	
COMMENTS	
SINUOSITY (Number of bends per 61 m (20	
None 1.0 0.5 1.5	2.0 3.0 2.5 >3
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Mode	erate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be C	ompleted):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE	
USGS Quadrangle Name: Lynchburg Quadrangle NRC	S Soil Map Page: NRCS Soil Map Stream Order
County: Clinton County Township / C	City: Clark Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): _ Date of last precipitation:	Quantity: <b>0.00</b>
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): N (Note lab samples collected for water chemistry?	ple no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, pleas	e explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher colle ID number. Include appropriate field data shee Fish Observed? (Y/N) N Salamanders Observ	ctions optional. NOTE: all voucher samples must be labeled with the site ts from the Primary Headwater Habitat Assessment Manual) ed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N croinvertebrates Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF	STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site	
Herb	
Swale	
	Forested
FLOW	
Erosional	
Feature	
	i
Ag	
~y	
October 24, 2002 Revision PHWH Form	Page - 2 Save as pdf Reset Form
	Save as pur Reset Form

Stream 29 Modified Cl	ass I
ONDEPA Primary Headwater Habitat Evaluation Form	
HHEI Score (sum of metrics 1, 2, 3) :	9
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-09 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	26
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23320 LONG83.81975 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER AEH, PJR COMMENTS Ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ictions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	Substrate
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% GRAVEL (2-64 mm) [9 pts] 0%	
SAND (<2 mm) [6 pts]	9
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
	Bankfull
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 4.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 3.0 \text{ m} (<=3' 3") [$	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY       ANOTE: River Left (L) and Right (R) as looking downstream         RIPARIAN WIDTH       FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Image: State of the sector	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	D
None   Fenced Pasture   Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10	D ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg Quadrangle NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Clinton County Township / City: Clark Township
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

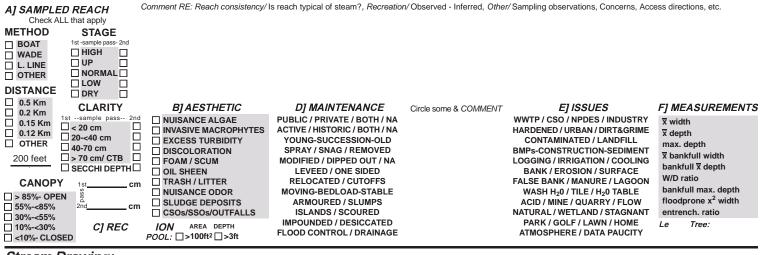


Save as pdf

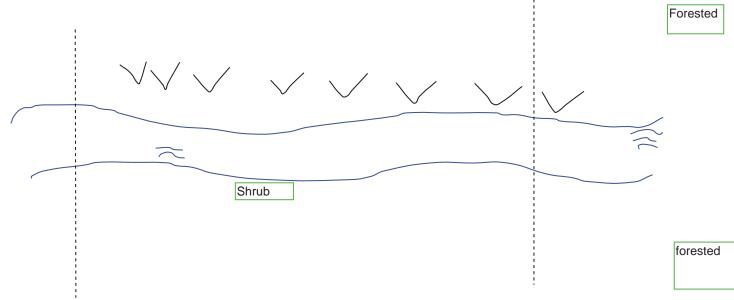
Stream 30 Class I	
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	
HHEI Score (sum of metrics 1, 2, 3):	0
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-11         SITE NUMBER         RIVER BASIN         DRAINAGE AREA (mi²)         0.1	4
LENGTH OF STREAM REACH (ft) LAT. 39.23575 LONG83.82771 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER AEH, PJR COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	VERY
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 70%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         20%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0% <td< td=""><td>Substrate</td></td<>	Substrate
	Max = 40
GRAVEL (2-64 mm) [9 pts]         5%         MUCK [0 pts]         0%           SAND (-2 mm) [6 pts]         5%         APTIFICIAL [2 pts]         0%	10
SAND (<2 mm) [6 pts]	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of F	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
	-
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.50	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull Width
= 2.5  meters  (> 13') [30  pts] = 2.0  m - 1.5  m (> 3' 3'' - 4' 8'') [15  pts] = 2.0  m - 1.5  m (> 3' 3'' - 4' 8'') [15  pts] = 2.0  m (<=3' 3'') [5  pts]	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information <u>must</u> also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None   Fenced Pasture   Mining or Construction	
COMMENTS rubus and honesucke	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     I     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	ft)
	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg Quadrangle NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Clinton County Township / City: Clark Township
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location Forested
FLOW Shrub
Shrub
PHWH Form Page - 2
October 24, 2002 Revision Save as pdf Reset Form

Stream 31		Good Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 55
Stream & Location: Hil	sboro-hutchingson	_RM: Date: 12/12/2017
qh-aeh-12122017-03	Scorers Full Name & Affiliation:	-
River Code:	STORET #:Lat./ Long.: 39.23627,	-83.828552 Office verified location
1] SUBSTRATE Check O	VLY Two substrate TYPE BOXES;	DNE (Or 2 & average)
DECT TVDEC	% or note every type present Check C OL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN	
BLDR /SLABS [10]	LIMESTONE [1]	HEAVY [-2]
BOULDER [9]	□ □ DETRITUS [3] □ IILLS [1] □ MUCK [2] □ WETLANDS [0]	SILT ONDERATE [-1] Substrate
GRAVEL [7] 3	5 SILT [2] 45 HARDPAN [0]	□ FREE [1] 10
SAND [6]     19     BEDROCK [5]	(Score natural substrates: ignore RIP/RAP [0]	LEDDEDNE DESTENSIVE [-2]
NUMBER OF BEST TYP	PES: 4 or more [2] <sup>sludge</sup> from point-sources)	Image: Weight of the state of the
Comments	☑ 3 or less [0]	
quality; 3-Highest quality in m	TATION [1] ROOTWADS [1] AQUATIC MACROPHY	of nignest       Check ONE (Or 2 & average)         pools.       EXTENSIVE >75% [11]         ERS [1]       MODERATE 25-75% [7]         TES [1]       SPARSE 5-<25% [3]
Comments		Cover Maximum 20
	COGY       Check ONE in each category (Or 2 & average)         COPMENT       CHANNELIZATION         STABILITY	
	ELLENT [7] INONE [6] IHIGH [3]	
	DD [5] 🛛 RECOVERED [4] 🗹 MODERATE [2]	
☑ LOW [2]		Channel
Comments		Maximum 11
River right looking downstream         L       R         I       I         NONE / LITTLE [3]       I         I       MODERATE [2]         I       I         HEAVY / SEVERE [1]       I	Image: Moderate 10-50m [3]       Image: Moderate 10-50m [3]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]         Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]       Image: Moderate 10-50m [2]	TY R CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] [1] MINING / CONSTRUCTION [0] Indicate predominant land use(s)
Comments	□ NONE [0] □ OPEN PASTURE, ROWCROP [0]	, ripanan 6
Confindentis		Maximum 10
	RIFFLE / RUN QUALITY	Recreation Potential
MAXIMUM DEPTH Check ONE (ONLY!)	CHANNEL WIDTH Check ONE (Or 2 & average) Check ALL that apply	Primary Contact
	POOL WIDTH > RIFFLE WIDTH [2]	Secondary Contact
	POOL WIDTH = RIFFLE WIDTH [1] $\Box$ VERY FAST [1] $\Box$ INTERSTI         POOL WIDTH > RIFFLE WIDTH [0] $\Box$ FAST [1] $\Box$ INTERMIT	
0.2-<0.4m [1]	MODERATE [1] EDDIES [1 Indicate for reach - pools and ri	Pool/
□ < 0.2m [0] Comments		ffles. Current 5
	nal riffles; Best areas must be large enough to support	
of riffle-obligate sp	ecies: Check ONE (Or 2 & average).	■ NO RIFFLE [metric=0]
RIFFLE DEPTH		FLE / RUN EMBEDDEDNESS
□ BEST AREAS > 10cm [2] ✓ BEST AREAS 5-10cm [1]	□ MAXIMUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2] ☑ MAXIMUM < 50cm [1] ☑ MOD. STABLE (e.g., Large Gravel) [1]	□ NONE [2] □ LOW [1]
BEST AREAS < 5cm [metric=0]	UNSTABLE (e.g., Fine Gravel, Sand) [0]	MODERATE IN Riffle /
Comments		
6] GRADIENT ( 20.5 ft	/mi)  VERY LOW - LOW [2-4] %POOL: 5	%GLIDE: 65 Gradient
DRAINAGE AREA	□ MODERATE [6-10]	%RIFELE
( 1.49 r	mi²) 🗹 HIGH - VERY HIGH [10-6] %RUN:	







Stream 32 Class I	
ChieEPA Primary Headwater Habitat Evaluation Form	3
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171212-10 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.16	<u>;                                    </u>
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23836 LONG83.83486 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER AEH, PJR COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERD	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BLDR SLABS [16 pts]         0%         SILT [3 pt]         80%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         20%	omis
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	8
	A + B
Bldr Slabs, Boulder, Cobble, Bedrock 6 Check 100% Check 100%	
	ool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         分NOTE: River Left (L) and Right (R) as looking downstream分	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Image: A state of term    Field      Image: A state of term      Image: A state of term <td></td>	
None     Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Providential, Park, New Field       Image: Providential, Park, New Field     Image: Park, New Field       Image: Park, New Field     Image: Park, New Field       Image	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	)

QHEI PERFORMED? - Yes 🖌 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg Quadrangle	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Clinton/Highland Towns	ship / City: Clark/Dodson Townships
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):0%	6
Were samples collected for water chemistry? (Y/N): (Note lat	b sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not,	, please explain:
Additional comments/description of pollution impacts:	
ID number.     Include appropriate field data       Fish Observed? (Y/N)     N     Voucher? (Y/N)     N     Salamanders O       Frogs or Tadpoles Observed? (Y/N)     N     Voucher? (Y/N)     N     Aquat	er collections optional. NOTE: all voucher samples must be labeled with the si a sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed): r site evaluation and a narrative description of the stream's location
DRAWING AND NARRATIVE DESCRIPTION	
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb	
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb	
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb Forested/ Pines	
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb Forested/ Pines	
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb Forested/ Pines	
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb Forested/ Pines	r site evaluation and a narrative description of the stream's location
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb Forested/ Pines	r site evaluation and a narrative description of the stream's location
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of interest for Herb Forested/ Pines	r site evaluation and a narrative description of the stream's location

**Reset Form** 

Save as pdf

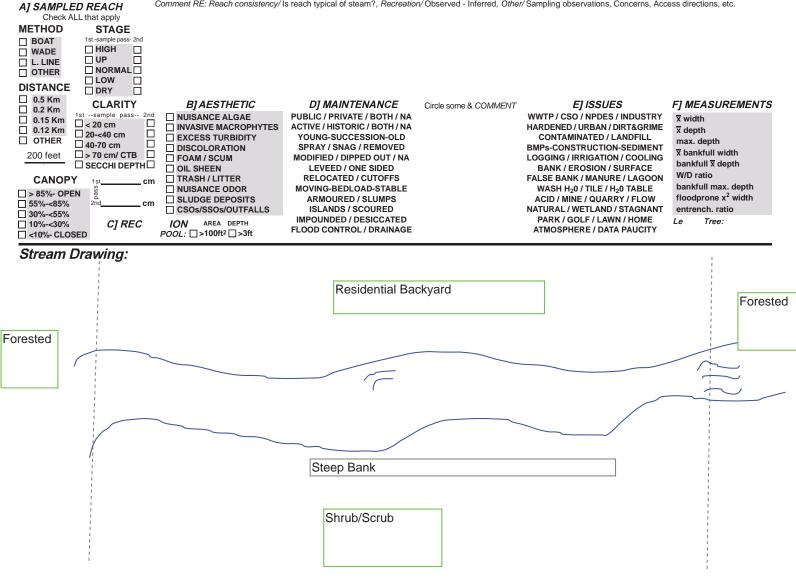
October 24, 2002 Revision

Stream 33 Modified Class 1	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form <b>20</b>	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-04 RIVER BASIN DRAINAGE AREA (mi²) 0.10	
LENGTH OF STREAM REACH (ft)       200       LAT.       39.24067       LONG.       -83.84203       RIVER CODE       RIVER MILE         DATE       12/13/17       SCORER       AEH, PJR       COMMENTS       Intermittent	_
DATE <u>12/13/17</u> SCORER AEH, PJR COMMENTS Intermittent NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	IEI tric
BLDR SLABS [16 pts] 0% SILT [3 pt] 35% Poi	ints
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         40%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	strate
Omega         Omega         Omega         Omega         Max           COBBLE (65-256 mm) [12 pts]         O%         CLAY or HARDPAN [0 pt]         O%	= 40
GRAVEL (2-64 mm) [9 pts]     15%     MUCK [0 pts]     0%       SAND (-2 mm) [6 pts]     10%     ARTIFICIAL [3 pts]     0%	0
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock (A) (B) (B) (A +	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	Depth = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]       5	;
COMMENTSMAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Ban	kfull
	dth (=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 5	;
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 국어이전E: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial Field	
Narrow <5m         Residential, Park, New Field         Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       ✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)	

QHEI PERFORMED? - Yes 🖌 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Enclosed Discours
WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE E	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland Town	ship / City: <b>Dodson Township</b>
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):0	6
Were samples collected for water chemistry? (Y/N): N (Note la	b sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not	, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field dat       Fish Observed? (Y/N)       N       Voucher? (Y/N)       N	er collections optional. NOTE: all voucher samples must be labeled with the site a sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) N Voucher? (Y/N) N tic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
Roadway Herb	r site evaluation and a narrative description of the stream's location
FLOW Herb	rub
	Form Page - 2
October 24, 2002 Revision	Save as pdf Reset Form

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 34		Good Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	x QHEI Score: 56.5
Stream & Location: AEP Hillst	ooro-Hutchingson	<b>RM: Date:</b> 12/13/2017
qh-20171213-aeh-02	Scorers Full Name & Affiliation.	· Audrey Hanner, AECOM
		, -83.842536 Office verified location □
BEST TYPES         POOL RIFFL           BLDR /SLABS [10]	Substrate TYPE BOXES; every type present Check ORIGIN Check ORIGIN	ONE (Or 2 & average) QUALITY HEAVY [-2] SILT MODERATE [-1] NORMAL [0]
Comments □	□       ✓ SILT [2]       25       □       HARDPAN [0]         □       □       ARTIFICIAL [0]       □       □       SANDSTONE [0]         □       ○       Score natural substrates; ignore       □       RIP/RAP [0]         ↓       or more [2]       sludge from point-sources)       □       LACUSTURINE [0]         ↓       or less [0]       □       SHALE [-1]         □       COAL FINES [-2]	
quality; <b>3</b> -Highest quality in moderate o		Soft ingness         Check ONE (Or 2 & average)           or, large         Check ONE (Or 2 & average)           al pools.         EXTENSIVE >75% [11]           ERS [1]         MODERATE 25-75% [7]           (TES [1])         SPARSE 5-<25% [3]
Comments		Maximum 6
3] CHANNEL MORPHOLOGY C         SINUOSITY       DEVELOPMEI         □ HIGH [4]       □ EXCELLENT [         ☑ MODERATE [3]       ☑ GOOD [5]         □ LOW [2]       □ FAIR [3]         □ NONE [1]       □ POOR [1]         Comments       □		] Channel Maximum 20
River right looking downstream RIF ROSION RIF NONE / LITTLE [3] MODERATE [2] RIF	Y NARROW < 5m [1]	ITY R CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s)
Check ONE (ONLY!)       Check         □ > 1m [6]       □ POOL W         □ 0.7-<1m [4]	/ RUN QUALITY         IANNEL WIDTH         CONE (Or 2 & average)         IDTH > RIFFLE WIDTH [2]         IDTH = RIFFLE WIDTH [1]         IDTH > RIFFLE WIDTH [1]         IDTH = RIFFLE WIDTH [2]         IDTH = R	ITIAL [-1] TTENT [-2] 1] Primary Contact Secondary Contact (circle one and comment on back)
Comments		
of riffle-obligate species: RIFFLE DEPTH RUI ☑ BEST AREAS > 10cm [2] □ MAXIM	es; Best areas must be large enough to support Check ONE (Or 2 & average). N DEPTH RIFFLE / RUN SUBSTRATE RIF IUM > 50cm [2] [7] STABLE (e.g., Cobble, Boulder) [2] IUM < 50cm [1] [7] MOD. STABLE (e.g., Large Gravel) [1] [7] UNSTABLE (e.g., Fine Gravel, Sand) [0]	INO RIFFLE [metric=0]  FLE / RUN EMBEDDEDNESS  NONE [2]  LOW [1]  MODERATE [0]  Run EXTENSIVE [-1]  Maximum 5.5
DRAINAGE AREA	VERY LOW - LOW [2-4] %POOL: 25 MODERATE [6-10] HIGH - VERY HIGH [10-6] %RUN: 55	) %GLIDE: 0 Gradient %RIFFLE: 20 Maximum 10
. ,		



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream 35 Modified Class 1	
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	
HHEI Score (sum of metrics 1, 2, 3):	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.01	Ī
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24163 LONG83.84454 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER AEH, PJR COMMENTS Intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions	S
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	tric
BLDR SLABS [16 pts] 0% SILT [3 pt] 30% Poir	nts
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         Subst	
COBBLE (65-256 mm) [12 pts] 35% CLAY or HARDPAN [0 pt] 0%	= 40
GRAVEL (2-64 mm) [9 pts]     25%     MUCK [0 pts]     0%     19       SAND (-2 mm) [6 pts]     10%     ARTIFICIAL [3 pts]     0%	<b>)</b>
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) (B) A + B	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool D	
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	= 30
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>✓ &lt; 5 cm [5 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	
COMMENTSMAXIMUM POOL DEPTH (Inches): 1.00	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       Bank         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Width	
= > 3.0  m - 4.0  m (> 9' 7'' - 13') [25  pts] $ = 1.0  m (<=3' 3'') [5  pts]$	=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS       AVERAGE BANKFULL WIDTH (Feet):       3.00       5	
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	

QHEI PERFORMED? - Yes V No QHEI Score (If Yes	es, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATE	RSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg NRCS Soil	I Map Page: NRCS Soil Map Stream Order
	Dodson Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no	. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S	S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not, please expl	ain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data sheets from         Fish Observed? (Y/N)         N         Voucher? (Y/N)         Salamanders Observed? (Y	optional. NOTE: all voucher samples must be labeled with the site the Primary Headwater Habitat Assessment Manual) //N) N Voucher? (Y/N) N ertebrates Observed? (Y/N) N Voucher? (Y/N) N
DRAWING AND NARRATIVE DESCRIPTION OF STRE	EAM REACH (This must be completed):
Include important landmarks and other features of interest for site evalua	· · · ·
Ag	
FLOW Culvert	
eroded ban	ks
Ag	
PHWH Form Page	- 2
October 24, 2002 Revision	Save as pdf Reset Form

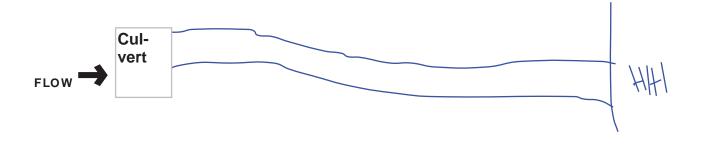
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 36 Modified Class	1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi <sup>2</sup> ) 0.01	
INTERCORDER STREAM REACH (ft) LAT. 39.24477 LONG83.85194 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER AEH, PJR COMMENTS Intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	RY
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	IHEI letric
	oints
BOULDER (>256 mm) [16 pts]	
BEDROCK [16 pt]	bstrate ax = 40
COBBLE (65-256 mm) [12 pts]	
GRAVEL (2-64 mm) [9 pts]     20%     MUCK [0 pts]     0%       SAND (<2 mm) [6 pts]	10
SAND (<2 mm) [6 pts]         10%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A	( + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	al Dawih
	ol Depth ax = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	ankfull Vidth
	ax=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L_R_(Per Bank)     L_R_(Most Predominant per Bank)	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	
Field Open Pasture, Row Crop	
None     Fenced Pasture     Mining or Construction     COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lynchburg NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Highland Township / City: Dodson Township
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

## DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

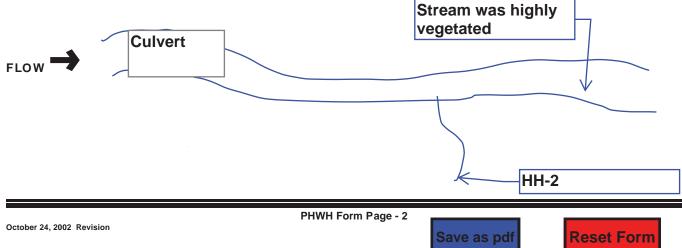
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



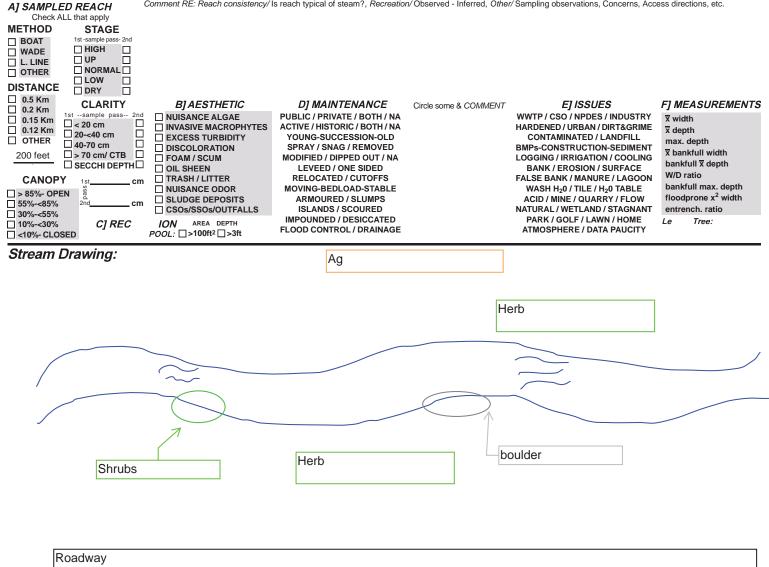
Save as pdf

Stream 37 Modified Class 1	
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	
HHEI Score (sum of metrics 1, 2, 3):	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.29	
ENGTH OF STREAM REACH (ft) LAT. 39.24483 LONG83.85242 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER AEH, PJR COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	S
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	
MODIFICATIONS: culvert	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	
BLDR SLABS [16 pts] 0% SILT [3 pt] 20% POI	nts
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         80%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         Subst	
COBBLE (65-256 mm) [12 pts]	= 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A + 1	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> </ol>	-
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	_ 30
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	
COMMENTSMAXIMUM POOL DEPTH (Inches): 1.00	
	kfull
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Wid	lth
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3" 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3" 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3'$	=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50 5	
This information <u>must</u> also be completed	_
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Narrow <sm field<="" new="" park,="" residential,="" td=""><td></td></sm>	
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)         WWH Name:       Distance from Evaluated Stream         CWH Name:       Distance from Evaluated Stream         EWH Name:       Distance from Evaluated Stream         BWH Name:       Distance from Evaluated Stream
USGS Quadrangle Name: Lynchburg NRCS Soil Map Page: NRCS Soil Map Stream Order
County:     Highland     Township / City:     Dodson Township
MISCELLANEOUS
Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Is the sampling reach representative of the stream (Y/N)       Y       If not, please explain:         Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



		Good Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	GHEI Score: 59
Stream & Location: AEP Hillsb	oro-Hutchingson	RM:Date: 12/13/2017
qh-20171213-aeh-01	Scorers Full Name & Affiliation:	Audrey Hanner, AECOM
River Code:		-83.860834 Office verified location
1] SUBSTRATE Check ONLY Two s	ubstrate TYPE BOXES:	DNE (Or 2 & average)
BEST TYPES BLDR /SLABS [10] BOULDER [9] COBBLE [8] GRAVEL [7] BEDROCK [5] NUMBER OF BEST TYPES: Comments	every type present       ORIGIN         OTHER TYPES       POOL RIFFLE         HARDPAN [4]       ILIMESTONE [1]         DETRITUS [3]       ILIMESTONE [1]         MUCK [2]       ILILS [1]         SILT [2]       20         ARTIFICIAL [0]       SANDSTONE [0]         (Score natural substrates; ignore       RIP/RAP [0]         Sor less [0]       SHALE [-1]	QUALITY HEAVY [-2] SILT MODERATE [-1] ONORMAL [0] FREE [1] MODERATE [-1] MODERATE [-1] MODERATE [-1] MAXIMUM 20 MAXIMUM 20
quality; <b>3</b> -Highest quality in moderate o		of nignest       Check ONE (Or 2 & average)         pools.       EXTENSIVE >75% [11]         iRS [1]       MODERATE 25-75% [7]         TES [1]       SPARSE 5-<25% [3]
		20
SINUOSITY       DEVELOPMEN         HIGH [4]       EXCELLENT [         MODERATE [3]       GOOD [5]         LOW [2]       FAIR [3]         NONE [1]       POOR [1]         Comments       FAIR [3]	7] □ NONE [6] □ HIGH [3] ☑ RECOVERED [4] ☑ MODERATE [2] □ RECOVERING [3] □ LOW [1] □ RECENT OR NO RECOVERY [1]	Channel Maximum 20
River right looking downstream RIP	Y NARROW < 5m [1]	
Check ONE (ONLY!)         Check           □ > 1m [6]         □ POOL WI           □ 0.7-<1m [4]	/ RUN QUALITY         ANNEL WIDTH         ONE (Or 2 & average)         DTH > RIFFLE WIDTH [2]         DTH = RIFFLE WIDTH [1]         DTH > RIFFLE WIDTH [1]         DTH = RIFFLE WIDTH [1]         DTH > RIFFLE WIDTH [2]         DTH > RIFFLE WIDTH [2]	TIAL [-1] TENT [-2] I ffles.
	- Destance much be leave as well to see the	
of riffle-obligate species: RIFFLE DEPTH RUN ☑ BEST AREAS > 10cm [2] □ MAXIN	es; Best areas must be large enough to support Check ONE (Or 2 & average). I DEPTH RIFFLE / RUN SUBSTRATE RIFF IUM > 50cm [2] ☑ STABLE (e.g., Cobble, Boulder) [2] IUM < 50cm [1] ☑ MOD. STABLE (e.g., Large Gravel) [1] □ UNSTABLE (e.g., Fine Gravel, Sand) [0]	a population <u>NO RIFFLE [metric=0]</u> FLE / RUN EMBEDDEDNESS NONE [2] LOW [1] MODERATE [0] EXTENSIVE [-1] Maximum 8
DRAINAGE AREA	VERY LOW - LOW [2-4]         %POOL: 25           MODERATE [6-10]         %RUN: 40	%GLIDE: 0 Gradient 10 %RIFFLE: 35 Gradient 10



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream 39 Modified Class	1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form <b>20</b>	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 0.10	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24843 LONG83.86184 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER AEH, PJR COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructio	ns
STREAM CHANNEL	ŧ۲
MODIFICATIONS: Channelized	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
	etric
BLDR SLABS [16 pts]         0%         SILT [3 pt]         40%         PC           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         25%	oints
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0% Sub	ostrate x = 40
COBBLE (65-256 mm) [12 pts]	x = 40
	0
Total of Percentages of a conv (A) Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock Check 95%	+ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	I Depth x = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	nkfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] W	lidth
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ = 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<$	ix=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY *** NOTE: River Left (L) and Right (R) as looking downstream ** RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Narrow <5m	
COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       ✓     0.5     1.5     2.5     >3	
Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100 ft)	

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

PHWH Form Page - 2

Forested

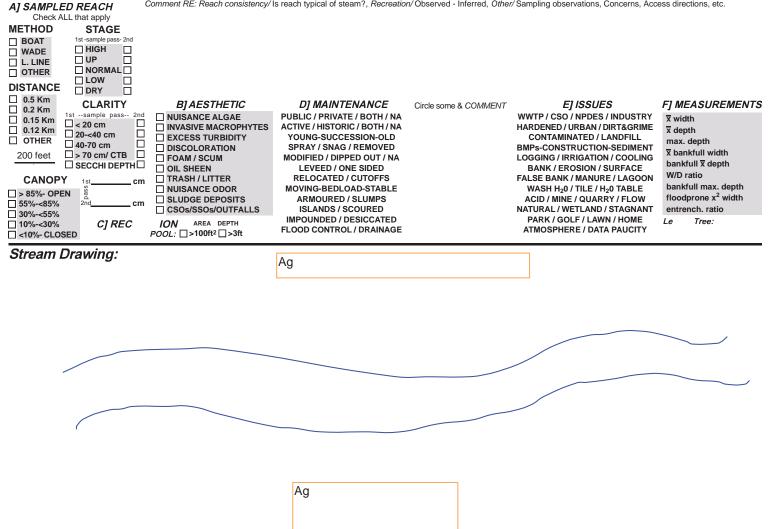
Save as pdf Reset Form

Stream 40 Class 2	
ChieEPA Primary Headwater Habitat Evaluation Form 5	2
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	7
Image: nin-aen-20171213-05       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi²)       1.5         LENGTH OF STREAM REACH (ft)       200       LAT.       39.25127       LONG.       -83.86789       RIVER CODE       RIVER MILE	<u>/</u>
DATE 12/13/17 SCORER AEH, PJR COMMENTS Intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	/ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 35%	Points
BEDROCK 116 Dtl V%	Substrate
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]         25%         MUCK [0 pts]         0%           SAND (<2 mm) [6 pts]	17
Total of Percentages of 20.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock 10070 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
	Pool Depth
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]         < 5 cm [5 pts]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 16.0	
······································	Bankfull
	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	45
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 4.00	15
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m     Residential, Park, New Field     Open Pasture, Row Crop	
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Subsurface flow with isolated pools (Interstitial) Subsurface flow with isolated pools (Interstitial)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Indecate (2 ft/100 ft) Moderate to Severe Indecate (10 ft/100 ft)	ft)

QHEI PERFORMED? - Yes No QHEI Score	(If Yes, Attac	h Completed	d QHEI Form	)
DOWNSTREAM DESIGNATED USE(S)				
CWH Name:			om Evaluate	
			om Evaluated	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE	ENTIRE WATERSHED	AREA. CLE	ARLY MARK	THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Pa	ge:	NRCS Soil	Map Stream Order
County: Town	nship / City:			
MISCELLANEOUS				
Base Flow Conditions? (Y/N):Y Date of last precipitation:		Quantity	0.00	
Photograph Information:				
Elevated Turbidity? (Y/N): N Canopy (% open): 0	%			
Were samples collected for water chemistry? (Y/N): (Note la	ab sample no. or id. ar	nd attach res	ults) Lab Nu	mber:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Cond	luctivity (µmh	os/cm)
Is the sampling reach representative of the stream (Y/N) If no	ot, please explain:			
Additional comments/description of pollution impacts:				
BIOTIC EVALUATION				
Performed? (Y/N): N (If Yes, Record all observations. Vouch ID number. Include appropriate field da Fish Observed? (Y/N) N Salamanders	ata sheets from the Prim Observed? (Y/N)	ary Headwate	er Habitat As (Y/N)	sessment Manual)
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aqu Comments Regarding Biology:	atic Macroinvertebrate	s Observed'	? (Y/N) N	Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION			ic muct b	a completed):
Include important landmarks and other features of interest f				
Ag				
	_			
	ŀ	lerb		
FLOW			$\int \int$	
Ag				
PHWH October 24, 2002 Revision	Form Page - 2			
· · · · · · ·	1	Save as <b>j</b>	odf	<b>Reset Form</b>

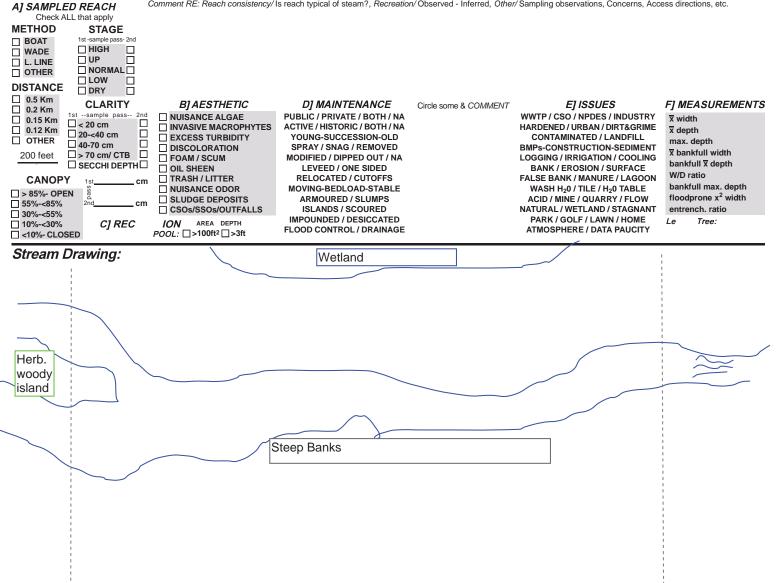
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 41		Fa	air Warmwater
<b>OhioEPA</b>	Qualitative Habitat I and Use Assessme		QHEI Score: 45.25
Stream & Location: A	Aep Hillsboro-Hutchingson	RI	<b>//: Date:</b> 12/13/2017
qh-20171213-aeh-03	Scorers Fi	ull Name & Affiliation: A	
River Code:	STORET #:L	at./ Long.: 39.258146, -8	3.885557 Office verified location
1] SUBSTRATE Check	ONLY Two substrate TYPE BOXES;		(Or 2 & average)
DECT TVDEC	te % or note every type present OOL RIFFLE OTHER TYPES POOL RII	ODICINI	QUALITY
BLDR /SLABS [10]	🔲 🖂 HARDPAN [4]	LIMESTONE [1]	HEAVY [-2]
BOULDER [9]     COBBLE [8]	DETRITUS [3]	☐ TILLS [1] ☐ WETLANDS [0]	SILT MODERATE [-1] Substrate
GRAVEL [7]	40 SILT [2] 35	HARDPAN [0]	□ FREE [1] 10
SAND [6]     BEDROCK [5]	15 ARTIFICIAL [0] (Score natural substrates; i	SANDSTONE [0]	DEC EXTENSIVE [-2]
NUMBER OF BEST T	YPES: 4 or more [2] sludge from point-sou		
Comments	✓ 3 or less [0]	SHALE [-1]	
•			
2] INSTREAM COVER	Indicate presence 0 to 3: 0-Absent; 1-Very sma quality; 2-Moderate amounts, but not of highes	all amounts or if more common of	linnest
quality; <b>3</b> -Highest quality in	moderate or greater amounts (e.g., very large b well developed rootwad in deep / fast water, or o	oulders in deep or fast water, lar	ge Check ONE (Or 2 & average)
UNDERCUT BANKS	[1] POOLS > 70cm [2]	OXBOWS, BACKWATERS	[1] MODERATE 25-75% [7]
OVERHANGING VEC		AQUATIC MACROPHYTES LOGS OR WOODY DEBRIS	
ROOTMATS [1]			Cover
Comments			Maximum 4
		``````````````````````````````````````	20
	<b>CLOGY</b> Check ONE in each category ( <i>Or 2</i> & <b>CHANNELIZATION</b>	average) STABILITY	
	(CELLENT [7]		
	DOD [5]	<ul> <li>✓ MODERATE [2]</li> <li>□ LOW [1]</li> </ul>	
	AIR [3]		Channel
Comments			Maximum 11
AL DANK EDOSION A	ND RIPARIAN ZONE Check ONE in each	category for FACH DANK(Or2)	per bank & average)
River right looking downstream		FLOOD PLAIN QUALITY	
		ST, SWAMP [3]	CONSERVATION TILLAGE [1]
<ul> <li>□ NONE / LITTLE [3]</li> <li>☑ ☑ MODERATE [2]</li> </ul>	✓ ✓ NARROW 5-10m [2]	DENTIAL, PARK, NEW FIELD [1]	URBAN OR INDUSTRIAL [0]
HEAVY / SEVERE [1]	U VERY NARROW < 5m [1] E FENC	ED PASTURE [1]	Indicate predominant land use(s)
Comments		I PASTURE, ROWCROP [0]	past 100m riparian. <b>Riparian</b> Maximum 4.2
Confinients			
	RIFFLE/RUN QUALITY		Represtion Potential
MAXIMUM DEPTH Check ONE (ONLY!)	CHANNEL WIDTH Check ONE (Or 2 & average)	CURRENT VELOCITY Check ALL that apply	Recreation Potential Primary Contact
□ > 1m [6]	POOL WIDTH > RIFFLE WIDTH [2] TOR	RENTIAL [-1] SLOW [1]	Secondary Contact
	□ POOL WIDTH = RIFFLE WIDTH [1] □ VER ☑ POOL WIDTH > RIFFLE WIDTH [0] □ FAS	Y FAST [1] INTERSTITIAL	- [-1] (circle one and comment on back)
✓ 0.2-<0.4m [1]		DERATE [1] DEDDIES [1]	Pool /
□ < 0.2m [0] Comments	Inc	dicate for reach - pools and riffles	. Current 2
	and siffles. Dest areas must be less		
of riffle-obligate s	ional riffles; Best areas must be larg pecies: Check ONE (Or 2		DODUIATION
RIFFLE DEPTH	RUN DEPTH RIFFLE / RU	IN SUBSTRATE RIFFLE	E / RUN EMBEDDEDNESS
■ BEST AREAS > 10cm [2] ✓ BEST AREAS 5-10cm [1]	□ MAXIMUM > 50cm [2] □ STABLE (e.g., ( ☑ MAXIMUM < 50cm [1] ☑ MOD. STABLE	Cobble, Boulder) [2]	□ NONE [2] ☑ LOW [1]
BEST AREAS < 5cm		g., Fine Gravel, Sand) [0]	MODERATE IN Riffle /
[metric=0] Comments			
6] GRADIENT ( 15.8	ft/mi) 🔲 VERY LOW - LOW [2-4]	%POOL: 20 %	
DRAINAGE AREA	MODERATE [6-10]		
( 2.78	mi²) 🔽 HIGH - VERY HIGH [10-6]	%RUN: ()%R	
			06/16/06



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream 42		Good Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 60.75
Stream & Location: AEP Hillst		<b>RM: Date:</b> 12/13/2017
qh-20171213-aeh-04 - West fork little miami river	Scorers Full Name & Affiliation:	Audrey Hanner/AECOM
River Code:		33.912658 Office verified location □
1] SUBSTRATE Check ONLY Two estimate % or note BEST TYPES POOL RIFFL		NE (Or 2 & average) QUALITY HEAVY [-2]
□       BOULDER [9]       15         □       COBBLE [8]       15         □       GRAVEL [7]       35         □       SAND [6]       15         □       BEDROCK [5]	Image: Detrive state st	SILT MODERATE [-1] NORMAL [0] FREE [1] MODERATE [-1] EXTENSIVE [-2] MODERATE [-1] MODERATE [-1] MODERATE [-1] Maximum 20
quality; <b>3</b> -Highest guality in moderate c		Iarge       Check ONE (0r 2 & average)         bools.       □         EXTENSIVE >75% [11]         RS [1]       ☑         MODERATE 25-75% [7]         ES [1]       □         SPARSE 5-<25% [3]
Comments		Maximum 14
3] CHANNEL MORPHOLOGY C         SINUOSITY       DEVELOPMEI         □ HIGH [4]       □ EXCELLENT         □ MODERATE [3]       □ GOOD [5]         □ LOW [2]       □ FAIR [3]         □ NONE [1]       □ POOR [1]         Comments       □		Channel Maximum 20
River right looking downstream EROSION NONE / LITTLE [3] MODERATE [2] RIF NONE / NONE / LITTLE [3] MODERATE [2] KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING KING	RIAN ZONE       Check       ONE in each category for EACH BANK (Or         PARIAN WIDTH       FLOOD PLAIN QUALIT         DE > 50m [4]       I       FOREST, SWAMP [3]         DE > 50m [4]       I       FOREST, SWAMP [3]         DERATE 10-50m [3]       I       SHRUB OR OLD FIELD [2]         RROW 5-10m [2]       I       RESIDENTIAL, PARK, NEW FIELD [3]         RY NARROW < 5m [1]	Y CONSERVATION TILLAGE [1]
Check ONE (ONLY!)         Check           □ > 1m [6]         ☑ POOL W           ☑ 0.7-<1m [4]	Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of the second system         Image: Application of the second system       Image: Application of th	ENT [-2]
of riffle-obligate species: RIFFLE DEPTH RUI ☑ BEST AREAS > 10cm [2] ☑ MAXIM □ BEST AREAS 5-10cm [1] □ MAXIM □ BEST AREAS < 5cm [metric=0] Comments	es; Best areas must be large enough to support a Check ONE (Or 2 & average). N DEPTH RIFFLE / RUN SUBSTRATE RIFF MUM > 50cm [2]  STABLE (e.g., Cobble, Boulder) [2] MUM < 50cm [1]  MOD. STABLE (e.g., Large Gravel) [1] UNSTABLE (e.g., Fine Gravel, Sand) [0]	Image: population       Image: Non RIFFLE [metric=0]         LE / RUN EMBEDDEDNESS         Image: None [2]         Image: Low [1]         Image: Moderate [0]         Riffle / Run Maximum 8         State
DRAINAGE AREA	MODERATE [6-10]	%GLIDE: 70 Gradient 2 %RIFFLE: 10 Maximum 10 06/16/06

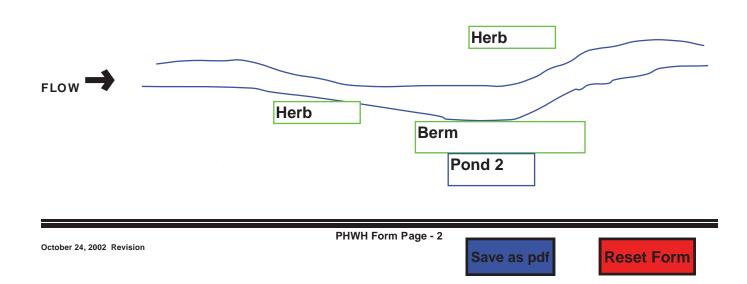


Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Image: Site NAME/LOCATION AEP Hillsboro-Hutchingson       19         Intername/Location AEP Hillsboro-Hutchingson         Intername/Location       AEP Hillsboro-Hutchingson       Drainage area (mi <sup>2</sup> )       0.10         Intername/Location       Site NUMBER       River Basin       Drainage area (mi <sup>2</sup> )       0.10         Intername       River Basin       Drainage area (mi <sup>2</sup> )       0.10         Intername       River Basin       Drainage area (mi <sup>2</sup> )       0.10
hh-aeh-20171213-07         SITE NUMBER         RIVER BASIN         DRAINAGE AREA (mi²)         0.10           LENGTH OF STREAM REACH (ft)         200         LAT.         39.27182         LONG.         -83.91652         RIVER CODE         RIVER MILE
DATE       12/13/17       SCORER       AEH, PJR       COMMENTS       intermittent         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       Channelized
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       HHEI Metric Packent         YPE       BLDR SLABS [16 pts]       0%       Image: Comparison of the present
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       6       TOTAL NUMBER OF SUBSTRATE TYPES:       3         2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 5 cm - 10 cm [15 pts]       > 5 cm - 10 cm [15 pts]       > 5 cm [5 pts]       > 00 WATER OR MOIST CHANNEL [0 pts]       5       5         > 10 - 22.5 cm [25 pts]       You WATER OR MOIST CHANNEL [0 pts]       > 5 cm [5 pts]       > 00 WATER OR MOIST CHANNEL [0 pts]       5       5         3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       3.00       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       > 1.0 m (<=3' 3") [5 pts]
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY         ANOTE: River Left (L) and Right (R) as looking downstream \$         RIPARIAN WIDTH       FLOODPLAIN QUALITY         Colspan="2">(Per Bank)         RIPARIAN WIDTH       FLOODPLAIN QUALITY         Mode rate 5-10m       Rimature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial         Narrow <5m

ADDITIONAL STREAM INFORMATION (This Information Must Als	so be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE E	ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Blanchester	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Clinton Town	nship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 0	%
Were samples collected for water chemistry? (Y/N): (Note la	ab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If no	t, please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
	ner collections optional. NOTE: all voucher samples must be labeled with the sit ata sheets from the Primary Headwater Habitat Assessment Manual)
N	N
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders	Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) N
Comments Regarding Biology:	
<u> </u>	
DRAWING AND NARRATIVE DESCRIPTION	N OF STREAM REACH (This must be completed):

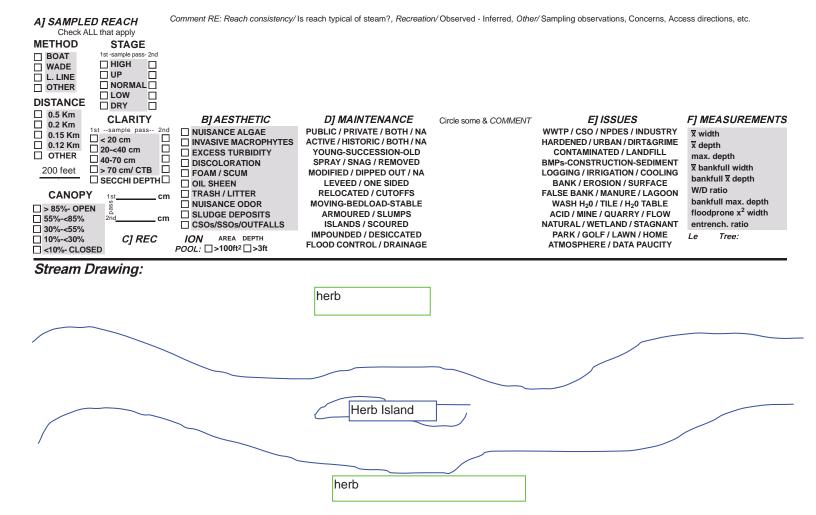
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Stream 44 Modified Class 1	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 18	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-11 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi <sup>2</sup> ) 0.10	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.27414 LONG83.92110 RIVER CODE RIVER MILE DATE 12/13/17 SCORER AEH, PJR COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	
STREAM CHANNEL       Image: None / Natural Channel       Image: Recovering       Recovering       Recent or No Recover'         MODIFICATIONS:       Image: Recent of None / Natural Channel       Image: Recovering       Recent or No Recover'	Y
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HEI etric
	ints
BOULDER (>256 mm) [16 pts]	strate
BEDROCK 16 Dtl V <sup>70</sup> LIL FINE DELRIUS 13 Dtsl V <sup>70</sup>	c = 40
GRAVEL (2-64 mm) [9 pts]	2
SAND (<2 mm) [6 pts]         0%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A +	⊦ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	( = 30
> 22.5 - 30 cm [30 pts]         < 5 cm [5 pts]	
	nkfull
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Wi	idth
	x=30
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN ZONE AND FLOODFLAIN QUALITY     A NOTE: River Left (E) and Right (R) as looking downstream at the second se	
L R (Per Bank) L R (Most Predominant per Bank) L R U Wide >10m Conservation Tillage Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m     Preid     Residential, Park, New Field     Open Pasture, Row Crop	
None   Fenced Pasture   Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
	ITIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Blanchester	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Clinton Towns	hip / City:Jefferson Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):0%	
Were samples collected for water chemistry? (Y/N): N (Note lat	o sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not,	please explain:
Additional comments/description of pollution impacts:	
L	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Vouche	r collections optional. NOTE: all voucher samples must be labeled with the site
ID number. Include appropriate field data	a sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Salamanders O	bserved? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquat	tic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
	OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for	r site evaluation and a narrative description of the stream's location
culvert	
FLOW	
	Stream vegetated
0	
S	5
PHWH	Form Page - 2
October 24, 2002 Revision	Save as pdf Reset Form

Stream 45		Fair Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 53
Stream & Location: AEP Hil	Isboro-Hutchingson	_RM: Date: 12/13/2017
qh-20171213-aeh-05	Scorers Full Name & Affiliation:	Audrey Hanner/AECOM
River Code:		
1] SUBSTRATE Check ONLY Tw	vo substrate TYPE BOXES;	DNE (Or 2 & average)
BEST TYPES POOL RIF	OTHER TYPES       POOL RIFFLE       ORIGIN            ☐       HARDPAN [4]          ☐          ☐ LIMESTONE [1]            ☐       DETRITUS [3]          ☐          ☐ TILLS [1]            ☐       MUCK [2]          ☐       HARDPAN [0]            ☐       SILT [2]          25        HARDPAN [0]            ☐       ARTIFICIAL [0]          ☐ SANDSTONE [0]        SANDSTONE [0]            [Score natural substrates; ignore          RIP/RAP [0]          □ LACUSTURINE [0]            [3 or less [0]          [3 or less [0]          [3 cOAL FINES [-2]	QUALITY HEAVY [-2] SILT MODERATE [-1] FREE [1] MODERATE [-1] FREE [1] MODERATE [-1] MODERATE [-1] MODER
quality; 3-Highest quality in moderati diameter log that is stable, well deve <u>1</u> UNDERCUT BANKS [1] <u>1</u> OVERHANGING VEGETATIO SHALLOWS (IN SLOW WATH ROOTMATS [1]		of nignest       Check ONE (Or 2 & average)         pools.       EXTENSIVE >75% [11]         ERS [1]       MODERATE 25-75% [7]         TES [1]       SPARSE 5-<25% [3]
Comments		Maximum 10
SINUOSITY DEVELOPM          HIGH [4]       EXCELLEN         MODERATE [3]       GOOD [5]         LOW [2]       FAIR [3]         NONE [1]       POOR [1]         Comments       Faire [3]         HIGH [4]       EROSION AND RIFE         River right looking downstream       Faire [3]         NONE / LITTLE [3]       V         MODERATE [2]       Image: None / LITTLE [3]	NT [7]       NONE [6] $\square$ HIGH [3]         Image: Recovered [4]       Image: Recovered [4]       Image: Recovered [4]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovered [4]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]         Image: Recovering [3]       Image: Recovering [3]       Image: Recovering [3]	Channel Maximum 20 Dr 2 per bank & average)
	ERY NARROW < 5m [1]	Indicate predominant land use(s) past 100m riparian. <b>Riparian</b> Maximum 6
Check ONE ( <i>ONLY</i> !) Ch □ > 1m [6] □ POOL □ 0.7-<1m [4] □ POOL	E / RUN QUALITY         CHANNEL WIDTH         eck ONE (Or 2 & average)         WIDTH > RIFFLE WIDTH [2]         WIDTH = RIFFLE WIDTH [1]         WIDTH > RIFFLE WIDTH [1]         WIDTH = RIFFLE WIDTH [1]         WIDTH > RIFFLE WIDTH [2]         MODERATE [1]         Indicate for reach - pools and right	TIAL [-1] TENT [-2]
Indicate for functional ri	ffles; Best areas must be large enough to support	a population
of riffle-obligate species RIFFLE DEPTH R □ BEST AREAS > 10cm [2] □ MA	Check ONE (Or 2 & average).	□ NO RIFFLE [metric=0] FLE / RUN EMBEDDEDNESS □ NONE [2] □ LOW [1] □ MODERATE [0] □ EXTENSIVE [-1] Riffle / Maximum 8
DRAINAGEAREA	□ VERY LOW - LOW [2-4]         %POOL: 20           ☑ MODERATE [6-10]         %RUN: 0	%GLIDE: 70 Gradient 8 %RIFFLE: 10 Maximum 10
		06/16/06



Stream 46 Class 2					
ChieEPA Primary Headwater Habitat Evaluation Form 46					
HHEI Score (sum of metrics 1, 2, 3) :					
SITE NAME/LOCATION AEP Hillsboro-Hutchingson					
hh-aeh-20171213-10 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi <sup>2</sup> ) 0.2	22				
LENGTH OF STREAM REACH (ft)       200       LAT.       39.28237       LONG.       -83.93535       RIVER CODE       RIVER MILE         DATE       12/13/17       SCORER       AEH, PJR       COMMENTS       intermittent					
DATE <u>12/13/17</u> SCORER <u>AEH, PJR</u> COMMENTS Intermittent NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	otiona				
·					
STREAM CHANNEL       Inone / Natural Channel       Recovered       Recovering       Recent or No Recovered         MODIFICATIONS:       Inone / Natural Channel       Recovered       Inone / Natural Channel	VERY				
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes					
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric				
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         SILT [3 pt]         60%	Points				
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate				
COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%	Max = 40				
GRAVEL (2-64 mm) [9 pts]       25%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	16				
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) (B)	A + B				
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 4					
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):	Pool Depth Max = 30				
<ul> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>✓ &gt; 5 cm - 10 cm [15 pts]</li> <li>&lt; 5 cm [5 pts]</li> </ul>					
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	15				
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.00					
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull				
= > 4.0  meters  (> 13') [30  pts] = > 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] = 1.0  m (<=3' 3") [5  pts]	Width Max=30				
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]					
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.50	15				
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 차 NOTE: River Left (L) and Right (R) as looking downstream ☆					
RIPARIAN WIDTH       FLOODPLAIN QUALITY         L_R       (Per Bank)       L_R         (Most Predominant per Bank)       L_R					
Wide >10m     Mature Forest, Wetland     Conservation Tillage       Immature Forest, Shrub or Old     Immature Forest, Shrub or Old     Immature Forest, Shrub or Old					
Field Field					
Narrow <5m	)				
None     Fenced Pasture     Mining or Construction       COMMENTS					
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):					
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)					
COMMENTS					
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):					
None       1.0       2.0       3.0         ✓       0.5       1.5       2.5       >3					
STREAM GRADIENT ESTIMATE	) ft)				

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location           Ag           Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
Herb
FLOW
Herb
Ag
Wetland
PHWH Form Page - 2 October 24, 2002 Revision Resot Form Resot Form

Stream 47 Class 2	
ChieEPA Primary Headwater Habitat Evaluation Form	46
HHEI Score (sum of metrics 1, 2, 3) :	10
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-08 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) 2.	10
LENGTH OF STREAM REACH (ft) 200 LAT. 39.29488 LONG83.95648 RIVER CODE RIVER MILE	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         55%	Metric Points
BOULDER (>256 mm) [16 pts]	Substrate
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 25% MUCK [0 pts] 0%	16
SAND (<2 mm) [6 pts]	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	15
COMMENTS MAXIMUM POOL DEPTH (Inches); 6.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.50	15
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 차NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	C
None     Fenced Pasture     Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓ 0.5       ✓ 0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Indicate Indicate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10	0 ft)

ADDITIONAL STREAM INFORMATION (	This Information Mus	t Also be Com	pleted):			
QHEI PERFORMED? - Yes	✓ No QHEI Score	(	Yes, Attach Co	mpleted QHEI Form	n)	
DOWNSTREAM DESIGNATED	USE(S)					
WWH Name:			Dis	tance from Evaluate	ed Stream	
			Dist	ance from Evaluate	d Stream	
EWH Name:			Dist	ance from Evaluate	d Stream	
MAPPING: ATTACH COPIES O	- MAPS, INCLUDING T	HE <u>ENTIRE</u> WA		A. CLEARLY MARK	THE SITE LOCATIO	N
USGS Quadrangle Name: Blanchester		NRCS S	Soil Map Page:	NRCS Soil	Map Stream Order	
County: Clinton		Township / City	Marion Towr	nship		
MISCELLANEOUS						
Base Flow Conditions? (Y/N):Y D	ate of last precipitation	n:	C	Quantity: <b>0.00</b>		
Photograph Information:						
Elevated Turbidity? (Y/N):	Canopy (% open):	0%				
Were samples collected for water chemist	ry? (Y/N): (N	ote lab sample	no. or id. and att	ach results) Lab Nu	mber:	
	issolved Oxygen (mg/l)	)pH	I (S.U.)	Conductivity (µmł	nos/cm)	
Is the sampling reach representative of th	e stream (Y/N)	If not, please e	xplain:			
Additional comments/description of polluti	on impacts:					
ID number. Fish Observed? (Y/N) N Voucher? Frogs or Tadpoles Observed? (Y/N) N Comments Regarding Biology:	Voucher? (Y/N) N	ld data sheets fr ders Observed? Aquatic Macroi	om the Primary H (Y/N) N Vo nvertebrates Ob	leadwater Habitat As pucher? (Y/N) N served? (Y/N) N	sessment Manual) Voucher? (Y/N)	th the site
DRAWING AND NARR	ATIVE DESCRIPT	TION OF ST	REAM REAC	H (This <u>must</u> b	e completed):	
Include important landmarks and	other features of inter	est for site eva	luation and a na	rrative description	of the stream's loca	ation
HH-9	Ag					
	Herb					
FLOW						
				$\sim$		
	Aa					
	Ag					
October 24, 2002 Revision	Pł	HWH Form Pag	je - 2	e as ndf	Reset Forn	

L

Stream 48 Class 1	
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	26
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchingson	
hh-aeh-20171213-09         SITE NUMBER         RIVER BASIN         DRAINAGE AREA (mi²)         0.           LENGTH OF STREAM REACH (ft)         200         LAT.         39.29479         LONG.         -83.95679         RIVER CODE         RIVER MILE	10
Length of stream red       200       LAT.       39.29479       LONG.       -83.95679       RIVER CODE       RIVER MILE         DATE       12/13/17       SCORER       AEH, PJR       COMMENTS       intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	OVERY
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.           TYPE         PERCENT         TYPE	Metric Points
BLDR SLABS [16 pts]         0%         SILT [3 pt]         65%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%	
BEDROCK         [16 pt]         0%         FINE DETRITUS         [3 pts]         0%           COBBLE         (65-256 mm)         [12 pts]         0%         CLAY or HABDBAN         [0 pt]         0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	16
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]         < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         NOTE: River Left (L) and Right (R) as looking downstream	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L_R     (Per Bank)     L_R     (Most Predominant per Bank)     L_R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field Field Orban or Industrial	2
Image: Narrow <5m     Image: Residential, Park, New Field     Image: Open Pasture, Row Crop       None     Image: Fenced Pasture     Image: None	)
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10	O ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Blanchester NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Clinton Township / City: Marion Township
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Q
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):0%
Were samples collected for water chemistry? (Y/N): _ N _ (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N N N
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher? (
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
AG
herb
AG
PHWH Form Page - 2 October 24, 2002 Revision
Save as pdf Reset Form

Stream 49 Modified Class	is 1
ChieEPA Primary Headwater Habitat Evaluation Form	2
HHEI Score (sum of metrics 1, 2, 3) :	<u></u>
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-jtt-121817-01 SITE NUMBER 01 RIVER BASIN DRAINAGE AREA (mi²)	
Length of Stream Read       (ft)       LAT.       39.30232       LONG.       -83.96737       RIVER CODE       RIVER MILE         DATE       12/18/17       SCORER       JTT, PJR       COMMENTS       ephemeral	
DATE 12/18/17 SCORER JTT, PJR COMMENTS ephemeral NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         9%	Substrate
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	8
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	ool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	Bankfull
	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Field Moderate 5-10m Field Moderate 5-10m Company Structure Forest, Shirds of Old Company Structure Forest, Shirds of Old Compa	
Narrow <5m     Residential, Park, New Field     Image: Comparison of the sture, New Clop       Image: None     Image: Comparison of the sture     Image: Comparison of the sture, New Clop	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Index Moderate (2 ft/100 ft) Moderate to Severe Index (10 ft/100 ft)	)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed	<u>):</u>
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, A	Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:CWH Name:CWH Name:CWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERS	HED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Ma	
County: Township / City: MISCELLANEOUS	
V	Quantity: 0.00
	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	
were samples collected for water chemistry? (Y/N): (Note lab sample no. of I	id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections option	onal. NOTE: all voucher samples must be labeled with the site
ID number. Include appropriate field data sheets from the	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertel	Voucher? (Y/N) Voucher? (Y/N) N
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	
Include important landmarks and other features of interest for site evaluation	and a narrative description of the stream's location
TLines	
ROW crop	
FLOW	
ROW	crop _
i I	

PHWH Form Page - 2

Stream 50 Modified Class	s 1
ChieEPA Primary Headwater Habitat Evaluation Form	
HHEI Score (sum of metrics 1, 2, 3) :	<u></u>
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-jtt-121817-02 SITE NUMBER_02 RIVER BASIN DRAINAGE AREA (mi²)	
Length of Stream Read       (ft)       LAT.       39.30661       LONG.       -83.97378       RIVER CODE       RIVER MILE         DATE       12/18/17       SCORER       JTT, PJR       COMMENTS       ephemeral	
DATE 12/18/17 SCORER JTT, PJR COMMENTS ephemeral NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	lione
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECENT OR NO RECOVERING RECENT OR NO RECEN	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Netric
	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         S	ubstrate
COBBLE (65-256 mm) [12 pts]           5%           CLAY or HARDPAN [0 pt]	/lax = 40
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	9
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	ool Depth /lax = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	Bankfull
= 3.0  m (<=3'  s'') [25  pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Image: None     Image: Residential, Park, New Field     Image: Residential, Park, New Field     Image: Residential, Park, New Field       Image: None     Image: Residential, Park, New Field     Image: Residential, Park, New Field     Image: Residential, Park, New Field	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS recent rain	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
TLines

PHWH Form Page - 2

I. L

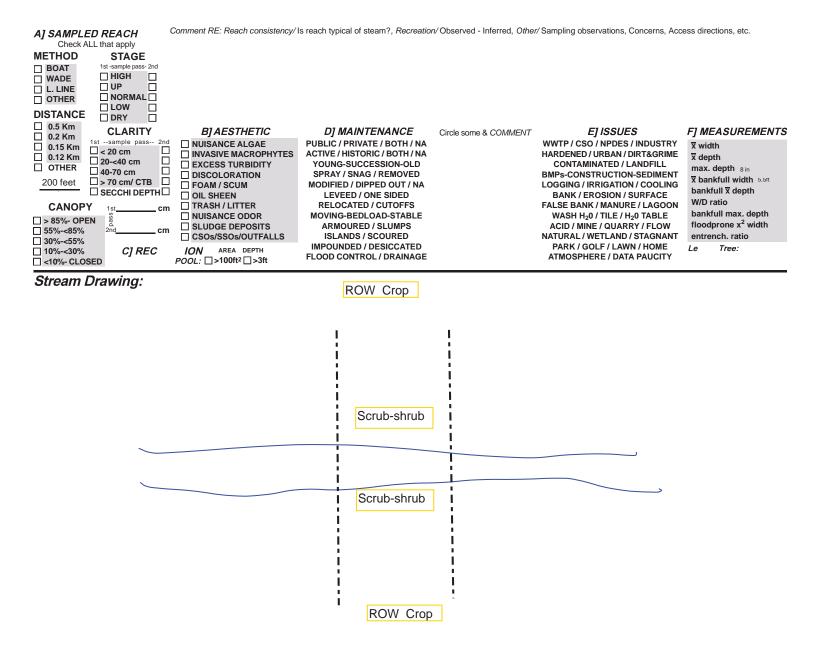
I

October 24, 2002 Revision

Save as pdf

**Reset Form** 

Stream 52			Very Poor Warmv	vater
<b>ChieEPA</b>	Qualitative Habita and Use Assessr	t Evaluation Index ment Field Sheet	QHEI Sco	re: 27
Stream & Location: Al	EP Hillsboro-Hutchings 138 kV		RM: Date	12/18/17
q-jtt-121817-02	Scorers	Full Name & Affiliation:		
River Code: -	- STORET #:	Lat./Long.: 39.312362,	-83.982428	Office verified location
1] SUBSTRATE Check O estimate	<i>NLY</i> Two substrate <i>TYPE BOXES</i> ; % or note every type present	Check O	NE (Or 2 & average)	
BLDR /SLABS [10]           BOULDER [9]           GRAVEL [7]           SAND [6]           BEDROCK [5]           NUMBER OF BEST TY           Comments	□       HARDPAN [4]         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □         □       □      □	RIFPLE       LIMESTONE [1]         Image: Constraint of the state of		([-2] RATE [-1] AL [0] [1] ISIVE [-2] RATE [-1] Maximum AL [0] 20
quality; 3-Highest quality in n         diameter log that is stable, w         UNDERCUT BANKS [1]         1       OVERHANGING VEGE         1       SHALLOWS (IN SLOW         ROOTMATS [1]	ETATION [1] ROOTWADS [1]	ge boulders in deep or fast water,	Inignest     Check ONE       large     Check ONE       pools.     EXTENSIN       RS [1]     MODERA       'ES [1]     SPARSE \$	TE 25-75% [7]
Comments				Maximum 5
SINUOSITY       DEVEI         □ HIGH [4]       □ EXC         □ MODERATE [3]       □ GOC         □ LOW [2]       □ FAII         □ NONE [1]       □ POC         Comments       □         4] BANK EROSION AN River right looking downstream         □ REROSION         □ NONE / LITTLE [3]         □ MODERATE [2]	DR [1]       RECENT OR NO RECO         ID RIPARIAN ZONE Check ONE in ea         RIPARIAN WIDTH         WIDE > 50m [4]         WIDE > 50m [4]         MODERATE 10-50m [3]         NARROW 5-10m [2]	N     STABILITY       □     HIGH [3]       □     MODERATE [2]       □     LOW [1]       OVERY [1]         ach category for EACH BANK (Or       FLOOD PLAIN QUALIT       DREST, SWAMP [3]       HUB OR OLD FIELD [2]       ESIDENTIAL, PARK, NEW FIELD []	R         R           CONSERVAT         R           U         URBAN OR I           U         URBAN OR I           I         Intervention	NSTRUCTION [0]
	☑ ☑ VERY NARROW < 5m [1] □ □ FE □ □ NONE [0]	ENCED PASTURE [1] PEN PASTURE, ROWCROP [0]	Indicate predominan past 100m riparian.	t land use(s) <b>Riparian</b> Maximum 10
MAXIMUM DEPTH Check ONE (ONLY!) □ > 1m [6] □ 0.7-<1m [4] □ 0.4-<0.7m [2] □ 0.2-<0.4m [1] □ < 0.2m [0] Comments	] POOL WIDTH = RIFFLE WIDTH [1] □ \ ] POOL WIDTH > RIFFLE WIDTH [0] □ F □ N	CURRENT VELOCITY Check ALL that apply ORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTIT AST [1] INTERMITT MODERATE [1] EDDIES [1] Indicate for reach - pools and riff	IAL [-1] ENT [-2]	on Potential by Contact ary Contact ary Contact comment on back Pool / Current Maximum 12
Indicate for function of riffle-obligate sp RIFFLE DEPTH BEST AREAS > 10cm [2] BEST AREAS 5-10cm [1] BEST AREAS < 5cm [metric=0] Comments	RUN DEPTH         RIFFLE /           MAXIMUM > 50cm [2]         STABLE (e.           MAXIMUM < 50cm [1]	Dr 2 & average). RUN SUBSTRATE RIFF g., Cobble, Boulder) [2]	LE / RUN EMBED	n Riffle /
DRAINAGE AREA	t/mi)  □ VERY LOW - LOW [2-4]		%GLIDE:	Gradient Maximum 10 06/16/06



Stream 53 Modified Class	ss 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	2
SITE NAME/LOCATION       AEP Hillsboro-Hutchings         hh-jbl-121417-08       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT. 39.31735       LONG83.99058       RIVER CODE       RIVER MILE         DATE       12/14/17       SCORER       jbl, jtt       COMMENTS       ephemeral         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction       STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERED	
MODIFICATIONS: driven through, channelizd	
Image: Substrain of the substraint	HHEI Metric Points Substrate Max = 40 12
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock (A) (B)	A + B
evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ✓         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       ☆ NOTE: River Left (L) and Right (R) as looking downstream ☆         RIPARIAN WIDTH       FLOODPLAIN QUALITY       FLOODPLAIN QUALITY         L       R       (Per Bank)       L       R         Wide >10m       Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial         Narrow <5m	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Image: Comment of the second sec	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       3.0	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Pa	age:NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/12/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	nd attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Prin Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrate Comments Regarding Biology:	nary Headwater Habitat Assessment Manual) Voucher? (Y/N)
L	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM R	EACH (This must be completed):
Include important landmarks and other features of interest for site evaluation and	· <u> </u>
row crop	
hh08	scrub-
	shrub
	ROW
	19
FLOW	
existing T Line Scrub shrub ROW	P
PHWH Form Page - 2	
October 24, 2002 Revision	Save as pdf Reset Form

ave as pui

Stream 54 Modified C	lass 2
<b>OnioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	35
SITE NAME/LOCATION       AEP Hillsboro-Hutchings         hh-jbl-121417-09       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT.       39.31818       LONG.       -83.99132       RIVER CODE       RIVER MILE         DATE       12/14/17       SCORER       jbl, jtt       COMMENTS       Intermittent         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECENT	
MODIFICATIONS: channelizd	
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       BLDR SLABS [16 pts]       0%       SILT [3 pt]       15%         BOULDER (>256 mm) [16 pts]       0%       EAF PACK/WOODY DEBRIS [3 pts]       15%         BEDROCK [16 pt]       0%       CLAY or HARDPAN [0 pt]       0%         COBBLE (65-256 mm) [12 pts]       10%       CLAY or HARDPAN [0 pt]       0%         SAND (<2 mm) [6 pts]	HHEI Metric Points Substrate Max = 40 15 A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 6	А+В
2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       > 5 cm [5 pts]         > 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]         MAXIMUM POOL DEPTH (Inches): 3.00	Pool Depth Max = 30
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\checkmark$ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50	5
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       ANOTE: River Left (L) and Right (R) as looking downstream and a looking downstream and looking downstream and a looking downstre	
Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS         SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):	
None       1.0       2.0       3.0 $0.5$ $\checkmark$ $1.5$ $2.5$ $3.0$	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	00 ft)

ADDITIONAL STREAM INFORM	IATION (This Information Mus	t Also be Completed):			
QHEI PERFORMED?	- Yes 🖌 No QHEI Score	(If Yes, At	tach Completed QHEI	Form)	
DOWNSTREAM DESI	GNATED USE(S)				
WWH Name:			Distance from Eva		
CWH Name:			Distance from Eval Distance from Eval		
MAPPING: ATTACH C	OPIES OF MAPS, INCLUDING T	HE <u>ENTIRE</u> WATERSHE	DAREA. CLEARLY M	ARK THE SITE LOCA	ΓΙΟΝ
USGS Quadrangle Name:		NRCS Soil Map	Page: NRCS	Soil Map Stream Ord	er
County: Warren	-	Township / City:			
MISCELLANEOUS					
Base Flow Conditions? (Y/N):_Y	, Date of last precipitation	12/12/17	Quantity:		
Photograph Information:					
Elevated Turbidity? (Y/N):	Canopy (% open):	100%			
Were samples collected for wate	r chemistry? (Y/N):	ote lab sample no. or id.	and attach results) La	b Number:	
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)		Conductivity		
,				(µmilos/oni)	
Is the sampling reach representa	tive of the stream (Y/N)	If not, please explain:			
Additional comments/description	of pollution impacts:				
	- f Yes, Record all observations. V D number. Include appropriate fiel /ou <u>cher? (</u> Y/N) N Salamand		rimary Headwater Habit	at Assessment Manual	
DRAWING AND	NARRATIVE DESCRIPT			<u>st</u> be completed)	):
Include important landma	rks and other features of intere hh09	est for site eva FOW C	rop ative descrip	otion of the stream's I	location
4					
		scru	h_		1 4
	N N	shru			
		ROV			
FLOW - Q				)	
Q	existing T Line	$\rightarrow$			9
ł	-	scru shru RO\	ıb		

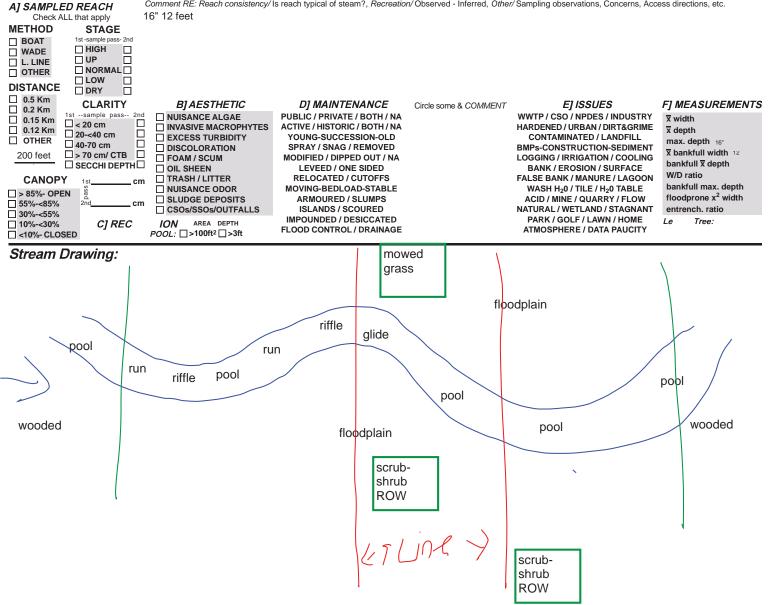
PHWH Form Page - 2

Т

Save as pdf

**Reset Form** 

Stream 55		Good Wa	armwater
<b>ChicEPA</b>	Qualitative Habitat Eval and Use Assessment I		I Score: 60
Stream & Location: QH-jbl-1			<b>Date:</b> 12/14/2017
<i>River</i> Code:	STORET #:Lat./L	me & Affiliation: jbl, jtt AEC . <b>ong.:</b> 39.321253, -83.996639 	
GRAVEL [7]     15     3       SAND [6]     20     1       BEDROCK [5]     9     1	FLE       OTHER TYPES       POOL RIFFLE         Image: Hardpan [4]       10         Image: Detribution [3]       25         Image: Detribution [3]       25 </td <td>□ TILLS [1] □ WETLANDS [0] SILT</td> <td>erage) QUALITY HEAVY [-2] MODERATE [-1] FREE [1] EXTENSIVE [-2] MODERATE [-1] NORMAL [0] NONE [1]</td>	□ TILLS [1] □ WETLANDS [0] SILT	erage) QUALITY HEAVY [-2] MODERATE [-1] FREE [1] EXTENSIVE [-2] MODERATE [-1] NORMAL [0] NONE [1]
quality: <b>3</b> -Highest guality in moderate		ty of in small amounts of nignest s in deep or fast water, large Ch vell-defined, functional pools. XBOWS, BACKWATERS [1] QUATIC MACROPHYTES [1] S	AMOUNT eck ONE (Or 2 & average) EXTENSIVE >75% [11] MODERATE 25-75% [7] SPARSE 5-<25% [3] NEARLY ABSENT <5% [1] Cover Maximum 20
3] CHANNEL MORPHOLOGY         SINUOSITY       DEVELOPM         □ HIGH [4]       □ EXCELLEN         ☑ MODERATE [3]       ☑ GOOD [5]         □ LOW [2]       ☑ FAIR [3]         □ NONE [1]       □ POOR [1]         Comments		STABILITY HIGH [3] MODERATE [2] LOW [1]	Channel Maximum 20
River right looking downstream R EROSION W NONE / LITTLE [3] M	IDE > 50m [4] □ □ □ FOREST, SV ODERATE 10-50m [3] □ □ SHRUB OR ARROW 5-10m [2] □ □ RESIDENTIA ERY NARROW < 5m [1] □ □ FENCED PA	DD PLAIN QUALITY VAMP [3] OLD FIELD [2] AL, PARK, NEW FIELD [1] UNIN	NSERVATION TILLAGE [1] BAN OR INDUSTRIAL [0] ING / CONSTRUCTION [0] redominant land use(s)
Check ONE (ONLY!)         Che           □ > 1m [6]         ☑ POOL           □ 0.7-<1m [4]	CHANNEL WIDTH     CURI       tck ONE (Or 2 & average)     Chu       WIDTH > RIFFLE WIDTH [2]     TORRENTI       WIDTH = RIFFLE WIDTH [1]     VERY FAS       WIDTH > RIFFLE WIDTH [0]     FAST [1]       WIDTH > RIFFLE WIDTH [0]     MODERAT	eck ALL that apply IAL [-1]  SLOW [1] T [1]  INTERSTITIAL [-1] INTERMITTENT [-2]	Recreation Potential Primary Contact Secondary Contact Secondary Contact Secondary Contact Secondary Contact Maximum 5
Indicate for functional rif of riffle-obligate species: RIFFLE DEPTH RI □ BEST AREAS > 10cm [2] □ MAX	fles; Best areas must be large end Check ONE ( <i>Or 2 &amp; ave.</i> JN DEPTH IMUM > 50cm [2] STABLE (e.g., Cobble IMUM < 50cm [1] MOD. STABLE (e.g., Fine	rage). JBSTRATE RIFFLE / RUN E e, Boulder) [2]	<u>NO RIFFLE [metric=0]</u> EMBEDDEDNESS E [2]
DRAINAGE AREA C	MODERATE [6-10]	%POOL: 70 %GLIDE:( %RUN: 5 %RIFFLE:(	10 Gradient 6 15 Maximum 10



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Primary Headwater Habitat Evaluation Form     Intervention     Intervent     Intervention     Intervention     Intervention     Intervent
HHEI Score (sum of metrics 1, 2, 3):       Image: Streman et al. (min)         Streman et al. (min)       Streman et al. (min)       Streman et al. (min)         Length of Streman et al. (min)       200       Lat. 39.32222       Long. 43.99847       River code       River and the al. (min)         Length of Streman et al. (min)       200       Lat. 39.32222       Long. 43.99847       River code       River and the al. (min)         Date:       Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         Streman et al. (min)       Image: Complete All Items on This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         Streman et al. (min)       Image: Complete All Items on This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         Streman et al. (min)       Image: Complete All Items on This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         Streman et al. (min)       Image: Complete All Items on This Form - Refer to "Field Evaluation for Ohio's PHWH Streams" for Instructions         Motificant percent of every type of substrate present. Check ONL Y two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Type       BUR SLABS [16 pts]       0%       0%       0%       0%       11         Store Cof Two Most PREDOMINATE
hh-jbi-121417-10       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi <sup>3</sup> )         LENGTH OF STREAM REACH (ft)       200       LAT.       39.32222       LONG.       -63.99847       RIVER CODE       RIVER MILE         DATE       12/14/17       SCORER       jbl, jtt       COMMENTS       ephemeral         NOTE:       Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       former earthrk in ROW       Instructions       Former earthrk in ROW       PERCENT         1.       SUBSTRATE (Estimate percent of every type of substrate types found (Max of 8), Final metric score is sum of boxes A & 8.       PERCENT       PERCENT         YPE       BLOR SLABS [16 pts]       0%       0%       0%       0%       0%         BOULDER (226 mm) [12 pts]       0%       0%       0%       0%       0%       0%       0%       11         MUCK (0 pts]       0%       0%       0%       0%       0%       0%       11       11         Attributer (20 pts]       0%       0%       0%       0%       0%       11       11         BOULDER (226 mm) [12
hh-jbi-121417-10       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi)         LENGTH OF STREAM REACH (ft)       200       LAT.       39.32222       LONG.       -63.99847       RIVER CODE       RIVER MILE         DATE       12/14/17       SCORER       jbl, jtt       COMMENTS       ephemeral         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       former earthrk in ROW       Instruction of every type of substrate present. Check ONLY two predominant substrate TYPE boxes       Metric Stream of the strea
DATE       12/14/17       SCORER       jbl, jtt       COMMENTS       ephemeral         NOTE:       Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       former earthrk in ROW       Image: Commerce and the image: Com
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       former earthrk in ROW       former earthrk in ROW       Recovering       Recovering       Recent or No Recovery         None / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY       Recovering       Recent or No Recovery         None / Nature (Estimate percent of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.       Percent       Percent       Percent       255         BUDR SLABS [16 pts]       PERCENT       YPE       SLT [3 pt]       255       0%       255       0%       255       0%       0%       255       0%       0%       11       1       A+B       Nature 40       11       A+B         Max = 40       Max = 40       Max = 40       Max = 40       0%       0%       11       A+B       100%       10%<
STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       former earthrk in ROW         1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A 8.       HHEI         Image: Display in the present of the present substrate types found (Max of 8). Final metric score is sum of boxes A 8.       Bitt [3 pt]       Image: Display in the present substrate types found (Max of 8). Final metric score is sum of boxes A 8.       Bitt [3 pt]       Image: Display in the present substrate types found (Max of 8). Final metric score is sum of boxes A 8.       Bitt [3 pt]       Image: Display in the present substrate types found (Max of 8). Final metric score is sum of boxes A 8.       Bitt [3 pt]       Image: Display in the present substrate types in the present substrate types is the present substrate type is the present
MODIFICATIONS:       former earthrk in ROW         1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       HHEI Metric 25%.         YPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts]
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TVPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate types found (Max of 8). Final metric score is sum of boxes A & 8.         Image: Substrate types found (Max of 8).         Image: Substrat
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       PERCENT         YPF       BLDR SLABS [16 pts]       PERCENT       YPF       SILT [3 pt]       PERCENT       45%         BOULDER (>256 mm) [16 pts]       0%       IEAF PACK/WOODY DEBRIS [3 pts]       0%       5%       0%       0%       10%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       <
TYPE       BLDR SLABS [16 pts]       PERCENT       TYPE       SILT [3 pt]       45%         BOULDER (>256 mm) [16 pt]       0%       Image: Comparison of the product of th
BOULDER (>256 mm) [16 pts]       0%       Image: Comparison of the state
BEDROCK [16 pt]       0%       0%       0%       0%       0%         COBBLE (65-256 mm) [12 pts]       0%       0%       0%       0%       5%       0%         GRAVEL (2-64 mm) [9 pts]       10%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%
COBBLE (65-256 mm) [12 pts]       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%
Image: Solution of the second seco
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock       0.00%       (A) Check       Substrate Percentage       100%       (B)         SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       6       TOTAL NUMBER OF SUBSTRATE TYPES:       5         2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 5 cm - 10 cm [15 pts]       > 5 cm - 10 cm [15 pts]       5         > 30 centimeters [20 pts]       22.5 cm [25 pts]       > 5 cm - 10 cm [15 pts]       > 5 cm - 10 cm [15 pts]       5         > 10 - 22.5 cm [25 pts]       MAXIMUM POOL DEPTH       (Inches):       1.00         3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       > 1.00         > 4.0 meters (> 13) [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       > 1.0 m (<=3' 3") [5 pts]
Bldr Slabs, Boulder, Cobble, Bedrock       G       TOTAL NUMBER OF SUBSTRATE TYPES:       5         SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       6       TOTAL NUMBER OF SUBSTRATE TYPES:       5         2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 5 cm - 10 cm [15 pts]       > 22.5 - 30 cm [30 pts]       > 5 cm - 10 cm [15 pts]       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5 <td< td=""></td<>
<ul> <li>2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>&gt; 0 WATER OR MOIST CHANNEL [0 pts]</li> <li>S BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):</li> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 4' 8") [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>
evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONL Y one box):         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       > 5 cm [5 pts]         > 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]         S.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]
> 22.5 - 30 cm [30 pts]        < 5 cm [5 pts]
> 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]         COMMENTS       MAXIMUM POOL DEPTH       (Inches): 1.00         3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]
Bank FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\checkmark$ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] $\checkmark$
Bank FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\checkmark$ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] $\checkmark$
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Width         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\checkmark$ $\le$ 1.0 m (<=3' 3") [5 pts]
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50 5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆
RIPARIAN ZONE AND FLOODPLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ <u>RIPARIAN WIDTH</u> <u>FLOODPLAIN QUALITY</u>
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage
Moderate 5-10m Immature Forest, Shrub or Old
Field     Open Pasture, Row Crop       Narrow <5m
None     Image: Fease Pasture     Image: Mining or Construction
COMMENTS
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)
COMMENTS
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):
None     Image: 1.0     Image: 2.0     Image: 3.0       0.5     1.5     2.5     3
STREAM GRADIENT ESTIMATE

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EI	ITIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Towns	ship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	12/12/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100	%
Were samples collected for water chemistry? (Y/N): N (Note lal	o sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not	please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data           Fish Observed? (Y/N)         N         Salamanders C	r collections optional. NOTE: all voucher samples must be labeled with the site a sheets from the Primary Headwater Habitat Assessment Manual) bbserved? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N tic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
	OF STREAM REACH (This <u>must</u> be completed):
hh10 s	r site evaluation and a narrative description of the stream's location crub- hrub OW
existing T Line	scrub shrub ROW
October 24, 2002, Povision	Form Page - 2       OW Crop     Save as pdf

Stream 57	Modified Class 1	1
<b>ChieEPA</b> Primary Headw	ater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) : 29	]
SITE NAME/LOCATION AEP Hillsboro-Hutchings		_
hh-jbl-121417-01SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.3	2692 LONG84.00612 RIVER CODE RIVER MILE	
DATE 12/14/17 SCORER jbl, jtt CO	MMENTS intermittent	
	• "Field Evaluation Manual for Ohio's PHWH Streams" for Instructior	ne
		115
	NNEL 🗹 RECOVERED 🔲 RECOVERING 🔲 RECENT OR NO RECOVER	Y
MODIFICATIONS: earthworkn in row		
1. SUBSTRATE (Estimate percent of every type of s	ubstrate present. Check ONLY two predominant substrate TYPE boxes	
	e types found (Max of 8). Final metric score is sum of boxes A & B.	HEI
TYPE PERCENT	PERCENT	etric
BLDR SLABS [16 pts] 0% BOULDER (>256 mm) [16 pts] 0%	SILT [3 pt]         25%         FOI           LEAF PACK/WOODY DEBRIS [3 pts]         20%	mts
BEDROCK [16 pt] 0%	FINE DETRITUS [3 pts] 0% Subs	strate
COBBLE (65-256 mm) [12 pts] 5%	CLAY or HARDPAN [0 pt]	x = 40
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts]	
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]         0%	2
Total of Percentages of <b>5.00%</b>	(A) Substrate Percentage 100% (B) A +	
Bldr Slabs, Boulder, Cobble, Bedrock	Check 100%	† D
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYP	ES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum po	ol depth within the 61 meter (200 ft) evaluation reach at the time of Pool	I Depth
evaluation. Avoid plunge pools from road culverts or		x = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	<ul> <li>✓ &gt; 5 cm - 10 cm [15 pts]</li> <li>&lt; 5 cm [5 pts]</li> </ul>	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS		
	MAXIMUM POOL DEPTH (Inches): 4.00	
3. BANK FULL WIDTH (Measured as the average of		nkfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		idth x=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
0011151150		-
	AVERAGE BANKFULL WIDTH (Feet): 2.00 5	2
Thi RIPARIAN ZONE AND FLOODPLAIN QUAL	is information <u>must</u> also be completed	
	.ITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ PLAIN QUALITY	
L R (Per Bank) L R	(Most Predominant per Bank) <u>L R</u>	
Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop	
	Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Ct Stream Flowing	neck ONLY one box): Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitia		
COMMENTS		
SINUOSITY (Number of ben <u>ds per 61 m (200</u>	D ft) of channel) <u>(C</u> heck ONLY one box):	
None 1.0	2.0 3.0	
0.5 1.5	2.5 2.5	
Flat (0.5 ft/100 ft)	erate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: _ Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/12/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): <u>N</u> Canopy (% open): <u>100%</u>
Were samples collected for water chemistry? (Y/N): _ N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
prop
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location wooded existing T Line Scrub shrub
ROW wooded
hh01
October 24, 2002 Revision PHWH Form Page - 2 Save as pdf Reset Form

Stream 58 Modified Cl	ass 2
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	58
SITE NAME/LOCATION AEP Hillsboro-Hutchings  hh-jbl-121417-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi <sup>2</sup> )	
hh-jbl-121417-02       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT.       39.32781       LONG.       -84.00729       RIVER CODE       RIVER MILE	
DATE 12/14/17 SCORER jbl, jttCOMMENTS perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVER	JVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         20%	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	
BEDROCK         [16 pt]         0%         FINE DETRITUS         [3 pts]         0%           COBBLE         (65-256 mm)         [12 pts]         15%         CLAY or HARDPAN         [0 pt]         20%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       15%       CLAY or HARDPAN [0 pt]       20%         GRAVEL (2-64 mm) [9 pts]       22%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	18
Total of Percentages of 15.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Check Check TOTAL NUMBER OF SUBSTRATE TYPES: 6	
	Pool Depth
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):	Max = $30$
✓       > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 12.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.0 m (&gt;=3' 3") [5 pts]</li> </ul>	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 6.00	20
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY SNOTE: River Left (L) and Right (R) as looking downstream SRIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
✓       Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       ✓       Immature Forest, Shrub or Old       Urban or Industrial	
	n
	5
None     Fenced Pasture     Mining or Construction       COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe	0 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be	e Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTID	RE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: N	RCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township	0 / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:1	2/12/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 90%	
Were samples collected for water chemistry? (Y/N): N (Note lab sa	ample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, ple	ease explain:
Additional comments/description of pollution impacts:	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed?	ollections optional. NOTE: all voucher samples must be labeled with the site neets from the Primary Headwater Habitat Assessment Manual) erved? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION O	$\int (f) = \partial f$
existing T Line	field odplain wooded
FLOW	
hh02 steep, eroded	scrub shrub ROW
PHWH For October 24, 2002 Revision	m Page - 2
	Save as pdf Reset Form

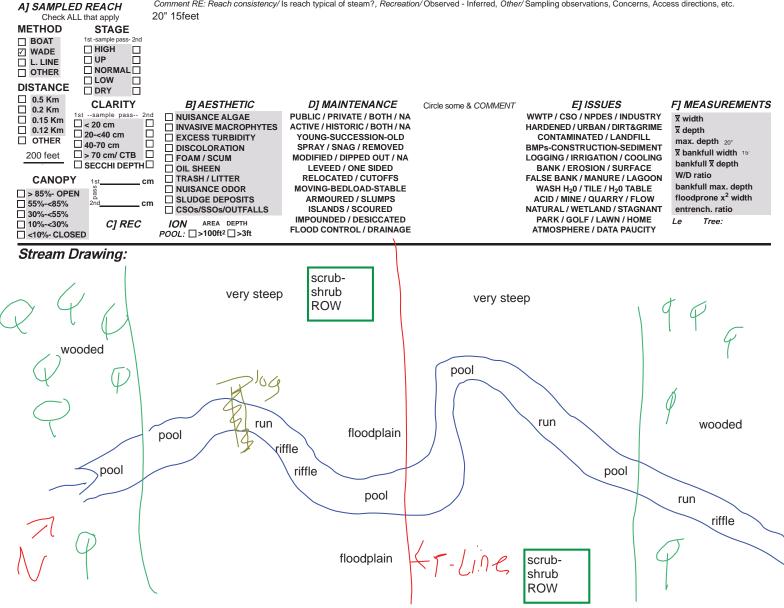
Stream 59 Modified Cla	ass 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	
HHEI Score (sum of metrics 1, 2, 3) :	8
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.32907 LONG84.01000 RIVER CODE RIVER MILE	
DATE 12/14/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	VERY
MODIFICATIONS: earthworkn in row	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 30%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         15%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 25%	Max = 40
GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	8
Total of Percentages of D.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 3.0  m (> 9' 7" - 4' 8") [20  pts] $ $ = 5.0  m (<=3' 3") [5  pts]$	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY SNOTE: River Left (L) and Right (R) as looking downstream SRIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial	
	2
Narrow <5m C Residential, Park, New Field C	
None     Fenced Pasture     Mining or Construction       COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         ✓         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100	) ft)

QHEI PERFORMED? - Yes 🗸	No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED US	E(S)	
WWH Name:	Distance from Evaluated Stream	
	Distance from Evaluated Stream	
EWH Name:	Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MA	APS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	
JSGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order	
County: Warren	Township / City:	
MISCELLANEOUS		
Y	of last precipitation: 12/12/17 Quantity:	
Photograph Information:		
N	100%	
Nere samples collected for water chemistry? (	(Y/N): N (Note lab sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissol	lved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)	
s the sampling reach representative of the stre	eam (Y/N) If not, please explain:	
prop		
·		
Additional comments/description of pollution in	npacts:	
· · · ·	all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)	h the s
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)	h the :
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N Frogs or Tadpoles Observed? (Y/N) N Vou	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N	h the :
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology:	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N	h the :
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology:	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N         N	
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Si	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Aquatic Macroinvertebrates Observed? (Y/N)       N         Voucher? (Y/N)       N         Vector       N         Vector       N         Vector       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N <t< td=""><td></td></t<>	
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Si	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       Aquatic Macroinvertebrates Observed? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher?	
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Si	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Aquatic Macroinvertebrates Observed? (Y/N)       N         Voucher? (Y/N)       N         Vector       N         Vector       N         Vector       N         N       N         N       N         N       N         N       N         N       N         N       N         N       N <t< td=""><td></td></t<>	
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Si	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       Aquatic Macroinvertebrates Observed? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher? (Y/N)         N       Voucher? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher?         N       Voucher?         N       Voucher?         N       N         N       N	
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Sign N	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       Aquatic Macroinvertebrates Observed? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher? (Y/N)         N       Voucher? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher?         N       Voucher?         N       Voucher?         N       N         N       N	tion
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Si	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       Aquatic Macroinvertebrates Observed? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher? (Y/N)         N       Voucher? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher?         N       Voucher?         N       Voucher?         N       N         N       N	tion
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Sign N	Iude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         I)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       Aquatic Macroinvertebrates Observed? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher? (Y/N)         N       Voucher? (Y/N)         N       Aquatic Macroinvertebrates Observed? (Y/N)         N       Voucher?         N       Voucher?         N       Voucher?         N       N         N       N	tion
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) N Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou Comments Regarding Biology: Vou DRAWING AND NARRATI Include important landmarks and other Sign FLOW X A	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) N Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) N Voucher? (Y/N)	tion
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Sign FLOW A Crop	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) I) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N	tion
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) N Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Sign FLOW A State of the state of th	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) I) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N	tion
Performed? (Y/N): N (If Yes, Record ID number. Incl Fish Observed? (Y/N) N Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou Comments Regarding Biology: DRAWING AND NARRATI Include important landmarks and other Sign FLOW A Not Sign OW Crop A Not Sign hh03	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) I) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N	tion

Stream 60 Modified Cl	ass 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	20
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121417-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi <sup>2</sup> )	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.32922 LONG84.01066 RIVER CODE RIVER MILE	
DATE 12/14/17 SCORER jbl, jttCOMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO MODIFICATIONS: filing grading	JVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE     PERCENT     TYPE     PERCENT       BLDR SLABS [16 pts]     0%     []     SILT [3 pt]     45%	Metric Points
BLDR SLABS [16 pts]         0%         I SILT [3 pt]         45%           BOULDER (>256 mm) [16 pts]         0%         I LEAF PACK/WOODY DEBRIS [3 pts]         40%	
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       10%         GRAVEL (2-64 mm) [9 pts]       0%       0%       0%       0%	
SAND (<2 mm) [6 pts]	10
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock 0.007/8 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	De al Desat
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
$ \begin{array}{ c c c c c } > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] \\ \hline \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7'' - 4' 8'') [20 \text{ pts}] \\ \end{array} $	Wax=50
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field Field	-
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	)
None  Fenced Pasture      COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	0 ft)

	Yes V No QHEI Score (If Yes,	Attach Completed QHEI Form)
DOWING I REAW DESIGI	NATED USE(S)	
		Distance from Evaluated Stream
CWH Name: EWH Name:		Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COP		HED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Ma	ap Page: NRCS Soil Map Stream Order
County: Warren	Township / City:	
MISCELLANEOUS		
Base Flow Conditions? (Y/N):_Y	Date of last precipitation: 12/12/17	Quantity:
Photograph Information:		
Elevated Turbidity? (Y/N):	Canopy (% open): <b>100%</b>	
Were samples collected for water c		id. and attach results) Lab Number:
		,
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l) pH (S.U	
Is the sampling reach representativ	e of the stream (Y/N) If not, please explain	
prop		
Additional comments/description of	pollution impacts:	
· · · ·		
ID n	number. Include appropriate field data sheets from the	Primary Headwater Habitat Assessment Manual)
Performed? (Y/N): (If Y	number. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N)	N Voucher? (Y/N)
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N	number. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N)	Primary Headwater Habitat Assessment Manual)           N         Voucher? (Y/N)         N
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N	number. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N)	Primary Headwater Habitat Assessment Manual)           N         Voucher? (Y/N)         N
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology:	number. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N)	Primary Headwater Habitat Assessment Manual)           N         Voucher? (Y/N)         N           vbrates Observed? (Y/N)         N         Voucher? (Y/N)
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology:	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology:	NARRATIVE DESCRIPTION OF STREA	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology:	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology: ORAWING AND N Include important landmark	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual)           N         Voucher? (Y/N)         N           vbrates Observed? (Y/N)         N         Voucher? (Y/N)
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology: Comments Regarding Biology: Include important landmark	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Crop	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology: Comments Regarding Biology: DRAWING AND N Includ > important landmark	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Crop	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Crop	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology: Comments Regarding Biology: DRAWING AND N Include important landmark Crop DRAWING AND N hogged ROW	NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluation hh04 Wooded	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Fish Observed? (Y/N) N Vou Frogs or Tadpoles Observed? (Y/N Comments Regarding Biology: Comments Regarding Biology: DRAWING AND N Include important landmark Crop DRAWING AND N hogged ROW	NUMBER. Include appropriate field data sheets from the ucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinverte NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluatio	Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) brates Observed? (Y/N) N Voucher? (Y/N) N MREACH (This <u>must</u> be completed):
Performed? (Y/N): (If Y ID n Frogs or Tadpoles Observed? (Y/N) Comments Regarding Biology: Comments Regarding Biology: Include important landmark Crop	NARRATIVE DESCRIPTION OF STREA s and other features of interest for site evaluation hh04 Wooded	Primary Headwater Habitat Assessment Manual)          N       Voucher? (Y/N)       N         vbrates Observed? (Y/N)       N       Voucher? (Y/N)         M       Voucher? (Y/N)       N         M       Voucher? (Y/N)       N         M       Voucher? (Y/N)       N         M       REACH (This must be completed):

Stream 61		Good Warmwater
<b>ChicEPA</b>	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	X QHEI Score: 62
Stream & Location: (		_RM:Date: 12/14/2017
River Code: -	Scorers Full Name & Affiliation STORET #: Lat./ Long.: 39.335568	
1] SUBSTRATE Check estima	ONLY Two substrate TYPE BOXES:	ONE (Or 2 & average)
BEST TYPES BLDR /SLABS [10] BOULDER [9] COBBLE [8] GRAVEL [7] BEDROCK [5] NUMBER OF BEST T Comments	OTHER TYPES       OOL RIFFLE       ORIGIN         Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe         Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe         Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe         Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe       Image: Pool RiffLe	□ NONE [1]
quality; 3-Highest quality in	GETATION [1] 1 ROOTWADS [1] 1 AQUATIC MACROPHY	S of nignest or, large       Check ONE (Or 2 & average)         al pools.       EXTENSIVE >75% [11]         ERS [1]       MODERATE 25-75% [7]         YTES [1]       SPARSE 5-<25% [3]
Comments		Cover Maximum 20
SINUOSITY       DEVI         HIGH [4]       EX         MODERATE [3]       G         LOW [2]       F4         NONE [1]       PC         Comments       F4	OLOGY       Check ONE in each category (Or 2 & average)         ELOPMENT       CHANNELIZATION       STABILITY         XCELLENT [7]       Image: None [6]       Image: High [3]         OOD [5]       Image: Recovered [4]       Image: Moderate [2]         AIR [3]       Image: Recovering [3]       Image: Low [1]         OOR [1]       Image: Recent or no recovery [1]         ND RIPARIAN ZONE       Check ONE in each category for EACH BANK (Or manage)         Image: RIPARIAN WIDTH       Image: FLOOD PLAIN QUAL	Channel Maximum 20 Or 2 per bank & average)
EROSION	$ \square \square WIDE > 50m [4] \qquad \square \square FOREST, SWAMP [3]  \square \square MODERATE 10-50m [3]  \square \square SHRUB OR OLD FIELD [2] $	CONSERVATION TILLAGE [1]     URBAN OR INDUSTRIAL [0]     URBAN OR INDUSTRIAL [0]     Indicate predominant land use(s)
MAXIMUM DEPTH Check ONE ( <i>ONLY</i> !) > 1m [6] 0.7-<1m [4]	D RIFFLE / RUN QUALITY CHANNEL WIDTH Check ONE (Or 2 & average)       CURRENT VELOCITY Check ALL that apply         ☑ POOL WIDTH > RIFFLE WIDTH [2]       ☐ TORRENTIAL [-1]       ☑ SLOW [1]         □ POOL WIDTH = RIFFLE WIDTH [1]       □ VERY FAST [1]       □ INTERSTI         □ POOL WIDTH > RIFFLE WIDTH [0]       □ FAST [1]       □ INTERMIT         □ POOL WIDTH > RIFFLE WIDTH [0]       □ FAST [1]       □ INTERMIT         □ MODERATE [1]       □ EDDIES [         □ Indicate for reach - pools and r	Image: Primary Contact         ITIAL [-1]         ITTENT [-2]         1]         riffles.         Pool / Current Maximum
	RUN DEPTH       RIFFLE / RUN SUBSTRATE       RIF         MAXIMUM > 50cm [2]       STABLE (e.g., Cobble, Boulder) [2]       Image: Comparison of the state of th	12 a population FLE / RUN EMBEDDEDNESS □ NONE [2] □ LOW [1] □ MODERATE [0] Run Maximum 8
6] GRADIENT ( 31 DRAINAGE AREA ( 4.6	ft/mi)       □       VERY LOW - LOW [2-4]       %POOL:       70         □       MODERATE [6-10]       %RUN:       10         mi²)       ☑       HIGH - VERY HIGH [10-6]       %RUN:       10	%GLIDE:         10         Gradient         6           %RIFFLE:         10         Maximum         6



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

Stream 62 Modified Cla	ass 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	21
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121417-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.33228 LONG84.01478 RIVER CODE RIVER MILE DATE 12/14/17 SCORER Jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO MODIFICATIONS: filing grading	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         45%	Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 30%	Substrate
BEDROCK         [16 pt]         0%         Image: Fine detritus         [3 pts]         0%           COBBLE         (65-256 mm) [12 pts]         0%         Image: CLAY or HARDPAN         [0 pt]         10%	Max = 40
GRAVEL (2-64 mm) [9 pts] 10% MUCK [0 pts] 0%	11
SAND (<2 mm) [6 pts]         5%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
→       > 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 3.0  m (> 9' 7" - 4' 8") [20  pts] $ $ = 1.0  m (<=3' 3") [5  pts]$	IWIAX=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 가NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank)       L R (Most Predominant per Bank)       L R         Image: Conservation Tillage       Image: Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	2 C
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None $1.0$ $2.0$ $3.0$ 0.5 $1.5$ $2.5$ $>3$	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	0 ft)

ADDITIONAL STREAM INFORMATION (Thi	s Information Must Also be Comple	ted):	
QHEI PERFORMED? - Yes 🗸	No QHEI Score (If Ye	es, Attach Completed QHEI Form	n)
DOWNSTREAM DESIGNATED US	SE(S)		
		Distance from Evaluate	
		Distance from Evaluate	
EWH Name:		Distance from Evaluate	
MAPPING: ATTACH COPIES OF M	IAPS, INCLUDING THE <u>ENTIRE</u> WATEI	RSHED AREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil	Map Page: NRCS Soil	Map Stream Order
County: Warren	Township / City:		
MISCELLANEOUS			
Base Flow Conditions? (Y/N):Y Date	e of last precipitation: 12/12/17	Quantity:	
Photograph Information:			
Ν	nopy (% open): 90%		
Were samples collected for water chemistry?	N	or id. and attach results) Lab Nu	imber:
	olved Oxygen (mg/l) pH (S		
	Y		
Is the sampling reach representative of the second	tream (Y/N) If not, please expla	ain:	
Additional comments/description of pollution	impacts:		
Fish Observed? (Y/N) Voucher? (Y/ Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Comments Regarding Biology:	N) N Salamanders Observed? (Y/ oucher? (Y/N) Aquatic Macroinve	/N) N Voucher? (Y/N) N ertebrates Observed? (Y/N) N	Voucher? (Y/N)
DRAWING AND NARRAT	TIVE DESCRIPTION OF STRE	AM REACH (This must b	e completed):
Include important landmarks and oth			
h	h05		
FLOW → Scrub Shrub ROW		wooded	
sting T Line		wooded	QA-C
	PHWH Form Page -	2	
October 24, 2002 Revision	,	Save as pdf	<b>Reset Form</b>

Stream 63 Modified Clas	s 1
ChieEPA Primary Headwater Habitat Evaluation Form 22	,
HHEI Score (sum of metrics 1, 2, 3) :	-
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121417-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.33450 LONG84.01893 RIVER CODE RIVER MILE	
DATE 12/14/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECENT OR NO RECENT OR NO RECOVERING RECENT OR NO RECENT O	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 35%	
BEDROCK [16 pt]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       5%       CLAY or HARDPAN [0 pt]       10%         GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	12
Total of Percentages of 5.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
	Bankfull
	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)       Flat to Moderate         Moderate (2 ft/100 ft)       Moderate to Severe	)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed)	ted):
QHEI PERFORMED? - Yes V No QHEI Score (If Ye	es, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATER	RSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:NRCS Soil	
County: Warren Township / City:	
	<u>'</u>
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/12/17	Quantitu
	Quantity:
Photograph Information:	I
Were samples collected for water chemistry? (Y/N): (Note lab sample no.	or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S	.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not, please expla	ain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections of ID number. Include appropriate field data sheets from Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Aquatic Macroinve Comments Regarding Biology:	/N) N Voucher? (Y/N) N
FLOW	
October 24, 2002 Revision PHWH Form Page -	2 Save as pdf Reset Form

Stream 64 Modified Class	ss 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	2
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121417-07 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi <sup>2</sup> )	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.33756 LONG84.02380 RIVER CODE RIVER MILE	
DATE 12/14/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruc	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	'ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 40%	Substrate
BEDROCK 116 pti V% LILE EINE DETRITUS 13 ptsi V/	Max = 40
GRAVEL (2-64 mm) [9 pts]         5%         MUCK [0 pts]         0%	12
SAND (<2 mm) [6 pts]         10%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock <b>5.00% (A)</b> Substrate Percentage <b>100% (B)</b>	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):          > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	Max = 30
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	5
	5
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY · · · 와NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate (2 ft/100 ft) Severe (10 ft/100 ft)	t)

QHEI PERFORMED? - Yes 🗸	No QHEI Score	(If Yes, Attach	Completed QHEI Form	n)
DOWNSTREAM DESIGNATED US	SE(S)			
			Distance from Evaluate	ed Stream
			Distance from Evaluate	
EWH Name:			Distance from Evaluate	d Stream
MAPPING: ATTACH COPIES OF M	APS, INCLUDING THE EN	TIRE WATERSHED A	REA. CLEARLY MARK	
USGS Quadrangle Name:		NRCS Soil Map Pag	je: NRCS Soil	Map Stream Order
County: Warren	Townsl	nip / City:		
MISCELLANEOUS				
Base Flow Conditions? (Y/N):Y Date	e of last precipitation:	12/12/17	Quantity:	
Photograph Information:				
Elevated Turbidity? (Y/N): Ca	nopy (% open):100%	6		
Were samples collected for water chemistry?	N	sample no orid and	d attach results) Lab Nu	imber:
	olved Oxygen (mg/l)	pH (S.U.)	Conductivity (µm	hos/cm)
Is the sampling reach representative of the st	tream (Y/N)	please explain:		
Additional comments/description of pollution	impacts:			
Fish Observed? (Y/N) Voucher? (Y/	N) N Salamanders Ot Sucher? (Y/N) N Aquati	sheets from the Prima oserved? (Y/N) N c Macroinvertebrates	Voucher? (Y/N)	Seessment Manual)
	IVE DESCRIPTION	OF STREAM RE	ACH (This <u>must</u> b	e completed):
Include important landmarks and oth	er features of interest for	site evaluation and	a narrative description	of the stream's locatio
hh0 hh0	7 mow			La anvila
	\ lawn			scrub shrub
$\langle \rangle$	$\mathbf{h}$			ROW
$\langle \rangle$	old field			
│	1e			
$\langle \langle \rangle \rangle$	$\rightarrow$			
`\`\		orm Page - 2		
•				
October 24, 2002 Revision		-	Save as pdf	Reset Form

, P

Stream 65 Modified Class	1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form 20	٦ -
HHEI Score (sum of metrics 1, 2, 3):	
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121317-08 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.34113 LONG84.02970 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	RY
MODIFICATIONS: channelized	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	IHEI etric
BLDR SLABS [16 pts] 0% SILT [3 pt] 40%	oints
BOULDER (>256 mm) [16 pts]         0%         I         LEAF PACK/WOODY DEBRIS [3 pts]         45%           BEDROCK [16 pt]         0%         I         FINE DETRITUS [3 pts]         0%         Su	bstrate
COBBLE (65-256 mm) [12 pts]	ax = 40
GRAVEL (2-64 mm) [9 pts]     5%     MUCK [0 pts]     0%       SAND (<2 mm) [6 pts]	10
Bldr Slabs, Boulder, Cobble, Bedrock	+ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	ol Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       Ma         > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	ax = 30
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
	5
	ankfull Vidth
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts]	ax=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	_
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial)  COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	

DOWNSTREAM DESIGNATED USE(S		(II Yes, Al	ach Completed QH	El Form)	
	6)		_		
WWH Name:				Evaluated Stream	
CWH Name:			_	valuated Stream valuated Stream	
			-		
MAPPING: ATTACH COPIES OF MAPS	S, INCLUDING THE				
USGS Quadrangle Name:		NRCS Soil Map	Page: NR	CS Soil Map Stream Orde	r
County: Warren	Tow	nship / City:			
MISCELLANEOUS					
Base Flow Conditions? (Y/N):Y Date of la	ast precipitation:	12/12/17	Quantity:		
Photograph Information:					
Elevated Turbidity? (Y/N): Canop	y (% open):90	)%			
Were samples collected for water chemistry? (Y/I		ab sample no. or id.	and attach results)	Lab Number:	
		· ·			
		pH (S.U.)	Conductiv	rity (µmhos/cm)	
Is the sampling reach representative of the stream	m (Y/N) If no	ot, please explain:			
Additional comments/description of pollution impa	acts.				
Fish Observed? (Y/N)	e appropriate field da	ata sheets from the P Observed? (Y/N)	rimary Headwater Ha		with 1
		iatic Macroinvertebr	ales Observed? (1/		
	N N	atic Macroinvertebr	ales Observed? (1/	N	
	<b>N</b>	latic Macroinvertebr			
	<b>N</b> rec	latic Macroinvertebr			
		latic Macroinvertebr			
Comments Regarding Biology:	E DESCRIPTIO	N OF STREAM	REACH (This <u>n</u>	nust be completed):	
Comments Regarding Biology:	E DESCRIPTIO	N OF STREAM	REACH (This <u>n</u>	nust be completed):	
Comments Regarding Biology:	E DESCRIPTIO	N OF STREAM	REACH (This <u>n</u>	nust be completed):	
Comments Regarding Biology:	E DESCRIPTIO	N OF STREAM for site evaluation a	REACH (This <u>n</u>	nust be completed): cription of the stream's lo	
Comments Regarding Biology:	E DESCRIPTIO	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology:	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology:	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology:	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology:	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology:	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology: DRAWING AND NARRATIVE Include important landmarks and other fe FLOW Scrub sh	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	
Comments Regarding Biology: DRAWING AND NARRATIVE Include important landmarks and other fe FLOW Scrub sh	E DESCRIPTIO eatures of interest f reside mowe	N OF STREAM for site evaluation a	REACH (This <u>n</u> nd a narrative desc	nust be completed): cription of the stream's lo	

ī

Stream 66 Modified Clas	ss 2
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 3	•
HHEI Score (sum of metrics 1, 2, 3) :	D
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121317-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.34323 LONG84.03311 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	/ERY
MODIFICATIONS: culvert	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 25%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         15%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 15% CLAY or HARDPAN [0 pt] 5%	Max = 40
GRAVEL (2-64 mm) [9 pts]     25%     MUCK [0 pts]     0%       SAND (-2 mm) [6 pts]     15%     ARTIFICIAL [3 pts]     0%	18
Total of Percentages of 15.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of F	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):          > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
$ = > 4.0 \text{ meters } (> 13') [30 \text{ pts}] $ $ > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] $ $ > 1.0 \text{ m} - 1.5 \text{ m} (> 3' 3" - 4' 8") [15 \text{ pts}] $ $ \le 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] $	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY · · · 차NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Image: State of the state of th	
None     Image: Residential, Park, New Field     Image: Residential, Park, New Field       Image: None     Image: Residential, Park, New Field     Image: Residential, Park, New Field	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u> :	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	it)

	No QHEI Score (If Yes, Attach Completed QHI	El Form)
DOWNSTREAM DESIGNATED U	SE(S)	
		valuated Stream
		valuated Stream
EWH Name:	Distance from Ev	
	APS, INCLUDING THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY	
USGS Quadrangle Name:	NRCS Soil Map Page: NRC	S Soil Map Stream Order
County: _ Warren	Township / City:	
MISCELLANEOUS		
Base Flow Conditions? (Y/N):_Y Date	of last precipitation: 12/12/17 Quantity:	
Photograph Information:		
Elevated Turbidity? (Y/N): N	nopy (% open): <b>95%</b>	
Were samples collected for water chemistry		Lab Number:
		ty (µmhos/cm)
	Y	
Is the sampling reach representative of the s	ream (Y/N) If not, please explain:	
<u> </u>		
Additional comments/description of pollution	impacts:	
. ,	d all observations. Voucher collections optional. NOTE: all vouche	
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) N Voucher? (Y	clude appropriate field data sheets from the Primary Headwater Ha	bitat Assessment Manual)
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N	bitat Assessment Manual)
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N	bitat Assessment Manual)
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology:	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Sucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N)	bitat Assessment Manual) N Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology:	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N	bitat Assessment Manual) N Voucher? (Y/N) ust be completed):
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology:	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merical short of the strength of the	bitat Assessment Manual) N Voucher? (Y/N) ust be completed):
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: DRAWING AND NARRA WOODED It landmarks and oth	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Ducher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N N Aquatic Macroinvertebrates Observed? (Y/N)	bitat Assessment Manual) N Voucher? (Y/N) ust be completed):
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology:	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merite description and a narrative description and a narrative description and a narrative description of the statement	bitat Assessment Manual) N Voucher? (Y/N) ust be completed):
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: DRAWING AND NARRA WOODED It landmarks and oth	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merite description and a narrative description and a narrative description and a narrative description of the statement	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: DRAWING AND NARRA WOODED It landmarks and oth	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merite description and a narrative description and a narrative description and a narrative description of the statement	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: Comments Regarding Biology: DRAWING AND NARRA WOODed It landmarks and oth hh03	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merite description and a narrative description and a narrative description and a narrative description of the statement	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: Comments Regarding Biology: DRAWING AND NARRA WOODed It landmarks and oth hh03	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merite description and a narrative description and a narrative description and a narrative description of the statement	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: Comments Regarding Biology: DRAWING AND NARRA WOODed It landmarks and oth hh03	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merite description of site evaluation and a narrative description of site evaluation and a narrative description of the sidential mowed lawn drive way	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: Comments Regarding Biology: DRAWING AND NARRA WOODed It landmarks and oth hh03	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merical for site evaluation and a narrative desc residential mowed lawn	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S
Performed? (Y/N): N (If Yes, Reco ID number. I Fish Observed? (Y/N) Voucher? (Y Frogs or Tadpoles Observed? (Y/N) V Comments Regarding Biology: Comments Regarding Biology: DRAWING AND NARRA WOODed It landmarks and oth hh03	clude appropriate field data sheets from the Primary Headwater Ha N) N Salamanders Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) TIVE DESCRIPTION OF STREAM REACH (This merefeatur wetland of residential mowed lawn drive way existing T Line	bitat Assessment Manual) N Voucher? (Y/N) U U U U S S S S S S S S S S S S S

Ľ

Stream 67 Modified Class	s 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 28	2
HHEI Score (sum of metrics 1, 2, 3) :	<u>'</u>
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121317-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.34736 LONG84.03953 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERD	ERY
Guivert	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 20%	
	ubstrate /lax = 40
COBBLE (65-256 mm) [12 pts]       10%       CLAY or HARDPAN [0 pt]       5%         GRAVEL (2-64 mm) [9 pts]       20%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	18
Total of Percentages of 10.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Check Check TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Po	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	/lax = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank)       L R (Most Predominant per Bank)       L R         Wide >10m       Mature Forest, Wetland       Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
V Narrow <5m V Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate (2 ft/100 ft) Severe (10 ft/100 ft)	,

ADDITIONAL STREAM INFORMATION (This Information I	Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI So	core (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
	IG THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: _	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipite	ation: 12/12/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open):	95%
Were samples collected for water chemistry? (Y/N): N	_ (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (r	ng/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriat	s. Voucher collections optional. NOTE: all voucher samples must be labeled with the site e field data sheets from the Primary Headwater Habitat Assessment Manual) nanders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
	IPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of in CUIVert	nterest for site evaluation and a narrative description of the stream's location
hh05	mowed path
FLOW	
existing T Line hh05	scrub-shrub ROW
October 24, 2002 Revision	wooded Je - 2 Save as pdf Reset Form

I

Stream 68 Modified C	lass 2
<b>OhioEPA</b> Primary Headwater Habitat Evaluation Form	69
HHEI Score (sum of metrics 1, 2, 3) :	
AEP Hillsboro-Hutchings         hh-jbl-121317-06       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT.       39.34798       LONG.       -84.04114       RIVER CODE       RIVER MILE         DATE       12/13/17       SCORER       jbl, jtt       COMMENTS       perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC MODIFICATIONS: culvert at road, streambank mod	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       PERCENT         BLDR SLABS [16 pts]       0%         BOULDER (>256 mm) [16 pts]       0%	Metric Points
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         30%         CLAY or HARDPAN [0 pt]         5%	Substrate Max = 40
GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	24
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock       30.00%       (A)       Substrate Percentage       95%       (B)         SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       18       TOTAL NUMBER OF SUBSTRATE TYPES:       6	A + B
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):          > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
Image: Second	25
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \le 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] $ = 1.5  m - 3.0  m (> 9' 7" - 4' 8") [20  pts]	Widx=50
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 8.50	20
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cr	ор
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS	)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 0.5 $1.0$ $2.0$ $3.02.5$ $3.0$ $>3$	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)       Flat to Moderate         Moderate (2 ft/100 ft)       Moderate to Severe	00 ft)

	Yes 🗸 No QHEI Score 🔄	(If Yes, Attac	h Completed QHEI Form)	
DOWNSTREAM DESIGN	ATED USE(S)			
			Distance from Evaluated S	
CWH Name:			Distance from Evaluated S Distance from Evaluated S	
MAPPING: ATTACH COPI	ES OF MAPS, INCLUDING THE	ENTIRE WATERSHED	AREA. CLEARLY MARK TH	E SITE LOCATION
USGS Quadrangle Name:		NRCS Soil Map Pa	ge: NRCS Soil Ma	p Stream Order
County: Warren	Том	vnship / City:		
MISCELLANEOUS				
Base Flow Conditions? (Y/N):Y	_ Date of last precipitation:_	12/12/17	Quantity:	_
Photograph Information:				
Elevated Turbidity? (Y/N):	_ Canopy (% open): <b>9</b>	0%		
· · · ·	N	ł		
Were samples collected for water ch			nd attach results) Lab Numb	
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmhos	
Is the sampling reach representative	of the stream (Y/N)	ot, please explain:		
Additional comments/description of p	ollution impacts:			
ID nu	s, Record all observations. Vouc mber. Include appropriate field d her? (Y/N) N Salamanders N Voucher? (Y/N) N Aq		hary Headwater Habitat Asses	
	ARRATIVE DESCRIPTIO		ACH (This must be	o mp lotod);
hh05	and other feitures of interest SCrub-Shrub	$\sim \epsilon$	existing T Line	
	ROW		0	/
ert		— /	/	
	V			wooded
hh0	6		/	
FLOW		mowed		
		/		
	$\sim$ 7		/ /	
	$\checkmark$			
			-	
		$h = h m h = D \cap M$	- I	
		ub-shrub ROW		
	/	H Form Page - 2		

T

Stream 69 Modified Class 1	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 21	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121317-07 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.34851 LONG84.04221 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	IS
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	ŕ
MODIFICATIONS: culvert	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	IEI
TYPE PERCENT TYPE PERCENT Me	tric
BLDR SLABS [16 pts]         0%         Image: Silt [3 pt]         35%         POI           BOULDER (>256 mm) [16 pts]         0%         Image: Silt [3 pt]         35%         Image: Silt [3 pt]         35%	ints
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0% Subs	strate = 40
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	= 40
GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	1
Total of Percentages of <b>Food</b> (A) Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	в
	Depth = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 22.5 - 30 cm [30 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5	;
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Ban	kfull
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Wide	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ✓       ≤ 1.0 m (<=3' 3") [5 pts]	.=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 5	
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field Open Pasture Row Crop	
Narrow <5m	
COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100 ft)	

	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE V	VATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS	S Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / C	ity:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:12/1	2/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 50%	
Were samples collected for water chemistry? (Y/N): (Note lab samp	le no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Y	explain:
	explain
Additional comments/description of pollution impacts:	
	tions optional. NOTE: all voucher samples must be labeled with s from the Primary Headwater Habitat Assessment Manual)
Performed? (Y/N):       (If Yes, Record all observations. Voucher collection         ID number.       Include appropriate field data sheets         Fish Observed? (Y/N)       N         Salamanders Observed       Salamanders Observed	s from the Primary Headwater Habitat Assessment Manual)
Performed? (Y/N):       (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets         Fish Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed?       Voucher? (Y/N)         N       Voucher? (Y/N)         N       Voucher? (Y/N)         N       Aquatic Mac	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology:	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S	TREAM REACH (This <u>must</u> be completed):
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology:	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N) N TREAM REACH (This <u>must</u> be completed): valuation and a narrative description of the stream's locati
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S Include important Inndmarks and other features of interest for site e	TREAM REACH (This <u>must</u> be completed):
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S Include important Inndmarks and other features of interest for site e Pasture ROW	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N) N TREAM REACH (This <u>must</u> be completed): valuation and a narrative description of the stream's locati
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S Include important Inndmarks and other features of interest for site e	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N) N TREAM REACH (This <u>must</u> be completed): valuation and a narrative description of the stream's locati
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S Include important Inndmarks and other features of interest for site e pasture ROW	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N) N TREAM REACH (This <u>must</u> be completed): valuation and a narrative description of the stream's locati
Performed? (Y/N): (If Yes, Record all observations. Voucher collec ID number. Include appropriate field data sheets Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observe Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Mac Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S Include important landmarks and other features of interest for site pasture ROW FLOW	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N) N TREAM REACH (This <u>must</u> be completed): valuation and a narrative description of the stream's locati

ave as por

I

Stream 70	Modif	fied Class 1	
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3): 22			
DATE 12/13/17 SCORER jbl, jtt NOTE: Complete All Items On This Form - Ref	RIVER BASIN DRAINAGE AREA (n 39.35200 LONG84.04713 RIVER CODE RIVER M COMMENTS Ephemeral fer to "Field Evaluation Manual for Ohio's PHWH Streams" for CHANNEL RECOVERED RECOVERING RECENT OR NO	ILE	
	of substrate present. Check ONLY two predominant substrate TYPE bo	xes	
(Max of 32). Add total number of significant substraint         TYPE         BLDR SLABS [16 pts]         BOULDER (>256 mm) [16 pts]         BEDROCK [16 pt]         COBBLE (65-256 mm) [12 pts]         GRAVEL (2-64 mm) [9 pts]         SAND (<2 mm) [6 pts]	IT       TYPE       PERCENT         I       SILT [3 pt]       30%         I       I       LEAF PACK/WOODY DEBRIS [3 pts]       40%         I       FINE DETRITUS [3 pts]       0%         I       CLAY or HARDPAN [0 pt]       5%         MUCK [0 pts]       0%       15%	HHEI Metric Points Substrate Max = 40	
Total of Percentages of <b>0.00%</b> Bldr Slabs, Boulder, Cobble, Bedrock	(A) Substrate Percentage (B) Check	A + B	
SCORE OF TWO MOST PREDOMINATE SUBSTRATE	TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 6		
	m pool depth within the 61 meter (200 ft) evaluation reach at the time of rts or storm water pipes)       (Check ONLY one box):         > 5 cm - 10 cm [15 pts]       < 5 cm [5 pts]	Pool Depth Max = 30	
COMMENTS	MAXIMUM POOL DEPTH (Inches): 1.	.00	
3. BANK FULL WIDTH (Measured as the averag > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	ge of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30	
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 2.	.50 5	
RIPARIAN ZONE AND FLOODPLAIN OF RIPARIAN WIDTH         RIPARIAN WIDTH       FLO         Wide >10m       L         Moderate 5-10m       I         Narrow <5m	OODPLAIN QUALITY         R       (Most Predominant per Bank)       L         R       Mature Forest, Wetland       Conservation Tills         Immature Forest, Wetland       Immature Forest, Shrub or Old       Urban or Industria         Field       Open Pasture, Ro         Fenced Pasture       Mining or Constru         (Check ONLY one box):       Moist Channel, isolated pools, no flow (Interm	age al ow Crop uction	
	n (200 ft) of channel) (Check <i>ONLY</i> one box): 2.0 2.5 3.0 >3		
STREAM GRADIENT ESTIMATE	Moderate (2 ft/100 ft) Moderate to Severe	e (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name:          Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation:12/12/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): _N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESC wooded TREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of valuation and a narrative description of the stream's location
Scrub-
shrub
ROW hh02
huge trash
FLOW hh01 pile
A Scrub-shrub ROW
existing T Line
wooded
PHWH Form Page - 2
October 24, 2002 Revision     Save as pdf     Reset Form

Γ.

Stream 71 Class 2	
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	4
HHEI Score (sum of metrics 1, 2, 3) :	81
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121317-03 DRAINAGE AREA (mi <sup>2</sup> )	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.35193 LONG84.04780 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru-	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         15%	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 40%	
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         30%         CLAY or HARDPAN [0 pt]         5%	Substrate Max = 40
GRAVEL (2-64 mm) [9 pts]     5%     MUCK [0 pts]     0%	24
SAND (<2 mm) [6 pts]         5%         ARTIFICIAL [3 pts]         0%	21
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 30.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):          > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]      < 5 cm [5 pts]	E
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ = 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [$	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         RIPARIAN WIDTH       FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Field     Open Pasture, Row Crop       Narrow <5m	)
None     Fenced Pasture     Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Subsurface flow with isolated pools (Interstitial)  Subsurface flow with isolated pools (Interstitial)  Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
$\boxed{ 0.5 } 1.5  \boxed{ 2.5 } 3$	
STREAM GRADIENT ESTIMATE	) ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name:       Distance from Evaluated Stream         EWH Name:       Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
Warren
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation:12/12/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
hh03 wooded hh02
FLOW wooded steep
existing T Line Scrub- shrub Scrub-shrub ROW
October 24, 2002 Revision PHWH Form Page - 2 Save as pdf · Reset Form

Γ.

Stream 72 Class 2	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 67	,
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121317-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.35215 LONG84.04779 RIVER CODE RIVER MILE	
DATE 12/13/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS: former earthwork??	ERY
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	Metric Points
BOULDER (>256 mm) [16 pts]	ubstrate
BEDRUCK 116 pt 20% FINE DETRITUS 13 pts 070	Aax = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	22
SAND (<2 mm) [6 pts]         5%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 50.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 7	
	ool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	/lax = 30
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 7.00	23
	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
$ \begin{array}{ c c c c c } &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ \hline &\checkmark \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \end{array} $	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 9.00	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORM	IATION (This Information Mus	t Also be Completed):		
QHEI PERFORMED?	- Yes 🗸 No QHEI Score	(If Yes, Attac	ch Completed QHEI Form)	
DOWNSTREAM DESI	GNATED USE(S)			
WWH Name:			_ Distance from Evaluated Stream	
			Distance from Evaluated Stream	
EWH Name:			Distance from Evaluated Stream	
MAPPING: ATTACH C	OPIES OF MAPS, INCLUDING T	HE <u>ENTIRE</u> WATERSHED	AREA. CLEARLY MARK THE SITE LOO	ATION
USGS Quadrangle Name:		NRCS Soil Map Pa	age: NRCS Soil Map Stream C	vrder
County: Warren		Township / City:		
MISCELLANEOUS				
Base Flow Conditions? (Y/N):_	Date of last precipitation	12/12/17	Quantity:	
Photograph Information:	7			
Elevated Turbidity? (Y/N):	Canopy (% open):	90%		
Were samples collected for wate	r chemistry? (Y/N): _ N	ote lab sample no. or id. a	nd attach results) Lab Number:	
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling reach representa	tive of the stream (Y/N)	If not, please explain:		
Additional comments/description	of pollution impacts:			
	D number. Include appropriate fiel /ou <u>cher? (Y/N) N</u> Salamand		NOTE: all voucher samples must be labe nary Headwater Habitat Assessment Manu Voucher? (Y/N) N es Observed? (Y/N) N Voucher? (Y/	ual)
			/	
DRAWING AND	NARRATIVE DESCRIPT	ION OF STREAM R	EACH (This <u>must</u> be complete	d):
Include important landma	rks and other features of intere	est of site evaluation and	Anarrative description of the store	location
wooded	existing T Line		hh03	94
FLOW hh02				wooded
Q Q	steep	Scrub- shrub	797	$\searrow$
	Pŀ	IWH Form Page - 2		
October 24, 2002 Revision			Save as pdf Reset F	orm

Stream 73 Modified Class 2	2	
ChieEPA Primary Headwater Habitat Evaluation Form 30		
HHEI Score (sum of metrics 1, 2, 3) :		
SITE NAME/LOCATION       AEP Hillsboro-Hutchings         hh-jbl-121217-05       SITE NUMBER       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT.       39.35749       LONG.       -84.05703       RIVER CODE       RIVER MILE         DATE       12/12/17       SCORER       jbl, jtt       COMMENTS       intermittent		
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ns	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER'S MODIFICATIONS: Channelized	Y	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI	
TYPE       PERCENT       TYPE       PERCENT       SILT [3 pt]       35%         BLDR SLABS [16 pts]       0%       I       ILEAF PACK/WOODY DEBRIS [3 pts]       40%       0%         BEDROCK [16 pt]       0%       I       FINE DETRITUS [3 pts]       0%       0%       Max         COBBLE (65-256 mm) [12 pts]       0%       I       CLAY or HARDPAN [0 pt]       0%       Image: Clay of the state in	etric pints ostrate x = 40	
GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	0	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	+ B	
	Dawth	
	I Depth x = 30	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5	
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00		
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Wi	nkfull idth x=30	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5	
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       \$NOTE: River Left (L) and Right (R) as looking downstream         RIPARIAN WIDTH       FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream         L       R       (Per Bank)       L       R         Wide >10m       Image       Mature Forest, Wetland       Image       Conservation Tillage         Image       Image       Image       Image       Urban or Industrial		
Narrow <5m		
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS		
SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       3.0		
STREAM GRADIENT ESTIMATE Flat (0.5 fr/100 ft) Flat to Moderate I Moderate (2 fr/100 ft) Moderate to Severe Severe (10 fr/100 ft)		

ADDITIONAL STREAM INFORMATION (This Information	Must Also be Completed):		
QHEI PERFORMED? - Yes 🖌 No QHEI S	core (If Yes, Att	ach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)			
WWH Name:		_ Distance from Evaluated Str	eam
CWH Name:		Distance from Evaluated Stre	eam
EWH Name:		Distance from Evaluated Stre	eam
MAPPING: ATTACH COPIES OF MAPS, INCLUDI	NG THE <u>ENTIRE</u> WATERSHE	DAREA. CLEARLY MARK THE	
USGS Quadrangle Name:	NRCS Soil Map	Page: NRCS Soil Map	Stream Order
County: Warren	Township / City:		
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Date of last precipit	ation: 12/12/17	Quantity:	
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open)	100%		
Were samples collected for water chemistry? (Y/N):	_ (Note lab sample no. or id.	and attach results) Lab Number	:
		Conductivity (µmhos/ci	m)
Is the sampling reach representative of the stream $(Y/N)$	If not, please explain:		
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION			
. ,		al. NOTE: all voucher samples mu	
	N	rimary Headwater Habitat Assessm	nent Manual)
Fish Observed? (Y/N)NVoucher? (Y/N)NSalarFrogs or Tadpoles Observed? (Y/N)NVoucher? (Y/N)Voucher? (Y/N)	manders Observed? (Y/N)	Voucher? (Y/N)	cher? (Y/N)
Comments Regarding Biology:			
		DEACUL (This must be as	ma loto d):
DRAWING AND NARRATIVE DESCR			1
Include important landmarks and other features of i		nd a narrative description of th	e stream's location
wooded	shrub		
scrub shrub	ROW		
FLOW			wooded
		Teih /	
hh05 7		chann-1	
11105	Scrub-	Cilcultural	
existing T Line	shrub	1	
	ROW		
October 24, 2002, Bovision	PHWH Form Page - 2		
October 24, 2002 Revision		Save as pdf Save A	eset Form

Stream 75 Modified Class	; <b>1</b>		
ChieEPA Primary Headwater Habitat Evaluation Form 18			
HHEI Score (sum of metrics 1, 2, 3) :			
SITE NAME/LOCATION       AEP Hillsboro-Hutchings         hh-jbl-121117-10       SITE NUMBER       RIVER BASIN         LENGTH OF STREAM REACH (ft)       200       LAT.         JATE       12/11/17       SCORER       jbl, jtt         COMMENTS       ephemeral			
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ons		
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS:	RY		
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes			
TYPE       PERCENT       TYPE       PERCENT       SILT [3 pt]       PERCENT       SILT [3 pt]         BLDR SLABS [16 pts]       0%       Image: Silt [3 pt]       Image: Silt	HHEI letric oints ubstrate ax = 40		
GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	13		
Tatal of Deventages of (A)	A + B		
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool	ol Depth		
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	ax = 30		
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]			
> 10 - 22.5 cm [25 pts]         ✓         NO WATER OR MOIST CHANNEL [0 pts]	0		
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.00			
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	ankfull Width lax=30		
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5		
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream if         RIPARIAN WIDTH       FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream if         L       R       (Per Bank)       L       R         V       Vide >10m       L       R       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       V       Immature Forest, Shrub or Old       Urban or Industrial         Narrow <5m			
None     Fenced Pasture     Mining or Construction       COMMENTS			
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS			
SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       3.0			
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100 ft)			

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed)	_
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, A	Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Mag	o Page: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	_
Base Flow Conditions? (Y/N):Y Date of last precipitation:12/09/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):100%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id	d. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:_	
Additional comments/description of pollution impacts:	
ID number.     Include appropriate field data sheets from the       Fish Observed? (Y/N)     N       Salamanders Observed? (Y/N)	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM Include important landmarks and other features of interest for site evaluation existing T Line Old field ROW	
hh10 row crop	wooded
October 24, 2002 Revision	Save as pdf Reset Form

Stream 76 Modified Class 2	
ChieFPA Primary Headwater Habitat Evaluation Form 40	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-jbl-121117-12SITE NUMBERRIVER BASINDRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT. 39.36531 LONG84.07917 RIVER CODE RIVER MILE	_
DATE 12/11/17 SCORER JTT, JBL COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	S
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: Channelized	′
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	
TYPE     PERCENT     TYPE     PERCENT     Met       BLDR SLABS [16 pts]     0%     I     SILT [3 pt]     40%	
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 45%	
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         Subs           COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         10%	
GRAV/EL (2-64 mm) [9 pts]     0%     MLICK [0 pts]     0%	
SAND (<2 mm) [6 pts]	<u> </u>
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A +	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool I	Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max           > 30 centimeters [20 pts]         > 5 cm - 10 cm [15 pts]	= 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
Image: Second	
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):         Bank           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         Wid	kfull dth
= 3.0  m - 4.0  m (>9' 7" - 13') [25  pts] $ = 3.0  m (>9' 7" - 4' 8") [20  pts] $ $ = 3.0  m (<=3' 3") [5  pts] $ $ = 3.0  m (>9' 7" - 4' 8") [20  pts]$	=30
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial	
Image: A start of the start	
None     Fenced Pasture     Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Pa	age: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. a	ind attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Print Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrate Comments Regarding Biology:	mary Headwater Habitat Assessment Manual)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM R	EACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and	d a narrative description of the stream's location
wooded	
	wooded
residential <b>Q</b> Id Field ROW	
FLOW	
	PERI
TLines	
	F FD
	× w.4
PHWH Form Page - 2	
October 24, 2002 Revision	Save as pdf Reset Form

Stream 77 Modified Class	<b>; 1</b>
ChieFPA Primary Headwater Habitat Evaluation Form 21	٦
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-jbl-121117-11SITE NUMBERRIVER BASINDRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.36562 LONG84.08007 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER JTT, JBL COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE MODIFICATIONS: driven through	RY
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	IHEI
	letric oints
BOULDER (>256 mm) [16 pts]	ubstrate
III BEDROCK 116 pt 0% III EINE DETRUUS 13 pts 0%	ax = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	11
SAND (<2 mm) [6 pts]         5%         ARTIFICIAL [3 pts]         0%	· · ·
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
	ol Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): M > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	ax = 30
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	3
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	ankfull Width
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 1.0 \text{ m} (<=3' 3") [$	lax=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY SNOTE: River Left (L) and Right (R) as looking downstream Stream Strea	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Field     Open Pasture, Row Crop       Narrow <5m	
None  Fenced Pasture	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
✓     0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Index Moderate (2 ft/100 ft) Moderate to Severe Index (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complet	<u>ed):</u>
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes	s, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATER	RSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil	Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no.	or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.	U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please expla	in:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data sheets from         Fish Observed? (Y/N)         N         Voucher? (Y/N)         N         Salamanders Observed? (Y/N)	
DRAWING AND NARRATIVE DESCRIPTION OF STREA Include important landmarks and other features of interest for site evaluat wooded residential FLOW flow hh(l) hh(l) TLines	ion and a narrative description of the stream's location
PHWH Form Page - October 24, 2002 Revision	
	Save as pdf Reset Form

Stream 78	Modified Class 1
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Fo	
HHEI Score (sum of met	rics 1, 2, 3)
SITE NAME/LOCATION       AEP Hillsboro-Hutchings         hh-jbl-121217-01       SITE NUMBER       RIVER BASIN       DRA         LENGTH OF STREAM REACH (ft)       200       LAT.       39.36772       LONG.       -84.08627       RIVER CODE         DATE       12/12/17       SCORER       jbl, jtt       COMMENTS       ephemeral	AINAGE AREA (mi²)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH	I Streams" for Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING MODIFICATIONS: Culvert	RECENT OR NO RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant su	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of type         TYPE       PERCENT       TYPE         BLDR SLABS [16 pts]       0%       ✓       SILT [3 pt]         BOULDER (>256 mm) [16 pts]       0%       ✓       LEAF PACK/WOODY DEBRIS [3 pts]         BEDROCK [16 pt]       0%       ✓       CLAY or HARDPAN [0 pt]         GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]         ARTIFICIAL [3 pts]       ARTIFICIAL [3 pts]	PERCENT Metric 30% Points
Total of Percentages of <b>5.00%</b> (A) Substrate Percentage <b>100%</b>	(B) A + B
Bldr Slabs, Boulder, Cobble, Bedrock	
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation real and advantage and advantage in a constraint of the second	· · · ·
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL	[0 pts] 5
COMMENTS MAXIMUM POOL DEPTH	(Inches): <b>1.00</b>
3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one bo	ox): Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pt ≤ 1.0 m (<=3' 3") [5 pts]	s] Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WID	TH (Feet): 1.50 5
Moderate 5-10m       Immature Forest, Shrub or Old         Immature Forest, Shrub or Old         Field         Narrow <5m	oking downstream☆ Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction
	L
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 0.5 1.5 2.5	3.0 >3
STREAM GRADIENT ESTIMATE	Severe (10 ft/100 ft)

County:       Warren       Township / City:         MISCELLANEOUS       Sales Flow Conditions? (YN):       V         Photograph Information:	QHEI PERFORMED? -	Yes 🗸 No QHEI Score	(If Yes, Attach Comp	bleted QHEI Form)	
Distance from Evaluated Stream         Distance from Evaluations         Protocore         Biotic Evaluation         Distance from Evaluation <th>DOWNSTREAM DESIGN</th> <th>ATED USE(S)</th> <th></th> <th></th> <th></th>	DOWNSTREAM DESIGN	ATED USE(S)			
EWH Name:       Distance from Evaluated Stream         MAPPING: ATTACK COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION         JSGS Quadrangle Name:       NRCS Soil Map Page:       NRCS Soil Map Stream Order			Distar	nce from Evaluated Stre	am
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTITE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION         USGS Quadrangle Name:       NRCS Soll Map Page         USGS Quadrangle Name:       NRCS Soll Map Page         County:       Warren         Township / City:       MISCELLANEOUS         Base Flow Conditions? (Y/N):       Date of last precipitation:       12/12/17       Quantity:         Photograph Information:       N       Canopy (% open):       80%         Were samples collected for water chemistry? (Y/N):       N       (Note lab sample no. or id. and attach results) Lab Number;         Field Measures:       Temp (*C)       Dissolved Oxygen (mg/l)       pH (S,U.)       Conductivity (umhos/cm)         Is the sampling reach representative of the stream (Y/N)       Y       If not, please explain:       If not, please explain:         Additional comments/description of pollution impacts:       ID number;       ID number;       ID number;         Performed?       (Y/N)       N       Satemanders Observed? (Y/N)       Voucher? (Y/N)       N         Comments Regarding Biology:       ID number;       ID number;       FSTREAM REACH (This must be completed):         To due important lamdmarka and other feature       Wooded       FSTREAM REACH (This must be completed):         To due important lamdmarka and other feature       Mowded					
USGS Quadrangle Name: NRCS Soil Map Page NRCS Soil Map Stream Order County: Warren Township / City. MISCELLANEOUS Base Flow Conditions? (r/N): Date of last precipitation: 12/12/17 Quantity. Photograph Information: A Canopy (% open): 80% Were samples collected for water chemistry? (r/N): N (Note lab sample no. or id. and attach results) Lab Number. Field Measures: Temp (*C) Dissolved Oxygen (mg/l) Is the sampling reach representative of the stream (r/N) Y If not, please explain: BIOTIC EVALUATION Performed? (r/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all vouchers amples must be labeled with Performed? (r/N) N (UYes, Record all observations. Voucher collections optional. NOTE: all vouchers amples must be labeled with Performed? (r/N) N voucher? (r/N) N voucher? (r/N) N voucher? (r/N) N voucher? (r/N) N Figh Observed? (r/N) N voucher? (r/N) N voucher? (r/N) N voucher? (r/N) N Comments / Berger (r/N) N voucher? (r/N) N voucher? (r/N) N Figh Observed? (r/N) N voucher? (r/N) N voucher? (r/N) N Figh Observed? (r/N) N voucher? (r/N) N voucher? (r/N) N Comments Regarding Biology: Figh Observed? (r/N) N voucher? (r/N) N voucher? (r/N) N Comments Regarding Biology: Figh Observed? (r/N) N voucher? (r/N) N Comments Regarding Biology: Figh Observed? (r/N) N voucher? (r/N) N Salamanders Observed? (r/N) N Salamanders Observed? (r/N) N Voucher? (r/N) N Comments Regarding Biology: Figh Observed? (r/N) N Salamanders Obser	EWH Name:		Distan	ce from Evaluated Strea	am
County: Warren Township / City: MISCELLANEOUS Base Flow Conditions? (Y/N): V Date of last precipitation: 12/12/17 Quantity:	MAPPING: ATTACH COP	ES OF MAPS, INCLUDING THE ENTIRE	ATERSHED AREA.	CLEARLY MARK THE S	
Doubley       Township / Cuty         MISCELLANEOUS         Base Flow Conditions? (Y/N):       Date of last precipitation:         Photograph Information:       Elevated Turbidity? (Y/N):         Nere samples collected for water chemistry? (Y/N):       N (Note lab sample no. or id. and attach results) Lab Number:         Field Measures:       Temp (*C)         Dissolved Oxygen (mg/h)       P (SU)         Conductivity (umhos/om)       Is the sampling reach representative of the stream (Y/N)         Is the sampling reach representative of the stream (Y/N)       If not, please explain:         Additional comments/description of pollution impacts:       In outple:         BIOTIC EVALUATION       Salamanders Observed? (Y/N)       N cutcher? (Y/N)         Performed? (Y/N):       N       Voucher? (Y/N)       N cutcher? (Y/N)         Progs or Tadpoles Observed? (Y/N)       N salamanders Observed? (Y/N)       N voucher? (Y/N)       N cutcher? (Y/N)         Field Measure:       Science of the stream takes       Description of the stream takes         October 24, 2022 Revision       Science of the stream takes       Description of the stream takes         Performed? (Y/N):       N       Voucher? (Y/N):       N cutcher? (Y/N):       N cutcher? (Y/N):         Comments Regarding Biology:       Science of the stream takes       Description of the st	USGS Quadrangle Name:	NRCS	Soil Map Page:	NRCS Soil Map S	tream Order
Base Flow Conditions? (Y/N): V Date of last precipitation: 12/12/17 Quantity: Photograph Information: Elevated Turbidity? (Y/N): Canopy (% open): 80% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (*C) Dissolved Oxyger (mg/l) PH (S.U) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) If not, please explain: Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with Performed? (Y/N) N voucher? (Y/N) N salamanders Observed? (Y/N) N voucher? (Y/N)	County: Warren	_ Township / Ci	ty:		
Photograph Information: Photo	MISCELLANEOUS				
Protograph Information: Elevated Tutbidity? (Y/N): N Canopy (% open): 80% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (°C) Dissolved Oxygen (mol) pH (S.U.) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) Y If not, please explain: Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (Y/N) N (Utes, Record all observations. Voucher collections optional. NOTE: all voucher's samples must be labeled with ID number: Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual Fish Observed? (Y/N) N Voucher? (Y/N) N salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N Comments Regarding Biology: DRAWING AND NARRATIVE DE wooded F STREAM REACH (This must be completed): the evaluation and a narrative description of the stream's loca existing T Line Moved grass PLOW Moved M Form Page -2 Deteker 24, 2002 Revision	Base Flow Conditions? (Y/N):	Date of last precipitation: 12/12	<b>2/17</b> Qua	antity:	
Elevated Turbidity? (V/N): N Canopy (% open): 80% Were samples collected for water chemistry? (V/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (*C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm) is the sampling reach representative of the stream (Y/N) T if not, please explain:  Additional comments/description of pollution impacts:  BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with ID number: Include appropriate field data sheets from the Primary Headwater Habital Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)				· · · · · · · · · · · · · · · · · · ·	
Vere samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (*C) Dissolved Oxygen (mg/) PH (S.U.) Conductivity (µmhos/cm) is the sampling reach representative of the stream (Y/N) If not, please explain:  BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with Doumber. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) Voucher? (Y/N) Comments Regarding Biology:  DRAWING AND NARRATIVE DE Comments Regarding Biol	N	80%			
Field Measures:       Temp (*C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)         Is the sampling reach representative of the stream (Y/N)       Y       If not, please explain:	Elevated Turbidity? (Y/N):				
Is the sampling reach representative of the stream (Y/N) If not, please explain: Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (Y/N) (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) (N) Voucher? (Y/N) (N) Salamanders Observed? (Y/N) (N) Voucher? (Y/N) (N) Vouc	Were samples collected for water ch	emistry? (Y/N): (Note lab sampl	e no. or id. and attac	h results) Lab Number:_	
Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (Y/N): Unumber: Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Field Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Comments Regarding Biology: DRAWING AND NARRATIVE DE Notemarks and other feature Wooded F STREAM REACH (This must be completed): te evaluation and a narrative description of the stream's loca existing T Line Scrub Shrub ho1 mowed grass Deceder 24, 2002 Revision	Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	oH (S.U.)	Conductivity (µmhos/cm	ı)
Additional comments/description of pollution impacts: BIOTIC EVALUATION Performed? (Y/N): Unumber: Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Field Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Comments Regarding Biology: DRAWING AND NARRATIVE DE Notemarks and other feature Wooded F STREAM REACH (This must be completed): te evaluation and a narrative description of the stream's loca existing T Line Scrub Shrub ho1 mowed grass Deceder 24, 2002 Revision	Is the sampling reach representative	of the stream (Y/N)	explain:		
BIOTIC EVALUATION         Performed? (Y/N): N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the Drimary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N) N         Salamanders Observed? (Y/N) N         Voucher? (Y/N) N         Scrub Shru					
BIOTIC EVALUATION         Performed? (Y/N): N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the Drimary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N) N         Salamanders Observed? (Y/N) N         Voucher? (Y/N) N         Scrub Shru					
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology: DRAWING AND NARRATIVE DE Wooded F STREAM REACH (This must be completed): Include important landmarks and other feature Wooded grass FLOW Scrub shrub Hh01 mowed grass hh02 Couber 24, 2002 Revision MOODE H Form Page - 2	Additional comments/description of p	pollution impacts:		·····	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology: DRAWING AND NARRATIVE DE WOOded F STREAM REACH (This must be completed): lnclude important landmarks and other feature wooded grass FLOW Scrub shrub hh01 mowed grass hh02 Couper 24, 2002 Revision WOOded H Form Page - 2					
DRAWING AND NARRATIVE DE Include important landmarks and other feature existing T Line becode drags brub shrub hh01 mowed grass hh01 mowed grass hh01 mowed grass hh01 mowed grass hh01 mowed grass hh01 mowed grass hh01 mowed grass hh01 mowed grass	-rogs or Tadpoles Observed? (Y/N)	her? (Y/N) N Salamanders Observer N Voucher? (Y/N) N Aquatic Maci	d? (Y/N) N Vou roinvertebrates Obse	cher? (Y/N)	her? (Y/N) N
Include important landmarks and other feature existing T Line mowed grass FLOW hh01 mowed grass hh01 mowed grass Decoder 24, 2002 Revision Mooded H Form Page - 2 Propose and feature Mooded H Form Page - 2 Propose and feature Mooded H Form Page - 2 Propose and feature Propose and fe					
Include important landmarks and other feature existing T Line mowed grass FLOW hh01 mowed grass hh01 mowed grass Decoder 24, 2002 Revision Mooded H Form Page - 2 Propose and feature Mooded H Form Page - 2 Propose and feature Mooded H Form Page - 2 Propose and feature Propose and fe					
Include important landmarks and other feature existing T Line mowed grass FLOW hh01 mowed grass hh01 mowed grass Decoder 24, 2002 Revision Mooded H Form Page - 2 Propose and feature Mooded H Form Page - 2 Propose and feature Mooded H Form Page - 2 Propose and feature Propose and fe					
Include important landmarks and other feature existing T Line mowed grass FLOW hh01 Doctober 24, 2002 Revision Wooded H Form Page - 2 Wooded H Form Page - 2 Portogenetic Porter Stream Store H Form Page - 2 Portogenetic Portogenetic Portoge	DRAWING AND N	ARRATIVE DE wooded F S	TREAM REACH	(This <u>must</u> be cor	npleted):
FLOW scrub shrub hh01 mowed grass hh02 bctober 24, 2002 Revision		and other feature: te ev	aluation and a narra	ative description of the	stream's location
FLOW Scrub shrub hh01 mowed grass hh02 Dctober 24, 2002 Revision Moded H Form Page - 2 Moded	existing T Li	ne			
FLOW Scrub shrub hh01 mowed grass DCtober 24, 2002 Revision MODE MODE AND					
hh01 mowed grass Dctober 24, 2002 Revision Wooded H Form Page - 2			grass		
hh01 mowed grass Dctober 24, 2002 Revision Wooded H Form Page - 2		~		$\sim$	• ( )
Dectober 24, 2002 Revision Wooded H Form Page - 2	FLOW 🔫	scrub shrub	$\frown$		- + 1
December 24, 2002 Revision Wooded H Form Page - 2	X	m		~~~~	-
October 24, 2002 Revision Wooded H Form Page - 2	hh01			~~~	
October 24, 2002 Revision WOOded H Form Page - 2					
October 24, 2002 Revision WOODED		grass			hh02
October 24, 2002 Revision WOODED					
October 24, 2002 Revision WOODED					
		H Form P	age - 2		

r N

Stream 79	Modified Class 2
<b>ChieEPA</b> Primary Headwa	ter Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121217-02SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)
LENGTH OF STREAM REACH (ft) 200 LAT. 39.36	803 LONG84.08730 RIVER CODE RIVER MILE
DATE 12/12/17 SCORER jbl, jtt COMM	MENTS intermittent
	Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
•	
MODIFICATIONS	
MODIFICATIONS: earthwork in ROW	
1. SUBSTRATE (Estimate percent of every type of sub	strate present. Check ONLY two predominant substrate TYPE boxes
(Max of 32). Add total number of significant substrate ty	ypes found (Max of 8). Final metric score is sum of boxes A & B.
	TYPE PERCENT Metric Points
BLDR SLABS [16 pts] 0% BOULDER (>256 mm) [16 pts] 0%	SILT [3 pt]         25%         FOILS           LEAF PACK/WOODY DEBRIS [3 pts]         5%         5%
BEDROCK [16 pt] 0%	FINE DETRITUS [3 pts] 0% Substrate
COBBLE (65-256 mm) [12 pts] 25%	Image: Clay or HARDPAN [0 pt]         5%
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts] 0% 21
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]
	A) Substrate Percentage 100% (B) A + B
Bldr Slabs, Boulder, Cobble, Bedrock	Check
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES	S: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 6
	depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth
<ul> <li>evaluation. Avoid plunge pools from road culverts or sto</li> <li>&gt; 30 centimeters [20 pts]</li> </ul>	orm water pipes)         (Check ONLY one box):         Max = 30           > 5 cm - 10 cm [15 pts]         Image: Check on the second sec
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]
COMMENTS	MAXIMUM POOL DEPTH (Inches): 3.00
3. BANK FULL WIDTH (Measured as the average of 3-	4 measurements) (Check ONLY one box): Bankfull
> 4.0 meters (> 13') [30 pts]	Vidth
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	✓ ≤ 1.0 m (<=3' 3") [5 pts] Max=30
	AVERAGE BANKFULL WIDTH (Feet): 3.00 5
	information <u>must</u> also be completed
RIPARIAN ZONE AND FLOODPLAIN QUALIT RIPARIAN WIDTH FLOODPLA	Y ☆NOTE: River Left (L) and Right (R) as looking downstream☆ AIN QUALITY
	Most Predominant per Bank) <u>L_R</u>
	Aature Forest, Wetland Conservation Tillage
	nmature Forest, Shrub or Old Urban or Industrial
	Residential, Park, New Field Open Pasture, Row Crop
	enced Pasture Mining or Construction
FLOW RECIME (At Time of Further) (Cha	
FLOW REGIME (At Time of Evaluation) (Check Stream Flowing	Moist Channel, isolated pools, no flow (Intermittent)
Subsurface flow with isolated pools (Interstitial)	Dry channel, no water (Ephemeral)
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 f	
■ None 1.0 0.5 ✓ 1.5	2.0 2.5 3.0 >3
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Modera	te (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Atta	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name:	_ Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHE	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/12/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 90%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id.	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pr         Fish Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N         Voucher? (Y/N)       N         Aquatic Macroinvertebra         Comments Regarding Biology:	imary Headwater Habitat Assessment Manual)
FLOW hh02 scrub shrub ROV	nd a narrative descrip hhr01 ream's location ting T Line wooded
October 24, 2002 Revision	
	Save as pdf Reset Form

Stream 80	Modified Class 1	
<b>ChieEPA</b> Primary Headwa	ater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings		
hh-jbl-121217-03 SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.36	6795 LONG84.08775 RIVER CODE RIVER MILE	
	IMENTS EPHEMERAL	
NOTE: Complete All Items On This Form - Refer to	"Field Evaluation Manual for Ohio's PHWH Streams" for Instructions	5
STREAM CHANNEL	NEL RECOVERED RECOVERING RECENT OR NO RECOVERY	
MODIFICATIONS: earthwork in ROW		
	hetrote procent Check ON V two prodominant substrate TVRE house	
	bstrate present. Check ONLY two predominant substrate TYPE boxes types found (Max of 8). Final metric score is sum of boxes A & B.	EI
TYPE PERCENT	TYPE PERCENT Met	
BLDR SLABS [16 pts]	SILT [3 pt] <b>Poir</b>	nts
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts] 35%	trate
BEDROCK [16 pt] 0%	FINE DETRITUS [3 pts]	
COBBLE (65-256 mm) [12 pts] $0\%$	CLAY or HARDPAN [0 pt] 5% 0%	
Total of Percentages of <b>0.00%</b>	(A) Substrate Percentage 95% (B) A + E	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPE	S: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2 Maximum Baal Danth /Maaaura tha maximum nach	I denth within the 61 meter (200 ft) evolution reach at the time of	Janth
<ol> <li>Maximum Pool Depth (Measure the maximum pool evaluation. Avoid plunge pools from road culverts or st</li> </ol>	I depth within the 61 meter (200 ft) evaluation reach at the time of torm water pipes) (Check ONLY one box): Pool D	
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]		
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	
COMMENTS	MAXIMUM POOL DEPTH (Inches): 0.00	
3. BANK FULL WIDTH (Measured as the average of 3-	-4 measurements) (Check ONLY one box): Bank	cfull
> 4.0 meters (> 13') [30 pts]	Vidt	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	✓ ≤ 1.0 m (<=3' 3") [5 pts] Max=	=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 1.00 5	
This	s information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALIT		
	AIN QUALITY (Meet Brademinent per Bank)	
	(Most Predominant per Bank) L R Mature Forest, Wetland Conservation Tillage	
	Immature Forest, Shrub or Old	
F	Field	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop	
None F	Fenced Pasture Mining or Construction	
COMMENTS		
FLOW REGIME (At Time of Evaluation) (Che	eck ONLY one box):	
Stream Flowing	Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial)	Dry channel, no water (Ephemeral)	
COMMENTS		
SINUOSITY (Number of bends per 61 m (200 f		
None 1.0 ✓ 0.5 1.5		
· 0.5    1.5	2.5 >3	
STREAM GRADIENT ESTIMATE	ate (2 ft/100 ft)	
🔄 FIAL (0.5 tt/100 tt) 🔄 FIAL TO IVIODERATE 🔛 MODERA	ate (2 ft/100 ft) Moderate to Severe	

ADDITIONAL STREAM INFORMATION (1	This Information Must Also be C	ompleted):		
QHEI PERFORMED? - Yes	✓ No QHEI Score	(If Yes, Attach Completed	QHEI Form)	
DOWNSTREAM DESIGNATED	USE(S)			
			om Evaluated Stream	
			m Evaluated Stream	_
EWH Name: _		Distance from	m Evaluated Stream	
MAPPING: ATTACH COPIES OF	MAPS, INCLUDING THE ENTIRE	WATERSHED AREA. CLEA	RLY MARK THE SITE LOCATION	
JSGS Quadrangle Name:	NRC	S Soil Map Page:	NRCS Soil Map Stream Order	
County: Warren	Township / 0	City:		
MISCELLANEOUS				
Base Flow Conditions? (Y/N): Da	ate of last precipitation: 12/	12/17 Quantity:		
Photograph Information:				
N	Canopy (% open): 90%			
			Ital Lab Number	
Nere samples collected for water chemistr		ple no. or id. and attach resu		
	ssolved Oxygen (mg/l)	pH (S.U.) Condu	uctivity (µmhos/cm)	
s the sampling reach representative of the	e stream (Y/N)	e explain:		
Additional comments/description of pollutic	on impacts:			
Fish Observed? (Y/N) Voucher? (	Include appropriate field data shee (Y/N) N Salamanders Observ Voucher? (Y/N) N Aquatic Ma	N	(Y/N) N	]
		mowed		
DRAWING AND NARR	ATIVE DESCRIPTION OF	STREAM REACH (Thi	s <u>inust</u> be completed):	
Include important landmarks and o	ther features of interest for site	evaluation an <mark>d a narrative o</mark>	leecription of the stream's losati	on
ooded		$\overline{}$	$\downarrow$ $\gamma$	
sidential			hh02	
			hh02	
scrub shrub	hh03			
			woode	be
			$\left( \mathcal{V} \right)$	
		Corub		
		Scrub-		
	7	shrub		
	F existing T Line			
	Existing T Line	shrub ROW		_

1.

Stream 81 Modified Class 1	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form <b>21</b>	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121217-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.36971 LONG84.09276 RIVER CODE RIVER MILE	
DATE 12/12/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	าร
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	Y
MODIFICATIONS: formet earthwork in ROW	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
	etric
BLDR SLABS [16 pts]         0%         Image: Silt [3 pt]         35%         POI           BOULDER (>256 mm) [16 pts]         0%         Image: Silt [3 pt]         40%	ints
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0% Subs	strate
COBBLE (65-256 mm) [12 pts]	( = 40
GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	1
Total of Percentages of (A) Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	·B
	Depth c = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts]	5
COMMENTSMAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Ban	nkfull
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       With	idth x=30
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 3.0  m (> 9' 7" - 4' 8") [20  pts] $ $ = 4.0  m (<=3' 3") [5  pts] $ $ = 5.0  m (<=3' 3") [5  pts]$	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream         RIPARIAN WIDTH       FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
Field     Open Pasture, Row Crop       Narrow <5m	
None   Fenced Pasture   Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None       1.0       2.0       3.0         ✓       0.5       1.5       2.5       >3	
Flat (0.5 ft/100 ft) Flat to Moderate I Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM	NFORMATION (This Information M	ust Also be Completed):		
QHEI PERFOR	RMED? - Yes 🗸 No QHEI Sco	ore (If Yes, Attach	Completed QHEI Form)	
	M DESIGNATED USE(S)			
WWH Name:			Distance from Evaluated Stream	
			Distance from Evaluated Stream	
EWH Name:			istance from Evaluated Stream	
MAPPING: AT	TACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AF	REA. CLEARLY MARK THE SITE LOCATIO	ON
USGS Quadrangle Name	e:	NRCS Soil Map Page	NRCS Soil Map Stream Order	
County: Warren		Township / City:		
MISCELLANE	OUS			
Base Flow Conditions? (	Y/N):_Y Date of last precipitati	ion: <b>12/12/17</b>	Quantity:	
Photograph Information:				
2 .	N	100%		
Elevated Turbidity? (Y/N	): Canopy (% open): _	10070		
Were samples collected	for water chemistry? (Y/N):	(Note lab sample no. or id. and	attach results) Lab Number:	
Field Measures: Tem	p (°C) Dissolved Oxygen (mo	g/l) pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling reach rep	presentative of the stream (Y/N)	If not, please explain:		
Additional comments/des	scription of pollution impacts:			
Fish Observed? (Y/N) Frogs or Tadpoles Obse Comments Regarding Bi	voucher? (Y/N) Salama rved? (Y/N) N Voucher? (Y/N) N	Aquatic Macroinvertebrates	Voucher? (Y/N) N Observed? (Y/N) N Voucher? (Y/N)	I
			CH (This <u>must</u> be completed):	4'
	iandmarks and other features of int		nar ative description of the stream's loc	cation
wooded		shrub		-/
	scrub shrub	ROW		4
FLOW			WOO	bded
$() \Psi$	1 7	Scrub-		
hh04		shrub		_
$\sim$	existing T Line	ROW	$ \mathcal{Q} $	
		1.011		
			i v	
October 24, 2002 Revision		PHWH Form Page - 2		

Stream 83 Modified Cla	iss 2
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	0
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37194 LONG84.09947 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru-	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         Image: Silt [3 pt]         30%	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 20%	
BEDROCK         [16 pt]         0%         FINE DETRITUS         [3 pts]         0%           COBBLE         (65-256 mm)         [12 pts]         25%         CLAY or HARDPAN         [0 pt]         0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       25%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	20
Total of Percentages of 25.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]      < 5 cm [5 pts]	_
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\leq 1.0 m (<=3' 3") [5 pts]$	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m     Mature Forest, Wetland     Conservation Tillage       Immature Forest, Shrub or Old     Immature Forest, Shrub or Old     Immature Forest, Shrub or Old	
Field Field	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None     Fenced Pasture     Mining or Construction     COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial)  COMMENTS	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u> :	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe         Severe (10 ft/100	ft)

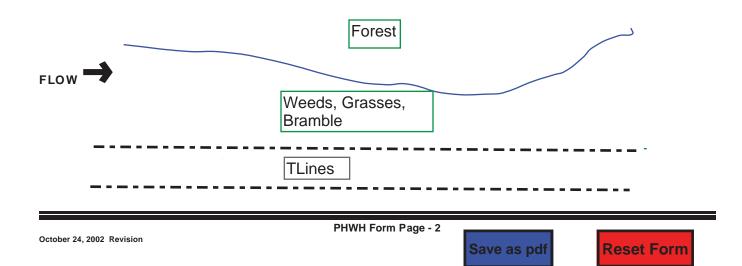
QHEI PERFORMED? - Yes 🖌 No QHEI Score	If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
CWH Name:	
CWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS. INCLUDING T	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATIO
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
	Township / City:
MISCELLANEOUS	Township / Oityi
Base Flow Conditions? (Y/N): Date of last precipitation	n: Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	90%
N	lote lab sample no. or id. and attach results) Lab Number:
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
1	
Additional comments/description of pollution impacts:	
ID number. Include appropriate fie       Fish Observed? (Y/N)     N	Voucher collections optional. NOTE: all voucher samples must be labeled wi eld data sheets from the Primary Headwater Habitat Assessment Manual) ders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIP	TION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of inter	
g T Line	
× /	Little Miami
	scrub-
	shrub ROW
V hh01	
	ooded

Stream 84 Modified Class	s 2
ChieEPA Primary Headwater Habitat Evaluation Form 30	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Hillsboro-Hutchings 138 kV	
hh-jbl-121117-02 DRAINAGE AREA (mi²) DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT. 39.37205 LONG84.09992 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER JTT, JBL COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS: grading, filling, channelized	ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI <i>I</i> letric
	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         S	ubstrate
	lax = 40
GRAVEL (2-64 mm) [9 pts]     35%     MUCK [0 pts]     0%       SAND (-2 mm) [6 pts]     0%     ARTIFICIAL [3 pts]     0%	25
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	ool Depth /ax = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	0
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.00	
	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank)       L R (Most Predominant per Bank)       L R         Wide >10m       Mature Forest, Wetland       Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial)   COMMENTS	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box):</u>	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft)       Flat to Moderate       Moderate (2 ft/100 ft)       Moderate to Severe       Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): _N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sin ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

## DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

1/3/2020 12:29:43 PM

in

Case No(s). 19-1987-EL-BLN

Summary: Letter of Notification Letter of Notification for the Clinton County (Duke)- Hillsboro 138 kV Line Project- SET 2 electronically filed by Tanner Wolffram on behalf of AEP Ohio Transmission Company, Inc.