

Wetland Delineation Report

APPENDIX A

U.S. ARMY CORPS OF ENGINEERS WETLAND AND UPLAND FORMS

Project/Site: West Bellaire-Glenco	Transmission	Line C	city/County:			Samul	ling Date: 07-Dec	-16
applicant/Owner: AEP			-	State:	OH		int: W-MDT12/0	
nvestigator(s): M.Thomayer, C.S	allono AECOM		Section, Town			T 6N	R 3W	772010-0
andform (hillslope, terrace, etc.)	Hillside		cal relief (con		_	concave	Slope: 8.0%	_ /4.6
Subregion (LRR or MLRA): LRR	N	Lat.: _4	0.0314	L	.ong.:80.8	3066	Datum: _	NAD 83
oil Map Unit Name: LoE					NWI	l classification:	: N/A	
re climatic/hydrologic condition:	on the site t	pical for this time of year	·? Yes 💿 N	No 🔾 (Ifr	no, explain ir	n Remarks.)		
re Vegetation, Soil	, or Hydro	logy significantly	disturbed?	Are "Norm	nal Circumsta	ances" present	_{:?} Yes 💿 N	o O
re Vegetation, Soil	, or Hydro	logy aturally pro	blematic?	(If needed	d explain an	y answers in R	Pemarks)	
	-				·			
Summary of Findings -	Attach sit	e map showing sa	mpling po	oint locati	ions, trar	nsects, imp	portant featu	res, etc
Hydrophytic Vegetation Present	Yes 💿	No O						
Hydric Soil Present?	Yes	No O	Is the S	Sampled Area	¹ Yes ● I	No O		
Wetland Hydrology Present?	Yes	No O	within	a Wetland?	res 🙂 i			
Remarks:								
wetland originates from a hillsic	e seep. Bound	lary follows phalaris comm	nunity and top	ography. Ass	ociated with	Stream HH-MD	OT-12072016-001.	
3		.,		3 1 3				
Hydrology								
Hydrology Wetland Hydrology Indicators:								
Wetland Hydrology Indicators:	one required:	check all that apply)					imum of two reauire	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of	one required;		314)		Surfac	ce Soil Cracks (B6	5)	d)
Wetland Hydrology Indicators:	one required;	True Aquatic Plants (E			Surface Sparse	ce Soil Cracks (Beely Vegetated Co	5) ncave Surface (B8)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1)	one required;		or (C1)	coots (C3)	Surface Sparse Draina	ce Soil Cracks (B6	5) ncave Surface (B8) 0)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)	one required;	True Aquatic Plants (E	or (C1) s along Living R	loots (C3)	Surface Sparse Draina Moss	ce Soil Cracks (Bé ely Vegetated Co age Patterns (B10	5) ncave Surface (B8) 0)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)	one required;	☐ True Aquatic Plants (E☐ Hydrogen Sulfide Odc☐ Oxidized Rhizosphere:	or (C1) s along Living R Iron (C4)		Surface Sparse Draina Moss Dry Se	ce Soil Cracks (B6 ely Vegetated Co age Patterns (B16) Trim Lines (B16)	5) ncave Surface (B8) 0)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	one required;	True Aquatic Plants (E Hydrogen Sulfide Odc Oxidized Rhizosphere Presence of Reduced	or (C1) s along Living R Iron (C4) n in Tilled Soils		Surface Sparse Draina Moss Dry Se	ce Soil Cracks (Beely Vegetated Co age Patterns (B10 Trim Lines (B16) eason Water Tab sh Burrows (C8)	5) ncave Surface (B8) 0)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	one required;	True Aquatic Plants (E Hydrogen Sulfide Odc Oxidized Rhizosphere: Presence of Reduced Recent Iron Reduction	or (C1) s along Living R Iron (C4) n in Tilled Soils		Surface Sparse V Draina Moss Dry Se Crayfis Satura	ce Soil Cracks (Beely Vegetated Co age Patterns (B10 Trim Lines (B16) eason Water Tab sh Burrows (C8)	sincave Surface (B8) 0) le (C2) kerial Imagery (C9)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3)	one required;	True Aquatic Plants (E Hydrogen Sulfide Odc Oxidized Rhizosphere: Presence of Reduced Recent Iron Reduction Thin Muck Surface (C	or (C1) s along Living R Iron (C4) n in Tilled Soils		Surface Sparse ✓ Draina Moss Dry Se Crayfis Satura Stunte	ce Soil Cracks (Be ely Vegetated Co age Patterns (B10 Trim Lines (B16) eason Water Tab sh Burrows (C8) ation Visible on A	sincave Surface (B8) 0) le (C2) verial Imagery (C9) ants (D1)	d)
Wetland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4)		True Aquatic Plants (E Hydrogen Sulfide Odc Oxidized Rhizosphere: Presence of Reduced Recent Iron Reduction Thin Muck Surface (C	or (C1) s along Living R Iron (C4) n in Tilled Soils		Surface Sparse Draina Moss Dry Se Crayfit Satura Stunte	ce Soil Cracks (Becely Vegetated Coage Patterns (B10) Trim Lines (B16) eason Water Tab sh Burrows (C8) ation Visible on A	sincave Surface (B8) 0) le (C2) verial Imagery (C9) ants (D1)	d)
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Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Ima		True Aquatic Plants (E Hydrogen Sulfide Odc Oxidized Rhizosphere: Presence of Reduced Recent Iron Reduction Thin Muck Surface (C	or (C1) s along Living R Iron (C4) n in Tilled Soils		Surface Sparse Draina Moss Dry Se Crayfis Satura Stunte Geome Shallo	ce Soil Cracks (Be ely Vegetated Co age Patterns (B16) Trim Lines (B16) eason Water Tab sh Burrows (C8) ation Visible on A ed or Stressed Pla orphic Position (I ow Aquitard (D3)	sion of the control o	d)
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Wetland 01

Tree Stratum (Plot size: _30')	0 0 0	Re	0.0% 0.0% 0.0% 0.0%	Indicator Status	Number of Dominant Species That are OBL, FACW, or FAC:1(A) Total Number of Dominant
1	0 0 0 0		0.0% 0.0% 0.0% 0.0%	Status	That are OBL, FACW, or FAC:1 (A) Total Number of Dominant
2	0 0 0 0		0.0% 0.0% 0.0%		Total Number of Dominant
3	0 0 0 0		0.0%		
4	0 0 0		0.0%		Species Across All Strate:
5	0 0				Species Across All Strata: (B)
6	0		0.00/		Demonstrated to a street Constant
7	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC:
8		닏.	0.0%		That Aic obe, FACW, of FAC.
		Ш.	0.0%		Prevalence Index worksheet:
O 11 O 11 (O1 1 O1 1 (Plot cizo: 15)	0	Ш,	0.0%		Total % Cover of: Multiply by:
	0 =	= To	tal Cover	•	0BL species <u>23</u> x 1 = <u>23</u>
Sapling-Sapling/Shrub Stratum (Plot size: 15')	10	~	100.0%		FACW species <u>83</u> x 2 = <u>166</u>
1	0	<u> </u>	0.0%		FAC species x 3 = 0
2		Н.			FACU species $0 \times 4 = 0$
3	0	Η.	0.0%		UPL species $0 \times 5 = 0$
4	0	Н.	0.0%		'
5	0	닖.	0.0%		Column Totals: <u>106</u> (A) <u>189</u> (B)
6	0	Щ.	0.0%		Prevalence Index = B/A = 1.783
7	0	닏.	0.0%		Hydrophytic Vegetation Indicators:
8	0	Ц.	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ш.	0.0%		Dominance Test is > 50%
0	0	\square	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:) —	10 =	= To	tal Cover	•	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0	$\overline{\Box}$	0.0%	-	Problematic Hydrophytic Vegetation ¹ (Explain)
3	0	$\overline{\Box}$	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4	0	\Box	0.0%		be present, unless disturbed or problematic.
	0	\Box	0.0%		Definition of Vegetation Strata:
5		Н.	0.0%		Four Vegetation Strata:
6		Ш.			Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Щ.	0.0%		(7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5') —			tal Cover		regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Phalaris arundinacea	70	✓.	66.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Cicuta maculata	20		18.9%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Typha angustifolia	3		2.8%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Persicaria pensylvanica	3		2.8%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Symphyotrichum lateriflorum	10		9.4%	FACW	in neight.
6	0		0.0%		Five Vegetation Strata:
7	0		0.0%		
8	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH).
0.	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
1	0	\Box	0.0%		than 3 in. (7.6 cm) DBH.
2	0	$\overline{\Box}$	0.0%		Shrub stratum – Consists of woody plants, excluding woody
		 = То	tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	0	닖.	0.0%		species, except woody vines, less than approximately 3 ft (1
2	0	닏.	0.0%		m) in height.
3	0	\sqsubseteq	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	□.	0.0%		height.
5	0		0.0%		Hydrophytic
6.	0		0.0%		Hydrophytic Vegetation
	0 :	- To	otal Cove	r	Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)					



Soil Sampling Point: W-MDT12/07/2016-01

Depth	-	Matrix				dox Feat					
(inches)		(moist)	%	Color (%_	Type 1	Loc ²	Texture	Rema	arks
0-6	10YR	4/1	60	10YR	7/6	5	C	M	Clay Loam		
	10YR	5/2	35								
6-18	10YR	5/1	90	10YR	4/6	10	С	M	Clay Loam		
		-			-				·		
											
			_								
									-		
	-										
			on. RM=Red	uced Matrix, C	S=Covere	ed or Coate	ed Sand Grain	ns ² Locat	tion: PL=Pore Lining. M=Matr	ix	
	Indicators:								Indicators for Problem	natic Hydric	Soils ³ :
Histosol (Surface ((00) (11) = 1	47.646	2 cm Muck (A10) (M	MLRA 147)	
	pedon (A2)			_			(S8) (MLRA 1		Coast Prairie Redox	(A16)	
Black Hist)					/ILRA 147, 14	łδ)	(MLRA 147,148)		
	Sulfide (A4 Layers (A5)				ny Gleyed eted Matri	Matrix (F2))		Piedmont Floodplai	n Soils (F19)	
	k (A10) (LRI					ıx (F3) ırface (F6)			(MLRA 136, 147)	Cf (TE:20	
	Below Dark		۸11)			Surface (F6)	7)		Very Shallow Dark		(·)
	k Surface (A		711)	_		sions (F8)	- /		Other (Explain in R	emarks)	
	ick Mineral (•	N.				(F12) (LRR N	ı			
MLRA 147		OI) (LININ		MLRA	136)						
Sandy Gle	eyed Matrix	(S4)		Umb	ric Surfac	e (F13) (M	LRA 136, 122	2)	3	odnovale. V	
Sandy Re	dox (S5)			Piedr	mont Floo	dplain Soil	s (F19) (MLR	A 148)	³ Indicators of hy wetland hydro	yarophytic veç ology must be	getation and present,
Stripped I	Matrix (S6)			Red	Parent Ma	aterial (F21) (MLRA 127	, 147)	unless dist	urbed or prob	lematic.
strictive I	ayer (if ob	served).									
Type:	ayer (ii ob	scrvcu).									
Depth (inc	hes):								Hydric Soil Present?	Yes	No O
marks:											
Haiks.											

Wetland 02	WE	TLAND D	ETERMINATION	DATA F	ORM - Eastern I	Vlountair	ns and Pi	edmont I	Region
Project/Site: West Bellaire-	Glencoe Tra	ınsmission L	ine	City/Cou	unty: Belmont Co		s	ampling Da	te: 07-Dec-16
Applicant/Owner: AEP					State:	ОН	Samplin	g Point: N-	MDT-12/07/2016-0
Investigator(s): M.Thomay	er, C.Stallor	ne, AECOM		Section	, Township, Range:	S 7	T 6N		R 3W
Landform (hillslope, terrace,	, etc.):	Swale		Local reli	ef (concave, convex	, none):	concave	Slope	e: 7.0% / 4.0
Subregion (LRR or MLRA):	LRR N		Lat.:	40.0336		.ong.: 40.	0336		Datum: NAD 83
Soil Map Unit Name: LoD	LICIT IV			40.0330			/I classifica	tion: N/A	
				o Vo	s • No O (Ifr				
Are climatic/hydrologic cond					•	no, explain			'es ● No ○
Are Vegetation, Soi		, or Hydrol		tly disturbe		nal Circums	-	Sciit.	
Are Vegetation	il 📙 ,	, or Hydrol	ogy 🗌 naturally	problemati	c? (If needed	d, explain a	ny answers	in Remark	ss.)
Summary of Finding	gs - Att			samplir	ng point locati	ons, tra	nsects,	importa	nt features, etc
Hydrophytic Vegetation Pro	esent?	Yes	No O						
Hydric Soil Present?		Yes	No O		s the Sampled Area	Yes •	No O		
Wetland Hydrology Present	t?	Yes	No O	١	within a Wetland?				
Remarks:									
Wetland originates from a	hillside se	ep. Bound	ary follows bidens con	nmunity ar	nd topography. Asso	ciated with	Stream HF	I-MDT-12/0	7/2016-03A.
Hydrology									
Wetland Hydrology Indicat	ors:					Seconda	rv Indicators	(minimum of	f two reauired)
Primary Indicators (minimum	um of one	required;				Surfa	ace Soil Cracl	cs (B6)	
Surface Water (A1)			True Aquatic Plant					ed Concave S	Surface (B8)
High Water Table (A2)			Hydrogen Sulfide				nage Pattern		
Saturation (A3)			Oxidized Rhizosph	Ü			Trim Lines		
Water Marks (B1)			Presence of Reduc	, ,			Season Wate		
Sediment Deposits (B2)			Recent Iron Reduc		d Soils (C6)		fish Burrows		(00)
Drift deposits (B3)			Thin Muck Surface					on Aerial Im	0 3 . ,
☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5)			Other (Explain in F	Remarks)				ed Plants (D	1)
Inundation Visible on Aeri	ial Imagony	(D7)					norphic Posi		
Water-Stained Leaves (B9)		(67)					low Aquitard otopographic		
Aquatic Fauna (B13)	,					_	neutral Test		
Field Observations:						V TAC	neutral rest	(00)	
Surface Water Present?	Yes \bigcirc	No 💿	Depth (inches):						
Water Table Present?	Yes	No 🔾	Depth (inches):	8					
Saturation Present?	Yes	No O	Depth (inches):		Wetland Hy	drology Pr	esent?	Yes	No O
(includes capillary fringe) Describe Recorded Data (st				-	inspections) if ava	ilablo:			
Describe Recorded Data (St	ream gauţ	je, monito	ing well, aerial priotos	s, previous	ilispections), il ava	nable.			
Remarks:									
Remarks.									

Wetland 02

			ecies? -		Sampling Point: <u>W-MD1-12/07/2016-02</u>
Tree Stratum (Plot size:)	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
2.			0.0%		
3			0.0%		Total Number of Dominant
4		$\overline{\Box}$	0.0%		Species Across All Strata:4(B)
		\Box	0.0%		Percent of dominant Species
5		Η.	0.0%		That Are OBL, FACW, or FAC: 75.0% (A/B)
6		Η.			
7		Н.	0.0%		Prevalence Index worksheet:
8		Ш.	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:)	= To	otal Cover	•	OBL species 0 x 1 = 0 FACW species 80 x 2 = 160
1	0		0.0%		
2.	0		0.0%		FAC species $0 \times 3 = 0$
3			0.0%		FACU species x 4 =80
4	_		0.0%		UPL species <u>0</u> x 5 = <u>0</u>
5			0.0%		Column Totals: 100 (A) 240 (B)
6.			0.0%		Prevalence Index = B/A = 2.400
7	0		0.0%		
8	_		0.0%		Hydrophytic Vegetation Indicators:
9.			0.0%		Rapid Test for Hydrophytic Vegetation
		\Box	0.0%		✓ Dominance Test is > 50%
10		—. - Та	otal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= 10			Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
1		Н.	0.0%		
2	0	\sqcup	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3	0	Ш.	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5	0		0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5')		= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. Epilobium coloratum	30	V	30.0%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2 Echinochloa crusgalli	20	V	20.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
Phalaris arundinacea	20		20.0%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Symphyotrichum lateriflorum	20	V	20.0%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
E. Boutoute accordingto	10	Π.	10.0%	FACW	in height.
		\Box	0.0%		
6		\Box	0.0%		Five Vegetation Strata:
7			0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8					ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		Η.	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0	닏.	0.0%		vines, approximately 20 ft (6 m) or more in height and less
l1	0	Н.	0.0%		than 3 in. (7.6 cm) DBH.
12	0	Ш.	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	100	= Tc	otal Cover	•	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
3	0	$\overline{\Box}$	0.0%		Woody vines – Consists of all woody vines, regardless of
3	0	\Box	0.0%		height.
4					
5		⊣.	0.0%		Hydrophytic
6	0	Ч.	0.0%		Vegetation Present? Yes No
	0	= To	otal Cove	r	
Remarks: (Include photo numbers here or on a separate she echinochloa crusgalli should be fac not facu per nwpl	eet.)				



Soil Sampling Point: W-MDT-12/07/2016-02

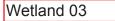
Profile Descr		the depth r				nfirm the	absence of indicators.)	
Depth	Matrix			dox Featu	1	1 - 2	Tankon	Demonto
(inches) 0-15	Color (moist) 10YR 5/1	<u>%</u> 90	Color (moist) 10YR 5/6	<u>%</u> 10	Type C	Loc ²	Texture Clay Loam	Remarks
0-15	101K 5/1	90	1018 5/6			IVI	Clay Loam	
							-	-
								-
							-	
¹ Type: C=Cond	centration. D=Depletio	n. RM=Reduc	ced Matrix, CS=Covere	ed or Coate	ed Sand Grai	ns ² Locat	ion: PL=Pore Lining. M=Ma	atrix
Hydric Soil I	Indicators:						Indicators for Probl	ematic Hydric Soils ³ :
Histosol ((A1)		Dark Surface (S7)			2 cm Muck (A10)	
Histic Epip	pedon (A2)		Polyvalue Belo	w Surface	(S8) (MLRA	147,148)		
Black Hist	tic (A3)		Thin Dark Surfa	ace (S9) (N	/ILRA 147, 1	48)	Coast Prairie Red (MLRA 147,148)	ox (A16)
	Sulfide (A4)		Loamy Gleyed)		☐ Piedmont Floodp	lain Soils (F19)
Stratified	Layers (A5)		✓ Depleted Matri	x (F3)			(MLRA 136, 147)	
2 cm Mucl	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dar	k Surface (TF12)
Depleted	Below Dark Surface (A	11)	Depleted Dark		7)		Other (Explain in	Remarks)
Thick Dar	k Surface (A12)		Redox Depress					
Sandy Mu MLRA 147	ick Mineral (S1) (LRR N 7, 148)	l,	Iron-Manganes MLRA 136)	se Masses ((F12) (LRR N	١,		
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (ML	RA 136, 12	2)	2	
Sandy Red	dox (S5)		Piedmont Floo	dplain Soils	s (F19) (MLF	RA 148)		hydrophytic vegetation and drology must be present,
Stripped N	Matrix (S6)		Red Parent Ma	terial (F21)) (MLRA 127	', 147)	unless di	sturbed or problematic.
Restrictive L	ayer (if observed):							
Type:								
Depth (incl							Hydric Soil Present?	Yes No
Remarks:								
Remarks.								

Wetland 03 WETLAND DETERMINATI	ON DATA FORM - Eastern	Mountains and Piedmont	Region
Project/Site: Glencoe-West Bellaire	City/County: Belmont	Sampling I	Date : 20-Sep-16
Applicant/Owner: AEP	State:	OH Sampling Point:	W-jbl-160920-01
Investigator(s): J.Lubbers, C.Stallone; AECOM Cincy	Section, Township, Range	: S 13 T 6N	R 3W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, conve	x, none): concave Slo	ppe: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N	— Lat.: 40.029216	Long.: -80.820217	Datum: NAD 83
Soil Map Unit Name: He-Hartshom silt loam		NWI classification: N/	
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes No (If	no, explain in Remarks.)	
	,	mal Circumstances" present?	Yes ● No ○
		ed, explain any answers in Rema	rke)
	•		
Summary of Findings - Attach site map showing	ng sampling point locat	ions, transects, import	ant features, et
Hydrophytic Vegetation Present? Yes ● No ○			
Hydric Soil Present? Yes No	Is the Sampled Are	a Yes ● No ○	
Wetland Hydrology Present? Yes ● No ○	within a Wetland?	100 0 110 0	
Remarks:	<u> </u>		
PEM wetland located at toe-of-slope and also on lower portions	of the slope due to seeps.		
Hydrology			
Wetland Hydrology Indicators:		Secondary Indicators (minimum	of two required)
Primary Indicators (minimum of one required; check all that app	ly)	Surface Soil Cracks (B6)	
Surface Water (A1)	Plants (B14)	Sparsely Vegetated Concave	e Surface (B8)
✓ High Water Table (A2) Hydrogen Sul	lfide Odor (C1)	Drainage Patterns (B10)	
Saturation (A3) Oxidized Rhiz	zospheres along Living Roots (C3)	Moss Trim Lines (B16)	
Water Marks (B1) Presence of F	Reduced Iron (C4)	✓ Dry Season Water Table (C2	2)
Sediment Deposits (B2)	Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)	
✓ Drift deposits (B3) ☐ Thin Muck Su	ırface (C7)	Saturation Visible on Aerial	Imagery (C9)
Algal Mat or Crust (B4) Other (Explai	n in Remarks)	Stunted or Stressed Plants ((D1)
Iron Deposits (B5)		Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)	
Water-Stained Leaves (B9)		✓ Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes No Depth (inch	nes): 0.25		

Wetland	03
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Absolute Pict size			—Species? –		Sampling Point: <u>W-Ibi-160920-01</u>
Tree Stratum		Absolute		Indicator	Dominance Test worksheet:
1	Tree Stratum (Plot size:)	% Cover		Status	Number of Deminant Charles
2	1	0	0.0%		· '
3			0.0%		
4					
S					Species Across All Strata:3 (B)
0					Demonstrate demoissant Conscion
6	5				
8. 0 0.0% Total Cover	6	0	0.0%		That Aic Obe, TAGW, of TAG.
8. 0 0.0% Total Cover	7	0	0.0%		Prevalence Index worksheet:
Sapling-Sapling-Shrub Stratum (Plot size: 1			0.0%		Total % Cover of: Multiply by:
Sapling-Shrub Stratum Filot size:			= Total Cover		OBL species
1. Salk alba 2.	Sapling-Sapling/Shrub Stratum (Plot size:) —			
2		4.0	✓ 100.0%	FACW	<u> </u>
3			0.0%		FAC species $\underline{5}$ x 3 = $\underline{15}$
1			0.0%		FACU species0 x 4 =0
4					UPL species $0 \times 5 = 0$
Section Sec	1.				, ,
7.	5				Corumn rotars. 122 (A) 104 (-)
Section Sec	6	0			Prevalence Index = B/A = 1.508
8.	7	0	0.0%		Hydrophytic Vegetation Indicators:
9.	8.	0	0.0%		
	9	0	0.0%		
Shrub Stratum (Plot size:			0.0%		
Shrutum (Plot size:)	10.				✓ Prevalence Index is ≤3.0 ¹
2.	Shrub Stratum (Plot size:)	12	= Total Cover		
3	1	0	0.0%		· · · · ·
3.	2	0	0.0%		☐ Problematic Hydrophytic Vegetation ¹ (Explain)
4.			0.0%		1 Indicators of hydric soil and wetland hydrology must
5.			0.0%		be present, unless disturbed or problematic.
Four Vegetation Strata: Color Col					Definition of Vegetation Strata:
Tree stratum - Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 1. Typha angustifolia 2. Leersia oryzoldes 3. Toxicodendron radicans 4. Phalaris arundinacea 4. Phalaris arundinacea 4. Phalaris arundinacea 5. J. 4.5% FAC 6. J. 0.0% 6. J. 0.0% 7. J. 0.0% 6. J. 0.0% 8. J. 0.0% 9. J. 0.0% 1. J. Vypha angustifolia 9. J. 0.0% 10. J. 0.0% 11. J. Vypha angustifolia 12. Leersia oryzoldes 13. Toxicodendron radicans 14. Phalaris arundinacea 15. J. 4.5% FAC 16. J. 0.0% 17. J. 0.0% 18. J. 0.0% 19. J. 0.0% 19. J. 0.0% 10. J. 0.0% 10. J. 0.0% 10. J. 0.0% 11. J. Vypha angustifolia 12. J. 0.0% 13. J. 0.0% 14. J. 0.0% 15. J. 0.0% 16. J. 0.0% 17. J. 0.0% 18. J. 0.0% 19. J. 0.0% 19. J. 0.0% 19. J. 0.0% 10. J. 0.0% 10. J. 0.0% 10. J. 0.0% 11. J. 0.0% 12. J. 0.0% 13. J. 0.0% 14. J. 0.0% 15. J. 0.0% 16. J. 0.0% 17. J. 0.0% 18. J. 0.0% 18. J. 0.0% 19. J. 0.0% 19. J.					I -
Note					
Sapling/shrub stratum - Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tail. Phalaris arundinacea	7	0	0.0%		
1. Typha angustifolia 2. Leersia oryzoides 3. Toxicodendron radicans 4. Phalaris arundinacea 5.	Herb Stratum (Plot size: 5')	0	= Total Cover		regardless of height.
2. Leersla oryzoides 10		55	√ 50.0%	∩RI	
3. Toxicodendron radicans 4. Phalaris arundinacea 40					
3. Indicodendron radicans 4. Phalarls arundinacea 4. O					
ft in height. 5.					1
5.	4. Phalaris arundinacea	40	36.4%	FACW	
7.	5	0	0.0%		
7.	6	0	0.0%		Five Vegetation Strata:
8.		0	0.0%		
9.			0.0%		
O			0.0%		1
than 3 in. (7.6 cm) DBH. Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m) in height. 3.					
Shrub stratum - Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Woody Vine Stratum (Plot size:) 110 = Total Cover	10				
Woody Vine Stratum (Plot size:) 110 = Total Cover	11				· '
Moody Vine Stratum (Plot size:) 110 = Total Cover Herb stratum - Consists of all herbaceous (non-woody)	12	0	0.0%		1
1. O O.0% plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m) in height. 3. O O.0% Woody vines – Consists of all woody vines, regardless of height. 5. O O.0% Hydrophytic Vegetation Present? Yes No O	Woody Vine Stratum (Plot size:	110	= Total Cover		, , ,
2.		0	0.0%		
3	• • •				
4					
4					
5. 0 0.0% Hydrophytic Vegetation Present? Yes ● No ○	4	0	0.0%		noight
6	5	0	0.0%		Hydrophytic
0 = Total Cover Present? Yes No V		0	0.0%		W
	·				
Remarks: (Include photo numbers here or on a separate sheet.)			10101 00761		
	Remarks: (Include photo numbers here or on a separate she	et.)			

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers



Soil Sampling Point: W-jbl-160920-01

Profile Descri	iption: (Describe to	the depth	needed to documen	t the indi	cator or co	nfirm the	absence of indicators.)	
Depth	Matrix		-	dox Featu	ures		_	
(inches)	Color (moist)	%	Color (moist)	_ %_	Type	Loc2	Texture Remarks	
0-6	10YR 6/1		7.5YR 5/8	_ 30	C	M	Silty Clay Loam	
6-18	10B 2.5/2	60	10B 4/2	40	D	M	Silty Clay Loam	
-								
							· -	
							-	
							-	
							-	
¹ Type: C=Conc	entration. D=Depletio	n. RM=Redu	uced Matrix, CS=Covere	ed or Coate	ed Sand Grai	ns ² Locat	tion: PL=Pore Lining. M=Matrix	
Hydric Soil I	ndicators:						Indicators for Problematic Hydric Soils ³ :	
Histosol (A			☐ Dark Surface (S7)				
Histic Epip	pedon (A2)		Polyvalue Belo	w Surface	(S8) (MLRA	147,148)	2 cm Muck (A10) (MLRA 147)	
Black Histi	ic (A3)		Thin Dark Surf				Coast Prairie Redox (A16) (MLRA 147,148)	
Hydrogen	Sulfide (A4)		✓ Loamy Gleyed	Matrix (F2))		Piedmont Floodplain Soils (F19)	
Stratified I	Layers (A5)		✓ Depleted Matri				(MLRA 136, 147)	
2 cm Muck	(A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dark Surface (TF12)	
Depleted B	Below Dark Surface (A	11)	Depleted Dark	Surface (F	7)		Other (Explain in Remarks)	
Thick Dark	Surface (A12)	•	Redox Depress	ions (F8)			Other (Explain in Remarks)	
Sandy Mud MLRA 147	ck Mineral (S1) (LRR N	1,	Iron-Manganes MLRA 136)	se Masses	(F12) (LRR I	٧,		
	yed Matrix (S4)		Umbric Surface	e (F13) (MI	LRA 136, 12	2)		
Sandy Rec			Piedmont Floo	dplain Soil:	s (F19) (MLF	RA 148)	³ Indicators of hydrophytic vegetation a	nd
Stripped M			Red Parent Ma				wetland hydrology must be present, unless disturbed or problematic.	
							· 	
Restrictive La	ayer (if observed):							
Type:							Hydric Soil Present? Yes No	
Depth (inch	nes):						nyunc son Present: Yes W NO	
Remarks:								

Wetland 04	WE.	TLAND D	ETERMINATION DATA	FORM - Eastern M	ountains	and Piedmont	Region
Project/Site: Glencoe_wb			City/	County: Bellmont		Sampling D	Date: 21-Sep-16
Applicant/Owner: AEP				State: OH	1	Sampling Point:	W-JBL-160921-2
Investigator(s): JBL,CMS			Secti	on, Township, Range: S	24	T 5N	R 3W
Landform (hillslope, terrace	e, etc.):	Bench	Local r	elief (concave, convex, r	none): co	ncave Slo	pe:0.0% /0.0_ °
Subregion (LRR or MLRA):	LRR N		Lat.: 40.02	2854448 Lo i	ng.: -80.84	0807020	Datum: NAD 83
Soil Map Unit Name: Lowe	ell-Westmo	reland silt	loams, 35-70 percent slopes		NWI o	classification: N/	A
Are climatic/hydrologic con	ditions on	the site ty	pical for this time of year?	Yes No (If no	, explain in	Remarks.)	
Are Vegetation, So		, or Hydrol			I Circumstan	ices" present?	Yes ● No ○
Are Vegetation, So	oil 🗌	, or Hydrol	ogy naturally problem	atic? (If needed,	explain any	answers in Remar	rks.)
Summary of Findin	gs - Att	ach site	e map showing samp	ling point locatio	ns, trans	ects, import	ant features, etc.
Hydrophytic Vegetation Pr	esent?	Yes	No O				
Hydric Soil Present?		Yes	No O	Is the Sampled Area	Yes No		
Wetland Hydrology Presen	ıt?	Yes	No O	within a Wetland?	ies C inc	, _	
Remarks:				ı			
Pem and portions of POW	old minin	g pond					
L Hydrology							
Wetland Hydrology Indica	tors:				Secondary I	ndicators (minimum	of two required)
Primary Indicators (minim		required;	check all that apply)			Soil Cracks (B6)	or two reddired?
✓ Surface Water (A1)			✓ True Aquatic Plants (B14)			Vegetated Concave	Surface (B8)
✓ High Water Table (A2)			✓ Hydrogen Sulfide Odor (C1)	✓ Drainag	e Patterns (B10)	
Saturation (A3)			Oxidized Rhizospheres alor	ng Living Roots (C3)	Moss Tr	im Lines (B16)	
Water Marks (B1)			Presence of Reduced Iron	(C4)	✓ Dry Sea	son Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction in T	illed Soils (C6)	Crayfish	Burrows (C8)	
Drift deposits (B3)			✓ Thin Muck Surface (C7)		Saturati	on Visible on Aerial I	Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Remarks)		✓ Stunted	or Stressed Plants (D1)
Iron Deposits (B5)					✓ Geomor	phic Position (D2)	
Inundation Visible on Aer	ial Imagery	(B7)				Aquitard (D3)	
✓ Water-Stained Leaves (B	9)					oographic Relief (D4))
Aquatic Fauna (B13)					✓ FAC-neu	utral Test (D5)	
Field Observations:	Yes	No O	Depth (inches): 1	0			
Surface Water Present? Water Table Present?	Yes •	No O	<u> </u>	0			
Saturation Present?	Yes •	No O		Wetland Hyd	rology Prese	ent? Yes •	No O
(includes capillary fringe)			20011 (1101100):				
Describe Recorded Data (s	tream gau	ge, monito	ring well, aerial photos, previo	ous inspections), if availa	able:		
Remarks:							
I							

		C	:2		Sampling Point: W-JBL-160921-2
Tree Stratum (Plot size:)	Absolute % Cover	Re	ecies? - I.Strat. ver	Indicator Status	
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)
2	0		0.0%		Total Number of Deminent
3	0		0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC:
7	0		0.0%		Prevalence Index worksheet:
8.			0.0%		Total % Cover of: Multiply by:
	ο.	= To	tal Cover		OBL species 15 x 1 = 15
Sapling-Sapling/Shrub Stratum (Plot size:					FACW species 50 x 2 = 100
1. Acer negundo	5	✓.	100.0%	FAC	FAC species 20 x 3 = 60
2	0	Ц.	0.0%		
3	0	Ц.	0.0%		' '
4	0	\square	0.0%		'
5	0	\square	0.0%		Column Totals: <u>85</u> (A) <u>175</u> (B)
6	0		0.0%		Prevalence Index = B/A = 2.059
7	0		0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
0	0		0.0%		✓ Prevalence Index is ≤3.0 ¹
	5 :	- To	tal Cover		
Shrub Stratum (Plot size:)	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		Η.		-	Problematic Hydrophytic Vegetation ¹ (Explain)
2		\Box	0.0%		
3		Η.	0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			0.0%		
5		Η.	0.0%		Definition of Vegetation Strata:
6	0	Ц.	0.0%		Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3
7	0	Щ	0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5')	0 :	= To	tal Cover	•	regardless of height.
1. Lemna aeguinoctialis	10		15.4%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Impatiens capensis	25	V	38.5%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Carex lurida	5		7.7%	OBL	plants, regardless of size, and all other plants less than 3.28 ft
4. Elymus riparius	5		7.7%	FACW	tall. Woody vines – Consists of all woody vines greater than 3.28
5 Pilea pumila	20	V	30.8%	FACW	ft in height.
6.	0	$\overline{\Box}$	0.0%		
7		\Box	0.0%		Five Vegetation Strata:
8.		$\overline{\Box}$	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
		\Box	0.0%		diameter at breast height (DBH).
9		Π-	0.0%		Sapling stratum – Consists of woody plants, excluding woody
0		Η-	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1		Н.			Shrub stratum – Consists of woody plants, excluding woody
2	0	_ ∐. - T o	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	65 :	_ 10	itai Covei		Herb stratum – Consists of all herbaceous (non-woody)
1. Toxicodendron radicans	15	✓_	100.0%	FAC	plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4			0.0%		height.
5			0.0%		
6	0		0.0%		Hydrophytic Vegetation
					Vac (A) Na ()
0.	15	= T/	otal Cove	r	Present? Yes Vio U

Wetland 04

Soil Sampling Point: W-JBL-160921-2

Profile Descr	ription: (Describe to	the depth	needed to documen	the indi	cator or co	nfirm the	absence of indicators.))			
Depth	Matrix			dox Featu							
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc ²	Texture	Remarks			
0-3	10YR 2/1						Silty Clay Loam	gravel/sand			
3-12	10YR 5/1	75	10YR 5/8	25	C	M	Sandy Clay Loam	gi avei / Sailu			
	-						-	*			
								_			
								-			
	-			-		-	-				
				-							
¹ Type: C=Con	centration. D=Depletion	on. RM=Redu	iced Matrix, CS=Covere	d or Coate	d Sand Grai	ns ² Locat	ion: PL=Pore Lining. M=I	Matrix			
Hydric Soil	Indicators:						Indicators for Pro	blematic Hydric Soils ³ :			
Histosol (Dark Surface (67)				•			
Histic Epi	pedon (A2)		Polyvalue Belov	v Surface ((S8) (MLRA	147,148)	2 cm Muck (A10				
Black His	Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148)				48)	Coast Prairie Re (MLRA 147,148					
✓ Hydrogen	Sulfide (A4)		Loamy Gleyed	Matrix (F2)				,			
Stratified	Layers (A5)		✓ Depleted Matri:	k (F3)			(MLRA 136, 14	dplain Soils (F19) 7)			
2 cm Muc	k (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow D	ark Surface (TF12)			
Depleted	Below Dark Surface (A	11)	Depleted Dark	Surface (F	7)		Other (Explain				
	k Surface (A12)		Redox Depress	ions (F8)			Other (Explain				
	Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) MLRA 147, 148) MIRA 136)				(F12) (LRR I	٧,					
	eyed Matrix (S4)		Umbric Surface	(F13) (ML	RA 136, 12	2)					
Sandy Re			Piedmont Floor	dplain Soils	s (F19) (MLF	RA 148)	³ Indicators	of hydrophytic vegetation and			
	Matrix (S6)		Red Parent Ma				wetland hydrology must be present, unless disturbed or problematic.				
						,		·			
Restrictive L	ayer (if observed):										
Туре:							Undria Cail Dragant?	Yes No			
Depth (inc	:hes):						Hydric Soil Present?	r res e no e			
Remarks:											
shovel refusa	l @ 12" due to grav	el layer									

Wetland 05	WEILAND	DETERMINATION	DATA FORM	- Eastern M	ount	ains and Pledmont	Region
Project/Site: Glencoe_wb			City/County:	Bellmont		Sampling D	Date : 21-Sep-16
applicant/Owner: AEP				State: Ol	4	Sampling Point:	W-jbl-160921-01
nvestigator(s): JBL,CMS			Section, Tow	nship, Range: S	24	T 5N	R 3W
andform (hillslope, terrace, etc	c.): Swale		Local relief (co	ncave, convex, i	none):	hummocky Slo	pe: 2.0% / 0.0 °
Subregion (LRR or MLRA):	RR N	Lat.	40.022684131	Loi	na.: -	80.841962114	Datum: NAD 83
oil Map Unit Name: Brooksid			.0.022000.		_	NWI classification: N/	
re climatic/hydrologic condition			vear? Yes 💿	No O (If no	evnl	—— ain in Remarks.)	
re Vegetation, Soil [, or Hydi		itly disturbed?			mstances" present?	Yes ● No ○
	_		•			•	
re Vegetation, Soil _	, or Hydi	rology L naturally	problematic?	(If needed,	explai	n any answers in Rema	rks.)
Summary of Findings	- Attach si	te map showing	sampling p	oint locatio	ns, t	ransects, import	ant features, etc.
Hydrophytic Vegetation Preser	nt? Yes 💿	No O					
Hydric Soil Present?	Yes	No O	Is the	Sampled Area	Voc	● No ○	
Wetland Hydrology Present?	Yes	No O	within	a Wetland?	163	C 110 C	
Remarks:			ļ.				
PeM near road							
Unada a La sa s							
Hydrology							
Wetland Hydrology Indicators					Seco	ndarv Indicators (minimum	of two required)
Primary Indicators (minimum	of one required					Surface Soil Cracks (B6)	
Surface Water (A1)		True Aquatic Plar	. ,			parsely Vegetated Concave	Surface (B8)
✓ High Water Table (A2)		Hydrogen Sulfide				Prainage Patterns (B10)	
✓ Saturation (A3)		Oxidized Rhizosp	heres along Living	Roots (C3)	N	Moss Trim Lines (B16)	
Water Marks (B1)		Presence of Redu	ced Iron (C4)			Ory Season Water Table (C2	<u>'</u>)
Sediment Deposits (B2)		Recent Iron Redu	ction in Tilled Soils	(C6)		crayfish Burrows (C8)	
Drift deposits (B3)		Thin Muck Surfac	e (C7)			aturation Visible on Aerial	Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in	Remarks)			tunted or Stressed Plants (D1)
Iron Deposits (B5)		_	,		V	Geomorphic Position (D2)	
Inundation Visible on Aerial II	magery (B7)					hallow Aquitard (D3)	
Water-Stained Leaves (B9)						licrotopographic Relief (D4))
Aquatic Fauna (B13)						AC-neutral Test (D5)	,
Field Observations:						· · ·	
Surface Water Present? Y	es 🔾 🛮 No 🖲	Depth (inches):					
Water Table Present? Y	es 💿 No 🗆	Depth (inches):	10				
Saturation Present?	es No C	Depth (inches):	5	Wetland Hyd	rology	Present? Yes	No O
(includes capillary fringe) Describe Recorded Data (strea				ections) if availa	hle.		
Describe Recorded Data (Strea	in gaage, mon	toring well, derial priote	s, previous mape	otions), ii avaiic	ibic.		
Remarks:							

		—Species? ———	Sampling Point: <u>W-IDI-160921-01</u>
Tree Stratum (Plot size:)	Absolute % Cover	Rel.Strat. Indicato	Dominance Test worksheet:
		0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2		0.0%	
3		0.0%	Total Number of Dominant
	_	0.0%	Species Across All Strata: (B)
4.		0.0%	Percent of dominant Species
5	_	0.0%	That Are OBL, FACW, or FAC: 100.0% (A/B)
6		0.0%	Bassalana Indassusalah ark
7			Prevalence Index worksheet: Total % Cover of: Multiply by:
8			
Sapling-Sapling/Shrub Stratum (Plot size:)	= Total Cover	OBL species
1		0.0%	
2		0.0%	FAC species $3 \times 3 = 9$
3	0	0.0%	FACU species $0 \times 4 = 0$
4	0	0.0%	UPL species $0 \times 5 = 0$
5	_	0.0%	Column Totals: 93 (A) 129 (B)
6	0	0.0%	Prevalence Index = B/A =1.387
7	0		Hydrophytic Vegetation Indicators:
8	0		Rapid Test for Hydrophytic Vegetation
9	0	0.0%	✓ Dominance Test is > 50%
0	0	0.0%	✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Total Cover	Morphological Adaptations ¹ (Provide supporting
1		0.0%	data in Remarks or on a separate sheet)
2		0.0%	Problematic Hydrophytic Vegetation ¹ (Explain)
3.		0.0%	¹ Indicators of hydric soil and wetland hydrology must
4		0.0%	be present, unless disturbed or problematic.
5		0.0%	Definition of Vegetation Strata:
6		0.0%	Four Vegetation Strata:
		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3
7		= Total Cover	in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: _5')			Sapling/shrub stratum – Consists of woody plants, excluding
1. Carex lurida		✓ 64.5% OBL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Impatiens capensis		5.4% FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft
3. Poa palustris	25	✓ 26.9% FACW	1
4. Verbesina alternifolia	3	3.2% FAC	tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5			
6			Five Vegetation Strata:
7			Tree - Woody plants, excluding woody vines, approximately
8			20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9			Sapling stratum – Consists of woody plants, excluding woody
0		0.0%	vines, approximately 20 ft (6 m) or more in height and less
1			than 3 in. (7.6 cm) DBH.
2			Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	93	= Total Cover	Herb stratum – Consists of all herbaceous (non-woody)
1	0	0.0%	plants, including herbaceous vines, regardless of size, and
2	0	0.0%	woody species, except woody vines, less than approximately 3 ft (1 m) in height.
3.	0	0.0%	Woody vines – Consists of all woody vines, regardless of
4	0	0.0%	height.
5.	0	0.0%	
6.		0.0%	Hydrophytic Vegetation
U		= Total Cover	Present? Yes No
		- 10tal 00V6l	L
Remarks: (Include photo numbers here or on a separate sh	eet.)		



Soil Sampling Point: W-jbl-160921-01

Depth	Matrix			dox Feat			absence of indicators.	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
0-8	5Y 4/1	70	2.5Y 6/8	30	C	М	Clay Loam	
8-16	10YR 5/1	60	10YR 5/8	40	С	М		
							-	
						-		•
							-	
Tyne: C=Con	ncentration D-Denletio	n RM-Redi	uced Matrix CS=Cover	ed or Coate	ed Sand Grai	ns 2locat	tion: PL=Pore Lining. M=	Matrix
* *	Indicators:	ni. Rivi–Redi	deed Matrix, 65–66ver		Su Suriu Grai	TIS LOCAT		
Histosol			Dark Surface ((C7)			Indicators for Pro	blematic Hydric Soils ³ :
_	ipedon (A2)		Polyvalue Belo		(CO) (MI DA	147 140\	2 cm Muck (A1	0) (MLRA 147)
Black His			Thin Dark Surf				Coast Prairie Re	edox (A16)
_	n Sulfide (A4)		Loamy Gleyed			40)	(MLRA 147,148	,
	Layers (A5)		✓ Depleted Matri)			dplain Soils (F19)
_	ck (A10) (LRR N)		Redox Dark Su				(MLRA 136, 14	
_	Below Dark Surface (A	11\	Depleted Dark		:7)			ark Surface (TF12)
_ '	rk Surface (A12)	.11)	Redox Depress		")		Other (Explain	in Remarks)
_	• •		Iron-Manganes		(F12) (LRR N	J.		
Sandy MI MLRA 14	uck Mineral (S1) (LRR N 7, 148)	۱,	MLRA 136)		() (-,		
_	eyed Matrix (S4)		Umbric Surfac	e (F13) (M	LRA 136, 12	2)		
Sandy Re			Piedmont Floo	dplain Soil	s (F19) (MLF	RA 148)		of hydrophytic vegetation and
	Matrix (S6)		Red Parent Ma				wettand r unless	nydrology must be present, disturbed or problematic.
	_ayer (if observed):							
Type:							Hydric Soil Present	P Yes ● No ○
Depth (inc	ches):						Hydric 30ii Present	r res S NO C
Remarks:								

Project/Site: Glencoe_wb		City/County: Bellm	nont	Sampling Date: 21-Sep-16
Applicant/Owner: AEP			State: OH	Sampling Point: w-jbl-160921-03
nvestigator(s): JBL,CMS		Section, Township,	, Range: S 24	T 5N R 3W
	Curala			
andform (hillslope, terrace, etc.):	Swale	Local relief (concave	e, convex, none).	concave Slope: 0.0% / 0.0
Subregion (LRR or MLRA): LRR N		Lat.: 40.022283758	Long.:8	0.842586824
Soil Map Unit Name: Brookside silty				WI classification: N/A
Are climatic/hydrologic conditions o	n the site typical for this ti	me of year? Yes 🂿 No 🤇	(If no, explain	•
Are Vegetation, Soil	, or Hydrology 🗌 sig	nificantly disturbed? A	re "Normal Circum	stances" present? Yes 💿 No 🔾
Are Vegetation, Soil	, or Hydrology \Box nat	urally problematic? (I	If needed, explain	any answers in Remarks.)
Summary of Findings - At	tach site map show	ving sampling point	locations, tra	ansects, important features, etc
Hydrophytic Vegetation Present?	Yes ● No ○			
Hydric Soil Present?	Yes ● No ○	Is the Samp	oled Area 🕠 🍙	•••
Wetland Hydrology Present?	Yes ● No ○	within a We		No O
Remarks:				
pem in cattle pasture				
peri in cattle pastare				
Hydrology				
Wetland Hydrology Indicators:			Second	ary Indicators (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of or	e required; check all that a	pply)		ary Indicators (minimum of two required)
• ••		pply) tic Plants (B14)	Suri	arv Indicators (minimum of two required) face Soil Cracks (B6) rsely Vegetated Concave Surface (B8)
Primary Indicators (minimum of or	True Aqua		Surl	face Soil Cracks (B6)
Primary Indicators (minimum of or Surface Water (A1)	☐ True Aqua	tic Plants (B14)	Suri	face Soil Cracks (B6) rsely Vegetated Concave Surface (B8)
Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2)	☐ True Aqua ☐ Hydrogen ☐ Oxidized F	tic Plants (B14) Sulfide Odor (C1)	Suri Spa Dra (C3) Suri	face Soil Cracks (B6) rsely Vegetated Concave Surface (B8) inage Patterns (B10)
Primary Indicators (minimum of or ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3)	True Aqua Hydrogen Oxidized F	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots (Suri	face Soil Cracks (B6) rsely Vegetated Concave Surface (B8) inage Patterns (B10) ss Trim Lines (B16)
Primary Indicators (minimum of or ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1)	True Aqua Hydrogen Oxidized F Presence o	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots (of Reduced Iron (C4)	Suri Spa Spa Dra (C3) Mos Dry Cra	face Soil Cracks (B6) rsely Vegetated Concave Surface (B8) inage Patterns (B10) ss Trim Lines (B16) Season Water Table (C2)
Primary Indicators (minimum of or ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	True Aqua Hydrogen Oxidized F Presence G Recent Iro	tic Plants (B14) Sulfide Odor (C1) Rhizospheres along Living Roots of Reduced Iron (C4) on Reduction in Tilled Soils (C6)	Suri Spa Spa Dra (C3) Mos Dry Cray	face Soil Cracks (B6) Irsely Vegetated Concave Surface (B8) Inage Patterns (B10) Inage Frim Lines (B16) Season Water Table (C2) Inage Patterns (B16)
Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3)	True Aqua Hydrogen Oxidized F Presence G Recent Iro	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7)	Suri Spa Spa Dra Crai Spa Crai Sturi Sturi	face Soil Cracks (B6) rsely Vegetated Concave Surface (B8) inage Patterns (B10) ss Trim Lines (B16) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4)	True Aqua Hydrogen Oxidized F Presence G Recent Iro Thin Muck	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7)	Suri Spa Spa Dra Dra C3)	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) ursely Trim Lines (B16) Season Water Table (C2) ursely Fish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Primary Indicators (minimum of or 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)	True Aqua Hydrogen Oxidized F Presence G Recent Iro Thin Muck	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7)	Suri Spa Spa Dra Ca Spa Ca Sturi Sturi Gec Sha	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) ursish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) unorphic Position (D2)
Primary Indicators (minimum of or 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 Imager	True Aqua Hydrogen Oxidized F Presence G Recent Iro Thin Muck	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7)	Suri Spa C(C3) Mos Cray Satu Stur Gec Sha Micci	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) ursish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3)
Primary Indicators (minimum of or 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations:	True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7) Sulain in Remarks)	Suri Spa C(C3) Mos Cray Satu Stur Gec Sha Micci	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) urfish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3) rotopographic Relief (D4)
Primary Indicators (minimum of or 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes	True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7)	Suri Spa C(C3) Mos Cray Satu Stur Gec Sha Micci	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) urfish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3) rotopographic Relief (D4)
Primary Indicators (minimum of or 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations:	True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7) Iolain in Remarks) Inches):	Suri Spa Dra C(C3) Mos Cra Satu Stur Gec Sha Micr FAC	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) ursish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3) rotopographic Relief (D4) Union Concentration (D5)
Primary Indicators (minimum of or Surface Water (A1) I 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present?	True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7) Iolain in Remarks) Inches):	Suri Spa C(C3) Mos Cray Satu Stur Gec Sha Micci	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) ursish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3) rotopographic Relief (D4) Union Concentration (D5)
Primary Indicators (minimum of or Surface Water (A1) I 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp y (B7) No Depth (i	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7) Polain in Remarks) Inches): Inches (Inches): Inches (Inches): Inches (Inches): Inches (Inches): Inches (Inches	Suri Spa Dra (C3) Mos Cra Satu Stur Gec Sha Micr FAC	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) ursish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3) rotopographic Relief (D4) Union Concentration (D5)
Primary Indicators (minimum of or Surface Water (A1) I 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present?	Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp y (B7) No Depth (i	tic Plants (B14) Sulfide Odor (C1) Phizospheres along Living Roots of Reduced Iron (C4) In Reduction in Tilled Soils (C6) Surface (C7) Polain in Remarks) Inches): Inches (Inches): Inches (Inches): Inches (Inches): Inches (Inches): Inches (Inches	Suri Spa Dra (C3) Mos Cra Satu Stur Gec Sha Micr FAC	face Soil Cracks (B6) ursely Vegetated Concave Surface (B8) inage Patterns (B10) uss Trim Lines (B16) Season Water Table (C2) ursish Burrows (C8) uration Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) umorphic Position (D2) ullow Aquitard (D3) rotopographic Relief (D4) Union Concentration (D5)

Wetland 06

		-Species?	Sampling Point: w-ibl-160921-03
Tree Stratum (Plot size:)	Absolute % Cover	Rel.Strat. Ind	
1	0	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)
2	0	0.0%	
3	0	0.0%	Total Number of Dominant Species Across All Strata: 5 (B)
4		0.0%	opedies release rill ottata.
5.		0.0%	Percent of dominant Species
		0.0%	That Are OBL, FACW, or FAC: 80.0% (A/B)
6			
7			Prevalence Index worksheet:
8	0		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum_ (Plot size:	,0 =	= Total Cover	OBL species 0 x 1 = 0
	0.5	✓ 100.0% FA	FACW species <u>85</u> x 2 = <u>170</u>
1. Rosa multiflora			FAC species $30 \times 3 = 90$
2	0	0.0%	FACU species 0.5 x 4 = 2
3	0	0.0%	
4	0	0.0%	UPL species0 x 5 =0
5		0.0%	Column Totals: 115.5 (A) 262 (B)
6.		0.0%	Prevalence Index = B/A = 2.268
7		0.0%	
8		0.0%	Hydrophytic Vegetation Indicators:
 -		0.0%	Rapid Test for Hydrophytic Vegetation
9			✓ Dominance Test is > 50%
0	0		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	:	= Total Cover	■ Morphological Adaptations ¹ (Provide supporting
1	0	0.0%	data in Remarks or on a separate sheet)
2.		0.0%	Problematic Hydrophytic Vegetation ¹ (Explain)
3.		0.0%	Indicators of hydric soil and wetland hydrology must
5 4		0.0%	be present, unless disturbed or problematic.
-		0.0%	Definition of Vegetation Strata:
		0.0%	Four Vegetation Strata:
6			Tree stratum – Consists of woody plants, excluding vines, 3
7			in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	0 =	= Total Cover	regardless of height.
1 _ Echinochioa crus-galli	25	✓ 22.7% FA	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Lobelia siphilitica	5	4.5% FA	CW Herb stratum – Consists of all herbaceous (non-woody)
3. Eupatorium perfoliatum	15	13.6% FA	plants, regardless of size, and all other plants less than 3.28 ft
4. Persicaria pensylvanica	18		tall. Woody vines – Consists of all woody vines greater than 3.28
			CW ft in height.
5. Bidens frondosa			
6. Lysimachia nummularia		\Box	Five Vegetation Strata:
7. Phalaris arundinacea	8		Tree - Woody plants, excluding woody vines, approximately
8. Impatiens capensis	14	12.7% FA	20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	0.0%	diameter at breast height (DBH).
0	0	0.0%	Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
1		0.0%	than 3 in. (7.6 cm) DBH.
2.		0.0%	Shrub stratum – Consists of woody plants, excluding woody
		= Total Cover	vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)		_	Herb stratum – Consists of all herbaceous (non-woody)
1 _ Toxicodendron radicans	5	✓ 100.0% FA	plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0	0.0%	3 ft (1 m) in height.
3.	0	0.0%	Woody vines – Consists of all woody vines, regardless of
4		0.0%	height.
		0.0%	
5			Hydrophytic
	0	0.0%	Vegetation
6			Drocont2 Yes (*) No ()
5	5	= Total Cover	Present? Yes No



Soil Sampling Point: w-jbl-160921-03

Depth		Matrix				dox Feat	ures		absence of indicators.)		
(inches)	Color	(moist)	%	Color	(moist)	%_	Type 1	Loc ²	Texture	Rem	arks
0-4	10YR	4/1	95	10YR	4/4	5	С	M	Silty Clay		
4-12	10YR	5/1	90	10YR	4/4	10	С	M	Silty Clay		
									-		
						_			-		
		_						-			
1 Type: C=Conc	centration I	D=Depletio	on RM=Redu	iced Matrix	CS=Covere	ed or Coate	ed Sand Grain	ns 2locat	tion: PL=Pore Lining. M=Matrix		
Hydric Soil I			Jii. Rivi–Rode	acca matrix,			ou ourid ordin	15 2000			2 11 3
Histosol (Dar	k Surface (S7)			Indicators for Problema		c Soils":
	pedon (A2)			_	`	,	(S8) (MLRA 1	47,148)	2 cm Muck (A10) (ML	•	
Black Hist				_			MLRA 147, 14		Coast Prairie Redox (A (MLRA 147,148)	A16)	
Hydrogen	Sulfide (A4)		Loa	my Gleyed	Matrix (F2)		Piedmont Floodplain	Soils (F19)	
Stratified	Layers (A5)			✓ Dep	leted Matri	x (F3)			(MLRA 136, 147)	30113 (1 17)	
2 cm Muck	k (A10) (LR	R N)			ox Dark Su				Very Shallow Dark Su	rface (TF1	2)
	Below Dark		\11)		leted Dark	•	7)		Other (Explain in Ren	narks)	
	k Surface (A	•		_	ox Depress		/E12) /LDD N				
Sandy Mu MLRA 147	ck Mineral (', 148)	(S1) (LRR I	٧,		-Manganes A 136)	se Masses	(F12) (LRR N	ı			
Sandy Gle	yed Matrix	(S4)		Um	bric Surface	e (F13) (M	LRA 136, 122)	³ Indicators of hydi		4-4:
Sandy Red				Pied	lmont Floo	dplain Soil	s (F19) (MLR	A 148)	wetland hydrolo	gy must b	e present,
Stripped N	Matrix (S6)			Red	Parent Ma	iterial (F21) (MLRA 127	147)	unless disturi	oed or prol	olematic.
Restrictive La	ayer (if ob	served):									
Type:											
Depth (inch	hes):								Hydric Soil Present?	∕es ⊙	No O
Remarks:											

Wetland 07 Project/Site: Glencoe_wb	WEI	LAND	DETERMINATION	City/County:		iour	ntain			t Regio	
Applicant/Owner: AEP				,,.	State: 0	ш		Sampling			
Investigator(s): JBL,CMS				Section Tow	nship, Range: S	_	24	T 5N	-	W-JDI R 3	-160921-04
						-					
Landform (hillslope, terrace,	etc.):	Toeslope		Local relief (co	ncave, convex,	none	e):	flat			0.0
Subregion (LRR or MLRA):	LRR N		Lat.:	40.02223020	8 Lo	ng.:	-80	.843274744		Datu	m: NAD 83
Soil Map Unit Name: Lowel	I-Westmor	reland silt	loams, 25-35 percent s	lopes			NW	/I classifica	tion: N	/A	
Are climatic/hydrologic cond	litions on	the site ty	pical for this time of ye	ear? Yes 💿	No O (If no	o, exp	plain i	in Remarks	.)		
Are Vegetation, Soi	ı 🗌 ,	or Hydrol	ogy 🗌 significantl	y disturbed?	Are "Norma	al Cir	cums	tances" pre	sent?	Yes	No 🔾
Are Vegetation, Soi	ı 🗌 ,	or Hydrol	ogy 🗌 naturally p	roblematic?	(If needed,	expl	lain a	ny answers	in Rema	ırks.)	
Summary of Finding	js - Atta	ach site	e map showing s	ampling p	oint locatio	ns,	, tra	nsects, i	import	tant fe	atures, etc
Hydrophytic Vegetation Pre	esent?	Yes 💿	No O								
Hydric Soil Present?		Yes	No O	Is the	Sampled Area	Vo		No O			
Wetland Hydrology Present	i?	Yes	No O	withir	a Wetland?	16:	s ©	NO C			
Remarks:											
disturbed pem in pasture-o	due to catt	le, receive	s runoff from swale								
Hydrology											
Wetland Hydrology Indicat Primary Indicators (minimu		roquirod.	check all that apply)			_Se	1	v Indicators		of two re	auired)
Surface Water (A1)	am or one	requirea;	True Aquatic Plants	· (D1/I)			,	ice Soil Crack		Curfoso	(DO)
✓ High Water Table (A2)			Hydrogen Sulfide C			☐ Sparsely Vegetated Concave Surface (B8) ✓ Drainage Patterns (B10)					
Saturation (A3)			_ , ,					Moss Trim Lines (B16)			
Water Marks (B1)			Presence of Reduce		10013 (03)	П	,	Season Water	•	2)	
Sediment Deposits (B2)			Recent Iron Reduct	. ,	s (C6)	П	, ,	ish Burrows		-)	
Drift deposits (B3)			Thin Muck Surface		()	П	, ,	ration Visible		Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in R				1	ted or Stresse		-	,
Iron Deposits (B5)			Other (Explain in R	citiatiks)		✓	1	norphic Posit		,	
Inundation Visible on Aeria	al Imagery	(B7)				$\overline{\Box}$	1	ow Aquitard			
Water-Stained Leaves (B9)						$\overline{\Box}$	1	topographic		1)	
Aquatic Fauna (B13)							_	neutral Test		,	
Field Observations:									. ,		
Surface Water Present?	Yes \bigcirc	No 💿	Depth (inches):								
Water Table Present?	Yes	No 🔾	Depth (inches):	6							
Saturation Present?	Yes	No O	Depth (inches):	0	Wetland Hyd	drolo	gy Pro	esent?	Yes	No O	
(includes capillary fringe)			1 , , ,		actions) if avail	oblo.					
Describe Recorded Data (str	ream gaug	je, monito	ring weii, aeriai photos	, previous inspe	ections), ii avaiii	abie:					
Remarks:											

Wetland 07

	Cover 0 0 0 0 0 0			Indicator Status	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
1	0 0 0 0	Cov	0.0%	Status	That are OBL, FACW, or FAC: (A)
2	0 0 0		0.0%		That are OBL, FACW, or FAC: (A)
3	0 0				
4	0		0.0%		Total Number of Dominant
4	0				Species Across All Strata:4 (B)
6			0.0%		
6	0	$\sqcup_{_}$	0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 50.0% (A/B)
7			0.0%		That Are OBL, FACW, or FAC:
8	0	\Box _	0.0%		Prevalence Index worksheet:
	0	\square _	0.0%		Total % Cover of: Multiply by:
(District	0 =	= Tot	tal Cover	•	0BL species x 1 =0
Sapling-Sapling/Shrub Stratum (Plot size:)					FACW species65 x 2 =130
1	0	片-	0.0%		FAC species $0 \times 3 = 0$
2	0	님-	0.0%		FACU species 30 x 4 = 120
3	0	닏-	0.0%		x :
4	0	ᆜ_	0.0%		'
5	0	□_	0.0%		Column Totals: 95 (A) 250 (B)
6	0	Ш.	0.0%		Prevalence Index = B/A =2.632_
7	0	Ш_	0.0%		Hydrophytic Vegetation Indicators:
8	0	$\square_{_}$	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	$\square_{_}$	0.0%		Dominance Test is > 50%
0	0	$\Box_{_}$	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0 =	= Tot	tal Cover	•	Morphological Adaptations ¹ (Provide supporting
	5	~	100.0%	FΔCII	data in Remarks or on a separate sheet)
••	0	Ď-	0.0%	TACO	Problematic Hydrophytic Vegetation ¹ (Explain)
2	0	Π-	0.0%		1 Indicators of hydric soil and watland hydrology must
3	0	H-			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		ద-	0.0%		Definition of Vegetation Strata:
5	0	⊢-	0.0%		
6		닏-	0.0%		Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3
7	0	Ш_	0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:) —	5 =	= Tot	tal Cover	•	regardless of height.
1. Persicaria pensylvanica	30	~	33.3%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Lysimachia nummularia	35	~	38.9%	FACW	Herb stratum – Consists of all herbaceous (non-woody)
3. Urtica dioica	25	✓	27.8%	FACU	plants, regardless of size, and all other plants less than 3.28 ft
4	0		0.0%		tall. Woody vines – Consists of all woody vines greater than 3.28
5	0		0.0%		ft in height.
6	0		0.0%		5: 1/ 6: .
7	0	\Box	0.0%		Five Vegetation Strata:
8.	0	$\overline{\sqcap}^-$	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
	0	$\overline{\Box}$	0.0%		diameter at breast height (DBH).
9	0	Π-	0.0%		Sapling stratum – Consists of woody plants, excluding woody
0	0	H-	0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1	0	H-			Shrub stratum – Consists of woody plants, excluding woody
2		⊔_ - То!	0.0% tal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	90 =	- 10	tai Covei		Herb stratum – Consists of all herbaceous (non-woody)
1	0	$\sqcup_{_}$	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%		height.
5	0		0.0%		
	0	$\overline{\Box}$	0.0%		Hydrophytic Vegetation
6		 = To	tal Cover		Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)			00 vei	-	



Soil Sampling Point: w-jbl-160921-04

Profile Descr	iption: (Describe to	the depth	needed to	documen	t the indic	cator or co	onfirm the	absence of indicators.)	
Depth	Matrix				dox Featu	1			
(inches) 0-4	Color (moist) 10YR 3/1	100	Color	(moist)	%	Type	Loc ²	<u>Texture</u>	Remarks
4-13	10YR 5/1	90	10YR	4/6		С	M	Clay Loam	
		_			_				
				-					
		_			_				
			-	-					
		_	-				-		
• •	· · · · · · · · · · · · · · · · · · ·	on. RM=Red	uced Matrix,	CS=Covere	ed or Coate	d Sand Grai	ins ² Locat	tion: PL=Pore Lining. M=Ma	
Hydric Soil I Histosol (A			□ Darl	k Surface ((7)			Indicators for Proble	ematic Hydric Soils ³ :
`	pedon (A2)		_	,	•	(S8) (MLRA	147 148)	2 cm Muck (A10)	(MLRA 147)
Black Hist						1LRA 147, 1		Coast Prairie Redo (MLRA 147,148)	ox (A16)
	Sulfide (A4) Layers (A5)			my Gleyed leted Matri	Matrix (F2)			Piedmont Floodpl	
	k (A10) (LRR N)			ox Dark Su				(MLRA 136, 147) Very Shallow Dari	
	Below Dark Surface (A	A11)	Dep	leted Dark	Surface (F	7)		Other (Explain in	
	k Surface (A12)		_	ox Depress		· · · · · · · · · · · · · · · · · · ·		_ , ,	
Sandy Mu MLRA 147	ıck Mineral (S1) (LRR 1 7, 148)	٧,	MLR	A 136)		F12) (LRR I			
	eyed Matrix (S4)					RA 136, 12		³ Indicators of	hydrophytic vegetation and
Sandy Red	dox (S5) Matrix (S6)					s (F19) (MLI) (MLRA 127		wetland hyd	drology must be present, sturbed or problematic.
			Red	raieiii ivia	iteriai (121)	(IVILKA 12	7, 147)	unessu	sturbed or problematic.
Type:	ayer (if observed):								
Depth (incl	hes):							Hydric Soil Present?	Yes No
Remarks:									

Welland 00	DATA FORM - Eastern Mountains and Piedmont Region
Project/Site: Glencoe_wb	City/County: Bellmont Sampling Date: 22-Sep-16
Applicant/Owner: AEP	State: OH Sampling Point: W-JBL-160922-01
Investigator(s): JBL,CMS	Section, Township, Range: S 29 T 5N R 3W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none):none Slope:0.0%_ /0.0 °
Subregion (LRR or MLRA): LRR N Lat.:	40.012142217 Long.: -80.860526792 Datum: NAD 83
Soil Map Unit Name: Brookside silty clay loam, 15 to 25 percent slope	NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of y	rear? Yes No (If no, explain in Remarks.)
	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ● No ○	
Hydric Soil Present? Yes ● No ○	Is the Sampled Area Yes No
Wetland Hydrology Present? Yes No	within a Wetland?
Remarks:	L
wetland swale fed by a spring box	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plant	
High Water Table (A2) Hydrogen Sulfide (
	eres along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	
	ction in Tilled Soils (C6) Crayfish Burrows (C8)
☐ Iron Deposits (B5) ☐ Other (Explain in F	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes O No O Depth (inches):	
Water Table Present? Yes O No O Depth (inches):	
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:
Remarks:	

	Wetland 08
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		Dominant Species?		Sampling Point: W-JBL-160922-01		
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status			
1		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)		
2		0.0%				
3		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)		
4		0.0%		Species ridioss rill strata.		
5		0.0%		Percent of dominant Species		
6		0.0%		That Are OBL, FACW, or FAC: 66.7% (A/B)		
	_	0.0%		Describer of the description of		
7		$\overline{}$		Prevalence Index worksheet: Total % Cover of: Multiply by:		
8		0.0%				
Sapling-Sapling/Shrub Stratum (Plot size:	_) =	= Total Cove	r	OBL species 0 x 1 = 0 FACW species 57 x 2 = 114		
1		0.0%				
2.		0.0%		FAC species $\underline{69}$ x 3 = $\underline{207}$		
3		0.0%		FACU species $\underline{5}$ x 4 = $\underline{20}$		
4		0.0%		UPL species x 5 =0		
5.	_	0.0%		Column Totals:131 (A)341 (B)		
6.		0.0%		Prevalence Index = B/A = 2.603		
7.		0.0%				
8		0.0%		Hydrophytic Vegetation Indicators:		
		0.0%		Rapid Test for Hydrophytic Vegetation		
9				✓ Dominance Test is > 50%		
10		0.0%		✓ Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)	:	= Total Cove	r	☐ Morphological Adaptations ¹ (Provide supporting		
1	0	0.0%		data in Remarks or on a separate sheet)		
2		0.0%		Problematic Hydrophytic Vegetation 1 (Explain)		
3		0.0%		¹ Indicators of hydric soil and wetland hydrology must		
4		0.0%		be present, unless disturbed or problematic.		
5		0.0%		Definition of Vegetation Strata:		
6.		0.0%		Four Vegetation Strata:		
		0.0%		Tree stratum - Consists of woody plants, excluding vines, 3 in.		
7.		= Total Cove		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
Herb Stratum (Plot size: _5')		_		Sapling/shrub stratum – Consists of woody plants, excluding		
1. Verbesina alternifolia	65	51.6%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2. Persicaria pensylvanica		5.6%	FACW	Herb stratum - Consists of all herbaceous (non-woody) plants,		
3. Eupatorium perfoliatum	5	4.0%	FACW	regardless of size, and all other plants less than 3.28 ft tall.		
4. Vernonia noveboracensis	10	7.9%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft in height.		
5. Symphyotrichum pilosum	4	3.2%	FAC	in neight.		
6. Poa palustris	35	✓ 27.8%	FACW	Five Vegetation Strata:		
7	0	0.0%				
8.	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in		
9		0.0%		diameter at breast height (DBH).		
		0.0%		Sapling stratum – Consists of woody plants, excluding woody		
10		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.		
l1		\neg		Shrub stratum – Consists of woody plants, excluding woody		
12	0	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Woody Vine Stratum (Plot size:)		= Total Cove	ŗ	Herb stratum – Consists of all herbaceous (non-woody) plants,		
1 Lonicera japonica	5	✓ 100.0%	FACU	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1		
2	0	0.0%		m) in height.		
3	0	0.0%		Woody vines – Consists of all woody vines, regardless of		
4		0.0%		height.		
5		0.0%				
6.		0.0%		Hydrophytic Vegetation		
U		= Total Cove		Present? Yes No		
		o.a. cove		<u> </u>		
Remarks: (Include photo numbers here or on a separate so ac neutral test met	heet.)					



Soil Sampling Point: W-JBL-160922-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			dox Featu	1	1 - 2	Tankon	Demonstra	
(inches) 0-16	Color (moist) 10YR 4/1	8 0	7.5YR 4/6	% 20	Type C	Loc ²	Texture sandy clay loam	Remarks	
0-10	101K 4/1		7.51K 4/0			IVI	Sandy clay loan		
			-				-		
							-		
¹ Type: C=Cond	centration. D=Depletio	n. RM=Reduc	ced Matrix, CS=Covere	ed or Coate	d Sand Grai	ns ² Locat	ion: PL=Pore Lining. M=Ma	atrix	
Hydric Soil I							Indicators for Probl	ematic Hydric Soils ³ :	
Histosol (Dark Surface (,			2 cm Muck (A10)		
	pedon (A2)		Polyvalue Belo				Coast Prairie Red		
Black Hist			Thin Dark Surf			48)	(MLRA 147,148)	5X (1110)	
	Sulfide (A4)		Loamy Gleyed				Piedmont Floodp	ain Soils (F19)	
	Layers (A5)		✓ Depleted Matri				(MLRA 136, 147)		
	k (A10) (LRR N)		Redox Dark Su		_,			k Surface (TF12)	
	Below Dark Surface (A	11)	Depleted Dark		7)		Other (Explain in	Remarks)	
	k Surface (A12)		Redox Depress		(E12) (LDD N				
Sandy Mu MLRA 147	ick Mineral (S1) (LRR N 7, 148)	l,	Iron-Manganes MLRA 136)						
Sandy Gle	eyed Matrix (S4)		Umbric Surface				3 Indicators of	hydrophytic vegetation and	
Sandy Red	dox (S5)		Piedmont Floo	dplain Soils	s (F19) (MLF	RA 148)	wetland hyd	drology must be present,	
Stripped N	Matrix (S6)		Red Parent Ma	iterial (F21)) (MLRA 127	', 147)	unless di	sturbed or problematic.	
Restrictive L	ayer (if observed):								
Туре:									
Depth (incl	hes):						Hydric Soil Present?	Yes ● No ○	
Remarks:							,		

roject/Site: Glencoe-WB				City/County	: Bellmont	Sampling Date: 23-Sep-16
pplicant/Owner: AEP					State: 0	Sampling Point: w-jbl-160923-01
nvestigator(s): JBL,CMS				Section, To	wnship, Range:	
andform (hillslope, terrace	e, etc.):	Toeslope		Local relief (c	concave, convex,	none): none
ubregion (LRR or MLRA):	_	10031000	l at			2.
	LRR N	colond cilt		: 40.01349329	98 LO	
oil Map Unit Name: Lowe						NWI classification: N/A
re climatic/hydrologic con						o, explain in Remarks.)
re Vegetation , So	oil 🔲 ,	or Hydro	logy	ntly disturbed?	Are "Norma	al Circumstances" present? Yes • No
re Vegetation 🗌 , So	oil 🗌 ,	or Hydro	logy 🗌 naturally	problematic?	(If needed,	explain any answers in Remarks.)
Summary of Findin	as - Atta	ach site	e man showing	sampling	point locatio	ons, transects, important features, e
		Yes	No O	, samping	point location	one, transcoto, impertant reatares, e
Hydrophytic Vegetation Pr		Yes •	No O			
Hydric Soil Present?		Yes Yes	No O		ie Sampled Area in a Wetland?	Yes ● No ○
Wetland Hydrology Preser	nt?	Yes 💌	NO U			
Remarks:						
toe of slope wetland near	Gierico sta	tion. Chec	ik po see ii data alrea	idy exists		
lydrology						
	tors:					Secondary Indicators (minimum of two required)
Hydrology Wetland Hydrology Indica Primary Indicators (minim		required;	check all that apply)			Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Wetland Hydrology Indica Primary Indicators (minim Surface Water (A1)		required;	check all that apply) True Aquatic Plai	nts (B14)		
Primary Indicators (minim Surface Water (A1) High Water Table (A2)		required;	True Aquatic Plan Hydrogen Sulfide	e Odor (C1)		Surface Soil Cracks (B6)
Wetland Hydrology Indical Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3)		required;	True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp	e Odor (C1) oheres along Livin	g Roots (C3)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16)
Wetland Hydrology Indical Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		required;	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	e Odor (C1) oheres along Livin uced Iron (C4)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2)
Wetland Hydrology Indica Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		required;	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	e Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hydrology Indical Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		required;	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	e Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ce (C7)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2)
Wetland Hydrology Indical Primary Indicators (minim Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3)		required;	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	e Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ce (C7)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indical Primary Indicators (minim Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4)	num of one		True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	e Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ce (C7)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Wetland Hydrology Indica Primary Indicators (minim 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 Aer Water-Stained Leaves (B	num of one		True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	e Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ce (C7)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Wetland Hydrology Indical Primary Indicators (minim 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 Aer Water-Stained Leaves (B4) Aquatic Fauna (B13)	num of one		True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	e Odor (C1) oheres along Livin uced Iron (C4) uction in Tilled So ce (C7)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indical Primary Indicators (minim 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 Aer Water-Stained Leaves (B4) Aquatic Fauna (B13) Field Observations:	num of one	(B7)	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) n Remarks)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Wetland Hydrology Indica Primary Indicators (minim 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 Aer Water-Stained Leaves (B1) Aquatic Fauna (B13) Field Observations: Surface Water Present?	rial Imagery ((B7)	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) n Remarks)		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Wetland Hydrology Indical Primary Indicators (minim 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 Aer Water-Stained Leaves (B1) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present?	rial Imagery (9) Yes O	(B7) No • No ○	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) n Remarks)	ils (C6)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Wetland Hydrology Indica Primary Indicators (minim 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 Aer Water-Stained Leaves (B1) Aquatic Fauna (B13) Field Observations: Surface Water Present?	rial Imagery ((B7)	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) n Remarks)	ils (C6)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) ✓ FAC-neutral Test (D5)
Wetland Hydrology Indical Primary Indicators (minim 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 Aer Water-Stained Leaves (B1) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Saturation Present?	rial Imagery (9) Yes O Yes Yes	(B7) No No No No No	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in Depth (inches) Depth (inches)	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) in Remarks) :	ils (C6) Wetland Hyd	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) ✓ FAC-neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (minim 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 Aer Water-Stained Leaves (Br Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	rial Imagery (9) Yes O Yes Yes	(B7) No No No No No	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in Depth (inches) Depth (inches)	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) in Remarks) :	ils (C6) Wetland Hyd	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) ✓ FAC-neutral Test (D5)
Wetland Hydrology Indical Primary Indicators (minim 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 Aer Water-Stained Leaves (B1) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	rial Imagery (9) Yes O Yes Yes	(B7) No No No No No	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in Depth (inches) Depth (inches)	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) in Remarks) :	ils (C6) Wetland Hyd	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) ✓ FAC-neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (minim 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 Aer Water-Stained Leaves (Br Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	rial Imagery (9) Yes O Yes Yes	(B7) No No No No No	True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Other (Explain in Depth (inches) Depth (inches)	e Odor (C1) cheres along Livin uced Iron (C4) uction in Tilled So ce (C7) in Remarks) :	ils (C6) Wetland Hyd	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) ✓ FAC-neutral Test (D5)

			ominant		Sampling Point: w-ibl-160923-01		
Tree Stratum (Plot size:)	Absolute % Cover	Re		Indicator Status	Dominance Test worksheet:		
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:3 (A)		
2	0		0.0%				
3	0		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)		
4			0.0%		(2)		
5.			0.0%		Percent of dominant Species		
6			0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)		
7		\Box	0.0%		Prevalence Index worksheet:		
8.		\Box	0.0%		Total % Cover of: Multiply by:		
0.	0	_ To	otal Cover		0BL species 23 x 1 = 23		
Sapling-Sapling/Shrub Stratum (Plot size:)	- 10	otal oover				
1_Salix nigra	5	V	100.0%	OBL	FACW species 90 x 2 = 180		
2			0.0%		FAC species $0 \times 3 = 0$		
3			0.0%		FACU species $0 \times 4 = 0$		
4			0.0%		UPL species x 5 =		
5.			0.0%		Column Totals: <u>113</u> (A) <u>203</u> (B)		
6	_	\Box	0.0%		Prevalence Index = B/A = 1.796		
		$\overline{\Box}$	0.0%				
7 8			0.0%		Hydrophytic Vegetation Indicators:		
<u> </u>		\Box	0.0%		Rapid Test for Hydrophytic Vegetation		
9					✓ Dominance Test is > 50%		
10		Щ,	0.0%		✓ Prevalence Index is ≤3.0 ¹		
Shrub Stratum (Plot size:)	5	= 10	otal Cover		Morphological Adaptations ¹ (Provide supporting		
1		\sqcup	0.0%		data in Remarks or on a separate sheet)		
2		\square	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)		
3			0.0%		¹ Indicators of hydric soil and wetland hydrology must		
4			0.0%		be present, unless disturbed or problematic.		
5			0.0%		Definition of Vegetation Strata:		
6.			0.0%		Four Vegetation Strata:		
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.		
Herb Stratum (Plot size: _5')	0	= To	otal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
	40	~	27.00/	EAC\A/	Sapling/shrub stratum – Consists of woody plants, excluding		
1. Impatiens capensis			37.0%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2. Poa palustris		∠	18.5%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.		
3. Lysimachia nummularia		V	20.4%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft		
4. Leersia oryzoides		Η.	9.3%	OBL	in height.		
5. Carex lurida	8		7.4%	OBL			
6. Scirpus cyperinus		Н.	7.4%	FACW	Five Vegetation Strata:		
7		Н.	0.0%		Tree - Woody plants, excluding woody vines, approximately 20		
8		\sqcup	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).		
9		\square	0.0%		Sapling stratum – Consists of woody plants, excluding woody		
10		\square	0.0%		vines, approximately 20 ft (6 m) or more in height and less		
11	0	\square	0.0%		than 3 in. (7.6 cm) DBH.		
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.		
Woody Vine Stratum (Plot size:)	108	= To	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,		
1			0.0%		including herbaceous vines, regardless of size, and woody		
	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.		
2	0		0.0%		Woody vines – Consists of all woody vines, regardless of		
3	0		0.0%		height.		
4							
5		<u></u>	0.0%		Hydrophytic		
6	0	Ш.	0.0%		Vegetation Present? Yes No		
	0	= T	otal Cover	-			
Remarks: (Include photo numbers here or on a separate sho	eet.)						



Soil Sampling Point: w-jbl-160923-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features										
Depth	Matrix		-		1					
(inches)	Color (moist)	%	Color (moist)	%_	Type	Loc2	Texture	Remarks		
0-4	10YR 4/1	98	10YR 4/4	2			Silty Clay Loam			
4-14	10YR 5/1	95	10YR 4/4	5			Silty Clay Loam			
				-				-		
								*		
		_								
							-	-		
		-	-							
		-								
¹ Type: C=Cond	centration. D=Depletio	n. RM=Red	uced Matrix, CS=Covere	d or Coate	ed Sand Grai	ins ² Locat	ion: PL=Pore Lining. M=Ma	atrix		
Hydric Soil I	Indicators:						Indicators for Proble	ematic Hydric Soils ³ :		
Histosol (☐ Dark Surface (S7)						
	pedon (A2)		Polyvalue Belov	v Surface	(S8) (MLRA	147,148)	2 cm Muck (A10)			
Black Hist			Thin Dark Surfa				Coast Prairie Red (MLRA 147,148)	ox (A16)		
	Sulfide (A4)		Loamy Gleyed					1 (540)		
Stratified	Layers (A5)		✓ Depleted Matri				Piedmont Floodp (MLRA 136, 147)	Iain Solls (F19)		
2 cm Muc	k (A10) (LRR N)		Redox Dark Su				Very Shallow Dar			
	Below Dark Surface (A	11)	Depleted Dark	Surface (F	7)		Other (Explain in			
	k Surface (A12)	,	Redox Depress	ions (F8)			Other (Explain in	Kenaksy		
	ıck Mineral (S1) (LRR N	I.	☐ Iron-Manganes	e Masses	(F12) (LRR I	N,				
MLRA 147		- 7	MLRA 136)							
Sandy Gle	eyed Matrix (S4)		Umbric Surface	e (F13) (MI	LRA 136, 12	2)	³ Indicators of hydrophytic vegetation and			
Sandy Re	dox (S5)		Piedmont Floor	dplain Soils	s (F19) (MLI	RA 148)		hydrophytic vegetation and drology must be present,		
Stripped I	Matrix (S6)		Red Parent Ma	terial (F21) (MLRA 127	7, 147)	unless di	sturbed or problematic.		
Dootrietive	aver (if about ed).									
	ayer (if observed):									
Type:							Hydric Soil Present?	Yes ● No ○		
Depth (inc	nes):						,	100 0 110 0		
Remarks:										

Project/Site: Glencoe-WB		C	ity/County:	Bellmont		Sampl	ling Date:	23-Sep-16
Applicant/Owner: AEP				State: 0	Н	Sampling Po	int: w	-jbl-160923-02
Investigator(s): JBL,CMS		5	Section, Tow	nship, Range: S	s 6	T 6N	R	4W
_andform (hillslope, terrace, etc.):	Swale	Lo	cal relief (co	ncave, convex,	none):	concave	Slope:	0.0% / 0.
Subregion (LRR or MLRA): LRR N	Ovuio				_	.893408219		Datum: NAD 83
Soil Map Unit Name: Chagrin silt lo	am 0.2 parcent s		10.01399601	<u> </u>		I classification:		Datum. NAD 03
	· · · · · · · · · · · · · · · · · · ·	•	- V (A)	No O			: <u>IV/A</u>	
Are climatic/hydrologic conditions or					•	n Remarks.)	Voo	. ● No ○
Are Vegetation, Soil	, or Hydrology	significantly of	disturbed?	Are "Norma	al Circumst	ances" present	? Yes	NO U
Are Vegetation, Soil	, or Hydrology	naturally prol	blematic?	(If needed,	, explain ar	ny answers in R	Remarks.)	1
Summary of Findings - At	tach site ma	np showing sa	mplina p	oint locatio	ons, trai	nsects, imp	oortani	t features, e
Hydrophytic Vegetation Present?	Yes No	<u> </u>	, g P		-,	· · · · · · · · · · · · · · ·		
	Yes • No		la Aba	Commission Assess				
Hydric Soil Present?	Yes • No	_		Sampled Area a Wetland?	Yes	No O		
Wetland Hydrology Present?	Tes 🥯 NO 🤇							
Remarks:	nfo and nec							
adjacent to hh-02. pem with some	pfo and pss							
adjacent to hh-02. pem with some	pfo and pss							
adjacent to hh-02. pem with some	pfo and pss				_Secondar	v Indicators (mini	imum of tv	vo reauired)
adjacent to hh-02. pem with some Hydrology		all that apply)				v Indicators (mini ce Soil Cracks (Bé		vo reauired)
adjacent to hh-02. pem with some Hydrology Wetland Hydrology Indicators:		all that apply) True Aquatic Plants (E	314)		Surfa		5)	
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2)					Surfa	ce Soil Cracks (B6	6) oncave Surf	
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3)		True Aquatic Plants (E	or (C1)	Roots (C3)	Surface Spars Drain Moss	ce Soil Cracks (Bé sely Vegetated Co age Patterns (B16) Trim Lines (B16)	6) oncave Surf 0)	
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced	or (C1) s along Living Iron (C4)		Surfaction Spars Drain Moss Dry S	ce Soil Cracks (Besely Vegetated Co lage Patterns (B10 Trim Lines (B16) Jeason Water Tab	6) oncave Surf 0)	
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3)		True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction	or (C1) s along Living Iron (C4) n in Tilled Soils		Surface Spars Drain Moss Dry S Crayfi	ce Soil Cracks (Bésely Vegetated Co age Patterns (B16 Trim Lines (B16) season Water Tab ish Burrows (C8)	6) oncave Surf 0) ole (C2)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3)		True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction Thin Muck Surface (C7	or (C1) s along Living Iron (C4) n in Tilled Soils 7)		Surfar Spars Drain Moss Dry S Crayfi Satur	ce Soil Cracks (Bésely Vegetated Co age Patterns (B16 Trim Lines (B16) deason Water Tab dish Burrows (C8) ration Visible on A	6) oncave Surf 0) ole (C2) Aerial Imag	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4)		True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction	or (C1) s along Living Iron (C4) n in Tilled Soils 7)		Surfar Spars Drain Moss Dry S Crayfi Satur	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16 Trim Lines (B16) Season Water Tab ish Burrows (C8) ration Visible on A	oncave Surf 0) ble (C2) Aerial Imag ants (D1)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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)	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction Thin Muck Surface (C7	or (C1) s along Living Iron (C4) n in Tilled Soils 7)		Surfar Spars Drain Moss Dry S Crayfi Satur Stunt Geom	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16) Trim Lines (B16) Geason Water Tab ish Burrows (C8) Fation Visible on A sed or Stressed Planorphic Position (I	oncave Surf 0) ble (C2) Aerial Imag ants (D1)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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 Imager	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction Thin Muck Surface (C7	or (C1) s along Living Iron (C4) n in Tilled Soils 7)		Surfar Spars Drain Moss Dry S Crayfi Saturt Stunt Geom	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16) Trim Lines (B16) Season Water Tab ish Burrows (C8) ration Visible on A seed or Stressed Pla norphic Position (I low Aquitard (D3)	5) oncave Surf 0) ole (C2) Aerial Imag ants (D1) D2)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager Water-Stained Leaves (B9)	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction Thin Muck Surface (C7	or (C1) s along Living Iron (C4) n in Tilled Soils 7)		Surfa Spars Drain Moss Dry S Crayfi Saturt Geom Shalld	ce Soil Cracks (Bésely Vegetated Co lage Patterns (B10 Trim Lines (B16) Season Water Tab ish Burrows (C8) Pation Visible on A seed or Stressed Planorphic Position (I low Aquitard (D3) stopographic Relie	oncave Surf o) ole (C2) Aerial Imag ants (D1) D2)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13)	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction Thin Muck Surface (C7	or (C1) s along Living Iron (C4) n in Tilled Soils 7)		Surfa Spars Drain Moss Dry S Crayfi Saturt Geom Shalld	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16) Trim Lines (B16) Season Water Tab ish Burrows (C8) ration Visible on A seed or Stressed Pla norphic Position (I low Aquitard (D3)	oncave Surf o) ole (C2) Aerial Imag ants (D1) D2)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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 Imager Water-Stained Leaves (B9)	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reduction Thin Muck Surface (C7 Other (Explain in Rem	or (C1) s along Living Iron (C4) n in Tilled Soils 7) narks)		Surfa Spars Drain Moss Dry S Crayfi Saturt Geom Shalld	ce Soil Cracks (Bésely Vegetated Co lage Patterns (B10 Trim Lines (B16) Season Water Tab ish Burrows (C8) Pation Visible on A seed or Stressed Planorphic Position (I low Aquitard (D3) stopographic Relie	oncave Surf o) ole (C2) Aerial Imag ants (D1) D2)	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations:	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reductior Thin Muck Surface (C Other (Explain in Rem	or (C1) s along Living Iron (C4) n in Tilled Soils 7) narks)		Surfa Spars Drain Moss Dry S Crayfi Saturt Geom Shalld	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16) Trim Lines (B16) Season Water Tab ish Burrows (C8) ration Visible on A sed or Stressed Planorphic Position (I low Aquitard (D3) stopographic Relieneutral Test (D5)	oncave Surf oncave Surf oncave Surf oncave	ery (C9)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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 Imager □ Water-Stained Leaves (B9) □ Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves ● Saturation Present?	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reductior Thin Muck Surface (C7 Other (Explain in Rem Depth (inches):	or (C1) s along Living Iron (C4) n in Tilled Soils 7) narks)		Surfar Spars Drain Moss Dry S Crayfi Saturt Stunt Geom Shalla Micro	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16) Trim Lines (B16) Season Water Tab ish Burrows (C8) ration Visible on A sed or Stressed Pla corphic Position (I tow Aquitard (D3) stopographic Relie meutral Test (D5)	oncave Surf oncave Surf oncave Surf oncave	ace (B8)
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of on ✓ 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes ●	e required; check	True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizospheres Presence of Reduced Recent Iron Reductior Thin Muck Surface (C Other (Explain in Rem Depth (inches): Depth (inches): Depth (inches):	or (C1) s along Living Iron (C4) n in Tilled Soils 7) narks)	Wetland Hyd	Surfar Spars Drain Moss Dry S Crayfi Saturt Stunt Geom Shallc Micro FAC-r	ce Soil Cracks (Bésely Vegetated Co sage Patterns (B16) Trim Lines (B16) Season Water Tab ish Burrows (C8) ration Visible on A sed or Stressed Pla corphic Position (I tow Aquitard (D3) stopographic Relie meutral Test (D5)	oncave Surf oncave Surf oncave Surf oncave	ery (C9)

				ominant		Sampling Point: w-ibl-160923-02			
Tı	ee Stratum (Plot size:)	Absolute % Cover	R	pecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:			
1	Acer negundo	15	~	100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC:5(A)			
2		0		0.0%					
				0.0%		Total Number of Dominant Species Across All Strata: 6 (B)			
		_		0.0%		specific via cos via citata			
				0.0%		Percent of dominant Species			
		_	\Box	0.0%		That Are OBL, FACW, or FAC: 83.3% (A/B)			
_			П	0.0%		Prevalence Index worksheet:			
						Total % Cover of: Multiply by:			
8	-	0		0.0%					
Sa	ppling-Sapling/Shrub Stratum (Plot size:)	15	= 10	otal Cover		0BL species 0 x 1 = 0			
	Salix interior		~	100.0%	FACW	FACW species 118 x 2 = 236			
•	Odin mono		$\overline{\Box}$	0.0%		FAC species x 3 =60			
			\Box	0.0%		FACU species $5 \times 4 = 20$			
•			\vdash	0.0%		UPL species $0 \times 5 = 0$			
			Н			Column Totals: 143 (A) 316 (B)			
		_	Н	0.0%					
6				0.0%		Prevalence Index = B/A =			
7		0		0.0%		Hydrophytic Vegetation Indicators:			
8		0	Ш	0.0%		Rapid Test for Hydrophytic Vegetation			
9		0		0.0%		✓ Dominance Test is > 50%			
10		0		0.0%		✓ Prevalence Index is ≤3.0 ¹			
CI	nrub Stratum (Plot size:)	20	= Te	otal Cover	•				
		5	~	100.0%	FACU	Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)			
•	Rosa multiflora				TACO	Problematic Hydrophytic Vegetation ¹ (Explain)			
				0.0%					
	-			0.0%		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
4		0	\sqcup	0.0%					
5		0		0.0%		Definition of Vegetation Strata:			
				0.0%		Four Vegetation Strata:			
				0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),			
	erb Stratum (Plot size:)		= T	otal Cover		regardless of height.			
		35	~	35.7%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding			
-	Impatiens capensis					vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
_	Phalaris arundinacea		Н	8.2%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.			
3	Eupatorium perfoliatum	15	Н	15.3%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft			
4	Solidago gigantea	12		12.2%	FACW	in height.			
5	Persicaria pensylvanica	20	~	20.4%	FACW				
6	Lobelia siphilitica	8	Ц	8.2%	FACW	Five Vegetation Strata:			
7		0	Ш	0.0%		Tree - Woody plants, excluding woody vines, approximately 20			
8		0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in			
9		0		0.0%		diameter at breast height (DBH).			
		0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less			
				0.0%		than 3 in. (7.6 cm) DBH.			
		0		0.0%		Shrub stratum – Consists of woody plants, excluding woody			
			= T	otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.			
W	oody Vine Stratum (Plot size:)					Herb stratum – Consists of all herbaceous (non-woody) plants,			
1	Toxicodendron radicans	5	~	100.0%	FAC	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1			
2		0		0.0%		m) in height.			
3		0		0.0%		Woody vines – Consists of all woody vines, regardless of			
4		0		0.0%		height.			
5		0		0.0%					
		0	$\overline{\Box}$	0.0%		Hydrophytic Vegetation			
U		5		otal Cove		Present? Yes No			
			- 1	Ctar COVE	•	<u> </u>			
Re	marks: (Include photo numbers here or on a separate she	et.)							



Soil Sampling Point: w-jbl-160923-02

Depth -	Matrix		Red	dox Featur	es						
(inches)	Color (moist)	%	Color (moist)		Type 1	Loc ²	Texture	Remarks			
0-3	10YR 4/2	95	10YR 4/6	5							
3-12	10YR 5/2	95	10YR 4/6	5							
	 						-				
							-				
vne. C=Conc	entration D-Denletio	n RM-Redu	iced Matrix CS-Covere	d or Coated	Sand Grain	ns 2l ocati	on: PL=Pore Lining. M=Ma	triv			
ydric Soil Ir		I. KWI—KCGC	The state of the s	u or courcu	Jana Gran	13 LOCATI					
_			Dark Surface (\$	27)			Indicators for Proble	ematic Hydric Soils ³ :			
│ Histosol (A │ Histic Epip			Polyvalue Belov	•	SS) (MI DA :	۱۸7 ۱۸۵۱	2 cm Muck (A10)	(MLRA 147)			
Black Histi			Thin Dark Surfa				Coast Prairie Redo	ox (A16)			
-	Sulfide (A4)		Loamy Gleyed I		-NA 14/, I	, o	(MLRA 147,148)				
Stratified L							Piedmont Floodpl	ain Soils (F19)			
_	(A10) (LRR N)		✓ Depleted Matrix (F3) Redox Dark Surface (F6)				(MLRA 136, 147)	0.6 (754-)			
-		11\		Depleted Dark Surface (F7)				☐ Very Shallow Dark Surface (TF12)			
, ·	Selow Dark Surface (A	11)	Redox Depress		,		Other (Explain in	Remarks)			
_	Surface (A12)		☐ Iron-Manganes		12) (LRR N	ı					
Sandy Muc MLRA 147,	k Mineral (S1) (LRR N 148)	ı	MLRA 136)								
Sandy Gley	yed Matrix (S4)		Umbric Surface	(F13) (MLR	RA 136, 122	2)	3 Indicators of	hudronhutic vegetation and			
Sandy Redox (S5)			Piedmont Floodplain Soils (F19) (MLRA 148)			A 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,				
Stripped M	latrix (S6)		Red Parent Ma	terial (F21)	(MLRA 127	, 147)	unless dis	sturbed or problematic.			
ostrictivo I a	yer (if observed):										
Type:											
Depth (inch							Hydric Soil Present?	Yes ● No ○			
-	les)										
emarks:											
emarks:											
emarks:											
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	ETLAND DETERMIN					-
	ransmission line		County: Belmont Co			ling Date: 07-Dec-16
Applicant/Owner: AEP				OH	Sampling Po	int: IPL-mdt12/07/2016-01
Investigator(s): M.Thomayer, C.Stalle	one, AECOM	Secti	on, Township, Range:	S 7	_ T _6N	R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local r	relief (concave, convex,	none): n	one	Slope:5.0% /2.9_ °
Subregion (LRR or MLRA): LRR N		Lat .: 40.03	14 L c	ong.: -80.80	066	Datum: NAD 83
Soil Map Unit Name: LoE				NWI	classification	: N/A
Are climatic/hydrologic conditions or	n the site typical for this	time of year?	Yes No (If no	o, explain in	Remarks.)	
Are Vegetation, Soil		significantly distu		•	nces" present	yes No
					•	•
Are Vegetation, Soil	, or Hydrology	naturally problem	natic? (If needed,	, explain any	answers in R	Remarks.)
Summary of Findings - At	tach site map sh	owing samp	ling point location	ons, trans	sects, imp	portant features, etc.
Hydrophytic Vegetation Present?	Yes ○ No ●					
Hydric Soil Present?	Yes ○ No ●		Is the Sampled Area			
Wetland Hydrology Present?	Yes ○ No ●		within a Wetland?	Yes O N	o	
Remarks:						
	nd					
upland plot on hillside above wetla	na					
Hydrology						
Hydrology						
Wetland Hydrology Indicators:						imum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of on				Surface	Soil Cracks (Bé	5)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1)	True Ac	quatic Plants (B14)		Surface Sparsel	e Soil Cracks (Bé y Vegetated Co	5) ncave Surface (B8)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2)	☐ True Ad☐ Hydrog	quatic Plants (B14) en Sulfide Odor (C1		Surface Sparsel Drainag	e Soil Cracks (Bé y Vegetated Co ge Patterns (B10	5) Incave Surface (B8) 0)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3)	☐ True Ac☐ Hydrog☐ Oxidize	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor	ng Living Roots (C3)	Surface Sparsel Drainag Moss Ti	e Soil Cracks (B6 y Vegetated Co ge Patterns (B16) rim Lines (B16)	5) incave Surface (B8) 0)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	☐ True Ac ☐ Hydrog ☐ Oxidize ☐ Presenc	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron (ng Living Roots (C3) (C4)	Surface Sparsel Drainac Moss T	e Soil Cracks (Bé y Vegetated Co ge Patterns (B16 rim Lines (B16) ason Water Tab	5) incave Surface (B8) 0)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	True Ac Hydrog Oxidize Presenc	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron (Iron Reduction in T	ng Living Roots (C3) (C4)	Surface Sparsel Drainag Moss Ti Dry Sea	e Soil Cracks (Be y Vegetated Co ge Patterns (B10 rim Lines (B16) ason Water Tab n Burrows (C8)	oncave Surface (B8) O)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3)	True Ac Hydrog Oxidize Presenc Recent Thin Mo	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss T Dry Sea Crayfish Saturat	e Soil Cracks (Be y Vegetated Co ge Patterns (B10 rim Lines (B16) ason Water Tab n Burrows (C8) ion Visible on A	oncave Surface (B8) O) le (C2) Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4)	True Ac Hydrog Oxidize Presenc Recent Thin Mo	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron (Iron Reduction in T	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss T Dry Sea Crayfish Saturat Stunted	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) rim Lines (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla	ob) Incave Surface (B8) In
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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)	True Ac Hydrog Oxidize Presenc Recent Thin Mc	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss T Dry Sea Crayfish Saturat Stuntec Geomoi	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) rim Lines (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla rphic Position (I	ob) Incave Surface (B8) In
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager	True Ac Hydrog Oxidize Presenc Recent Thin Mc	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss Ti Dry Sea Crayfish Saturat Stunted Geomoi	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla rphic Position (i	objection of the control of the cont
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager Water-Stained Leaves (B9)	True Ac Hydrog Oxidize Presenc Recent Thin Mc	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss Ti Dry Sea Crayfish Saturat Stunted Geomon Shallow Microto	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla rphic Position (I w Aquitard (D3)	sincave Surface (B8) 0) ale (C2) derial Imagery (C9) ants (D1) D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13)	True Ac Hydrog Oxidize Presenc Recent Thin Mc	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss Ti Dry Sea Crayfish Saturat Stunted Geomon Shallow Microto	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla rphic Position (i	sincave Surface (B8) 0) ale (C2) derial Imagery (C9) ants (D1) D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations:	True Ac Hydrog Oxidize Presenc Recent Thin Mc Other (quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7) Explain in Remarks)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss Ti Dry Sea Crayfish Saturat Stunted Geomon Shallow Microto	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla rphic Position (I w Aquitard (D3)	sincave Surface (B8) 0) ale (C2) derial Imagery (C9) ants (D1) D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13)	True Ac Hydrog Oxidize Presenc Recent Thin Mc Other (i	quatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres alor ce of Reduced Iron Iron Reduction in T uck Surface (C7)	ng Living Roots (C3) (C4) Filled Soils (C6)	Surface Sparsel Drainag Moss Ti Dry Sea Crayfish Saturat Stunted Geomon Shallow Microto	e Soil Cracks (Be y Vegetated Co ge Patterns (B16) ason Water Tab n Burrows (C8) ion Visible on A d or Stressed Pla rphic Position (I w Aquitard (D3)	sincave Surface (B8) 0) ale (C2) derial Imagery (C9) ants (D1) D2)

					TAC fication is	C31 (D3)		
Field Observations:								
Surface Water Present?	Yes 🔾	No 💿	Depth (inches):		_			
Water Table Present?	Yes \bigcirc	No 💿	Depth (inches):	0		, ,		
Saturation Present? (includes capillary fringe)	Yes \bigcirc	No •	Depth (inches):	0	Wetland Hydrology Present?	Yes 🔾	No •	
Describe Recorded Data (stream gaug	e, monitori	ing well, aerial photos, p	revious ins	spections), if available:			
Remarks:								



Soil Sampling Point: UPL-mdt12/07/2016-01

0-12	Color (moist) 10YR 4/3	100	Color (moist)		Loc²	Clay Loam	brick frag	marks gments
0-12	101K 4/3	100				Clay Loam		
-							'	
							_	
							•	
							·	
								
e: C=Concer	tration. D=Depletion	n. RM=Redu	uced Matrix, CS=Cover	ed or Coated Sand Gra	ns ² Locat	ion: PL=Pore Lining. M=	Matrix	
Iric Soil Inc			·					- C-:1-3
Histosol (A1			☐ Dark Surface	(S7)		Indicators for Pro		c Solis":
Histic Epipe				ow Surface (S8) (MLRA	147.148)	2 cm Muck (A1	O) (MLRA 147)	
Black Histic				face (S9) (MLRA 147, 1		Coast Prairie Re (MLRA 147,148		
Hydrogen Si			Loamy Gleyed		,			
Stratified La			✓ Depleted Mati			Piedmont Flood (MLRA 136, 14	Iplain Soils (F19) 7)	
	A10) (LRR N)		Redox Dark S				ark Surface (TF1	2)
	low Dark Surface (A	11)	Depleted Dark	Surface (F7)		Other (Explain		2)
	urface (A12)	,	Redox Depres	sions (F8)		☐ Other (Explain	iii Keiiiaiks)	
	Mineral (S1) (LRR N	,		se Masses (F12) (LRR	١,			
	d Matrix (S4)		Umbric Surfac	e (F13) (MLRA 136, 12	2)			
Sandy Redox			Piedmont Flo	odplain Soils (F19) (ML	RA 148)	Indicators of hydrophytic vegeta wetland hydrology must be pre		getation and
Stripped Ma				aterial (F21) (MLRA 12		wettand r unless	disturbed or pro	e present, blematic.
-	er (if observed):							
Туре:						Hydric Soil Present?	Yes 🔾	No •
Depth (inche	s):					nyulic 3011 Flesellt	162	100 ©
marks:								

		-Species?	Sampling Point: <u>UPL-mat12/07/2016-01</u>
(0)	Absolute	Rel.Strat. Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover		Number of Dominant Species
1			That are OBL, FACW, or FAC:1(A)
2		0.0%	Total Number of Dominant
3	0		Species Across All Strata:
4			Description of description of Country
5			Percent of dominant Species That Are OBL, FACW, or FAC:50.0% (A/B)
6		0.0%	That the obl, thow, or the
7	0		Prevalence Index worksheet:
8	0		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:) :	= Total Cover	0BL species x 1 =0
	_ ′	0.0%	FACW species <u>50</u> x 2 = <u>100</u>
1		0.0%	FAC species x 3 =0
3		0.0%	FACU species 50 x 4 = 200
		0.0%	UPL species $0 \times 5 = 0$
4		0.0%	Column Totals: 100 (A) 300 (B)
5		0.0%	
6		0.0%	Prevalence Index = B/A = 3.000
7		0.0%	Hydrophytic Vegetation Indicators:
8			Rapid Test for Hydrophytic Vegetation
9		0.0%	☐ Dominance Test is > 50%
0			✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	:	= Total Cover	
1	0		data in Remarks or on a separate sheet)
2	0		Problematic Hydrophytic Vegetation ¹ (Explain)
3	0		¹ Indicators of hydric soil and wetland hydrology must
4		0.0%	be present, unless disturbed or problematic.
5	0	0.0%	Definition of Vegetation Strata:
6		0.0%	Four Vegetation Strata:
7		0.0%	Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: 5')		= Total Cover	regardless of height.
Phalaris arundinacea	50	✓ 50.0% FACW	Sapling/shrub stratum – Consists of woody plants, excluding
Dactylis glomerata	50	✓ 50.0% FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum – Consists of all herbaceous (non-woody) plants,
3.		0.0%	regardless of size, and all other plants less than 3.28 ft tall.
4		0.0%	Woody vines – Consists of all woody vines greater than 3.28 ft
5		0.0%	in height.
		0.0%	
6		0.0%	Five Vegetation Strata:
7 8		0.0%	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
		0.0%	diameter at breast height (DBH).
9		0.0%	Sapling stratum – Consists of woody plants, excluding woody
0		0.0%	vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1			Shrub stratum – Consists of woody plants, excluding woody
2			vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)		_ Total cover	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	0.0%	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1
2	0	0.0%	m) in height.
3	0	0.0%	Woody vines – Consists of all woody vines, regardless of
4	0	0.0%	height.
5	0	0.0%	Hydrophytic
6	0	0.0%	Vegetation No. 10.
	0	= Total Cover	Present? Yes No •
Remarks: (Include photo numbers here or on a separate s	sheet)		
temarks. (meidde prioto numbers nere or on a separate s	3116GL. <i>j</i>		

Upland 02	WETLAND D	ETERMINATION	DATA FORM	l - Eastern M	ountains and Piedmon	nt Region
Project/Site: West Bellaire-Glenco	e Transmission L	ine	City/County:	Belmont Co	Sampling	Date: 07-Dec-16
Applicant/Owner: AEP				State: C		PL-MDT12/07/2016-02
Investigator(s): M.Thomayer, C.S	Stallone, AECOM		Section, Tow	nship, Range: S	7 T 6N	R 3W
Landform (hillslope, terrace, etc.)	: Hillside		Local relief (co	ncave, convex,	none): flat SI	ope: 5.0% / 2.9 °
Subregion (LRR or MLRA): LRF		Lat.:	40.0336	Lo	ng.: -80.8107	Datum: NAD 83
Soil Map Unit Name: LoD			40.0330		NWI classification: N	
			ear? Yes •	No O os		4//\
Are climatic/hydrologic condition	1			•	, explain in Remarks.)	Yes ● No ○
Are Vegetation, Soil	, , , ,		ly disturbed?	Are "Norma	I Circumstances" present?	ies C NO C
Are Vegetation, Soil	, or Hydrol	ogy 🗌 naturally p	problematic?	(If needed,	explain any answers in Rem	arks.)
Summary of Findings -			sampling p	oint locatio	ns, transects, impor	tant features, etc.
Hydrophytic Vegetation Present		No				
Hydric Soil Present?	Yes 🔾	No		Sampled Area	Yes ○ No ●	
Wetland Hydrology Present?	Yes 🔾	No	withir	n a Wetland?	103 0 110 0	
Remarks:						
Hydrology						
Wetland Hydrology Indicators:					Secondary Indicators (minimur	m of two required)
Primary Indicators (minimum of	one required;	check all that apply)			Surface Soil Cracks (B6)	
Surface Water (A1)		True Aquatic Plants	s (B14)		Sparsely Vegetated Concav	ve Surface (B8)
High Water Table (A2)		Hydrogen Sulfide C	Odor (C1)		Drainage Patterns (B10)	
Saturation (A3)		Oxidized Rhizosphe	0 0	Roots (C3)	Moss Trim Lines (B16)	
Water Marks (B1)		Presence of Reduce	. ,		Dry Season Water Table (0	22)
Sediment Deposits (B2)		Recent Iron Reduc		s (C6)	Crayfish Burrows (C8)	
Drift deposits (B3)		Thin Muck Surface	•		Saturation Visible on Aerial	
Algal Mat or Crust (B4)		Other (Explain in R	lemarks)		Stunted or Stressed Plants	(D1)
Iron Deposits (B5)	(D7)				Geomorphic Position (D2)	
Inundation Visible on Aerial Ima	igery (B7)				Shallow Aquitard (D3)	4)
Water-Stained Leaves (B9) Aquatic Fauna (B13)					Microtopographic Relief (D	4)
Field Observations:					FAC-neutral Test (D5)	
	No 💿	Depth (inches):				
	No 💿	Depth (inches):				
Saturation Present? (includes capillary frings) Yes		•		Wetland Hyd	rology Present? Yes 🔾	No 💿
(includes capillally inflige)		Depth (inches):		> 15		
Describe Recorded Data (stream	gauge, monitor	ring well, aerial photos	, previous inspe	ections), if availa	ible:	
<u> </u>						
Remarks:						

Tree Stratum (Plot size:) 1 2	Absolute % Cover			Indicator Status	Dominance Test worksheet:
2				Ottatas	Number of Deminsort Consider
2	0	\square _	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
	0		0.0%		
3	0		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4			0.0%		
5			0.0%		Percent of dominant Species
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8		$\overline{\Box}$	0.0%		Total % Cover of: Multiply by:
0.		 = Tot	tal Cover		0BL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:	_)	- 100	iai oovei		
1	0		0.0%		FACW species 0 x 2 = 0
2			0.0%		FAC species
3		\Box	0.0%		FACU species80 x 4 =320
4		\Box	0.0%		UPL species $\frac{10}{10}$ x 5 = $\frac{50}{10}$
5		$\overline{\Box}$	0.0%		Column Totals:90 (A)370 (B)
<u> </u>			0.0%		
6		<u> </u>	0.0%		Prevalence Index = B/A = 4.111
7		H-			Hydrophytic Vegetation Indicators:
8		<u>H</u> -	0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		☐ Dominance Test is > 50%
0	0	\sqcup_{-}	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	:	= Tot	tal Cover		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.		\Box	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
		$\overline{\Box}^-$	0.0%		¹ Indicators of hydric soil and wetland hydrology must
3		$\overline{\Box}$	0.0%		be present, unless disturbed or problematic.
4					Definition of Vegetation Strata:
5		H-	0.0%		Four Vegetation Strata:
6		Н-	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	Ш_	0.0%		(7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: _5')	=	= Tot	tal Cover	•	regardless of height.
1. Trifolium pratense	40	~	44.4%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Trifolium repens	30	~	33.3%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Solidago canadensis	10	$\overline{\Box}$	11.1%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
Setaria viridis	10	<u> </u>	11.1%	UPL	Woody vines – Consists of all woody vines greater than 3.28 ft
		<u> </u>	0.0%	0.2	in height.
5		<u> </u>	0.0%		
6		H-			Five Vegetation Strata:
7		<u> </u>	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8.		<u> </u>	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0	Ц_	0.0%		Sapling stratum – Consists of woody plants, excluding woody
0	0	\sqcup_{-}	0.0%		vines, approximately 20 ft (6 m) or more in height and less
1	0	\sqcup _	0.0%		than 3 in. (7.6 cm) DBH.
2	0	\Box_{-}	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	90 =	= Tot	tal Cover	•	Herb stratum – Consists of all herbaceous (non-woody) plants,
4	0		0.0%		including herbaceous vines, regardless of size, and woody
1					species, except woody vines, less than approximately 3 ft (1
2		<u> </u>	0.0%		m) in height.
3		_	0.0%		Woody vines – Consists of all woody vines, regardless of height.
4	0		0.0%		-
5	0	\square _	0.0%		Hydrophytic
6	0		0.0%		Vegetation
		= To	tal Cove		Present? Yes No No



Soil Sampling Point: UPL-MDT12/07/2016-0

Depth Matrix		Red	lox Features			-	
(inches) Color (moist)		Color (moist)	%1	Г ур е ¹	Loc ²	Texture Remarks	
0-12 10YR 6/6	65					Clay Loam	
10YR 4/3	35					Clay Loam	
						-	

						19	
						-	
						-	
Type: C=Concentration. D=Deple	tion. RM=Redu	iced Matrix, CS=Covered	d or Coated S	and Grains	² Locat	tion: PL=Pore Lining. M=Matrix	
Hydric Soil Indicators:		·					
Histosol (A1)		Dark Surface (S	7)			Indicators for Problematic Hydric Soils ³ :	
Histic Epipedon (A2)		Polyvalue Below	•	(MIRA 14	17.148)	2 cm Muck (A10) (MLRA 147)	
Black Histic (A3)		Thin Dark Surfa				Coast Prairie Redox (A16)	
Hydrogen Sulfide (A4)		Loamy Gleyed N		,	,	(MLRA 147,148)	
Stratified Layers (A5)		✓ Depleted Matrix				☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
2 cm Muck (A10) (LRR N)		Redox Dark Sur				☐ Very Shallow Dark Surface (TF12)	
Depleted Below Dark Surface	(Δ11)	Depleted Dark S	, ,			_	
Thick Dark Surface (A12)	(711)	Redox Depressi				Other (Explain in Remarks)	
Sandy Muck Mineral (S1) (LRR	P N	Iron-Manganese) (LRR N,			
MLRA 147, 148)	. 14,	MLRA 136)					
Sandy Gleyed Matrix (S4)		Umbric Surface	(F13) (MLRA	136, 122)		2	
Sandy Redox (S5)		Piedmont Flood	plain Soils (F	19) (MLRA	148)	³ Indicators of hydrophytic vegetation a wetland hydrology must be present,	ind
Stripped Matrix (S6)		Red Parent Mat	erial (F21) (N	ILRA 127,	147)	unless disturbed or problematic.	
Restrictive Layer (if observed)							
• •						Hydric Soil Present? Yes No •	
Depth (inches):						Tryano con ricocinc. Tes C No C	
Remarks:							

U	pland	03

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Glencoe-West Bellaire		City/County: Belmont	Sampling Date: 20-Sep-16
Applicant/Owner: AEP		State: OF	Sampling Point: Upl-jbl-160920-01
Investigator(s): J.Lubbers, C.Stallone	; AECOM Cincy	Section, Township, Range: S	13 T 6N R 3W
Landform (hillslope, terrace, etc.):	Toeslope	Local relief (concave, convex, r	none): convex Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N	Lat.:	40.029231 Lor	ng.: -80.819988
Soil Map Unit Name: He-Hartshom			NWI classification: N/A
Are climatic/hydrologic conditions or		ear? Yes • No O (If no	, explain in Remarks.)
Are Vegetation ☐ , Soil ✓			I Circumstances" present? Yes No
Are Vegetation , Soil .			explain any answers in Remarks.)
Summary of Findings - At	tach site map showing s	ampling point locatio	ns, transects, important features, et
Hydrophytic Vegetation Present?	Yes No		
Hydric Soil Present?	Yes O No O	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present?	Yes ○ No •	within a Wetland?	
Upland plot on old soil/spoil pile ad	ljacent to wetland		
Hydrology			
Wetland Hydrology Indicators: Primary Indicators (minimum of on 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 Imager Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gates)	True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduce Recent Iron Reduct Thin Muck Surface (Other (Explain in Recent) Y (B7) No Depth (inches): Depth (inches): Depth (inches):	dor (C1) Pres along Living Roots (C3) Ed Iron (C4) Ion in Tilled Soils (C6) (C7) Emarks) Wetland Hyde	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-neutral Test (D5) rology Present? Yes No No

Upland 03
VECETATION

VEGETATION (Five/Four Strata) - Use scientific names of plants.

			minant		Sampling Point: Upl-ibl-160920-01
Tree Stratum (Plot size: _30')	Absolute % Cover	Rel		Indicator Status	Dominance Test worksheet:
1. Juglans nigra	10	✓	100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC:
2	0		0.0%		Total Number of Dominant
3	0	Ц-	0.0%		Species Across All Strata: 3 (B)
4		Ц-	0.0%		Dancart of deminant Creation
5		Ц_	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC:66.7% (A/B)
6		<u> </u>	0.0%		
7		H-	0.0%		Prevalence Index worksheet:
8		Ш_	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15') — 10	= 10	tal Cover		0BL species 0 x 1 = 0
1 Acer negundo	10	✓	100.0%	FAC	FACW species 70 x 2 = 140
2	0		0.0%		FAC species x 3 = 30
3			0.0%		FACU species $22 \times 4 = 88$
4	_		0.0%		UPL species $0 \times 5 = 0$
5			0.0%		Column Totals: <u>102</u> (A) <u>258</u> (B)
6			0.0%		Prevalence Index = B/A = 2.529
7	0		0.0%		Hydrophytic Vegetation Indicators:
8	0		0.0%		Rapid Test for Hydrophytic Vegetation
9	0		0.0%		✓ Dominance Test is > 50%
10	0		0.0%		✓ Prevalence Index is ≤3.0 ¹
_Shrub Stratum (Plot size:)	10	= To	tal Cover		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6			0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: 5')	0	= To	tal Cover		regardless of height.
1. Phalaris arundinacea	70	~	85.4%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Ageratina altissima	12		14.6%	FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Agrimonia striata	0		0.0%	FACU	plants, regardless of size, and all other plants less than 3.28 ft
4	0	Ц-	0.0%		tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0	Ц-	0.0%		
6	0	닏-	0.0%		Five Vegetation Strata:
7		Ц_	0.0%		Tree - Woody plants, excluding woody vines, approximately
8	0	Ц-	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		Ц-	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10		<u> </u>	0.0%		vines, approximately 20 ft (6 m) or more in height and less
11		H-	0.0%		than 3 in. (7.6 cm) DBH. Shrub stratum – Consists of woody plants, excluding woody
12	0	Щ_	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	82	= 10	tal Cover		Herb stratum – Consists of all herbaceous (non-woody)
1.	0	Ш_	0.0%		plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately
2	0		0.0%		3 ft (1 m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	□_	0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation
	0	= To	tal Cover	<u> </u>	Present? Yes VO
Remarks: (Include photo numbers here or on a separate sho	eet.)				



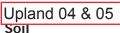
Soil Sampling Point: Upl-jbl-160920-01

Profile Descr	iption: (Describe	to the depth	needed to document	the indicato	or or con	firm the	absence of indicators.)		
Depth	Matrix	(Red	ox Features					
(inches)	Color (moist)	%	Color (moist)	<u>%</u> <u>T</u>	ype 1	Loc ²	Texture	Remar	
0-10	10YR 4/2	100					Silty Clay Loam	coal fragmen	
10-18	5YR 4/1	100					Silty Clay Loam	coal fragmen	ts
								—·.	
							-		
							-		
							-		
1 Type: C=Cond	centration D=Denle	tion RM-Red	iced Matrix CS=Covered	or Coated Sa	and Grain	s 2l ocati	ion: PL=Pore Lining. M=N	Matrix	
		IIOII. RIVI=REUI	uceu Matrix, C3=Covereu	or coated 3a	anu Grain	S -LUCAL			
Hydric Soil I				-\			Indicators for Prob	olematic Hydric S	oils ³ :
Histosol (•		Dark Surface (S	•			2 cm Muck (A10) (MLRA 147)	
	pedon (A2)		Polyvalue Below				Coast Prairie Re	dox (A16)	
Black Hist	• •		Thin Dark Surfac		A 147, 14	8)	(MLRA 147,148)		
	Sulfide (A4)		Loamy Gleyed M					plain Soils (F19)	
l —	Layers (A5)		✓ Depleted Matrix				(MLRA 136, 147		
	(A10) (LRR N)		Redox Dark Surf	` '				ark Surface (TF12)	
	Below Dark Surface	(A11)	Depleted Dark S	, ,			Other (Explain i	n Remarks)	
Thick Dark	k Surface (A12)		Redox Depression						
Sandy Mu	ck Mineral (S1) (LRR	? N,	Iron-Manganese MLRA 136)	Masses (F12)) (LRR N,				
MLRA 147	•		Umbric Surface	(E12) (MIDA	126 122				
	yed Matrix (S4)						³ Indicators o	of hydrophytic veget	ation and
Sandy Red			☐ Piedmont Flood				wetland h	ydrology must be p	resent,
Stripped N	Natrix (S6)		Red Parent Mate	erial (F21) (M	LRA 127,	147)	unless	disturbed or probler	natic.
Restrictive La	ayer (if observed)	:							
Type:	-								
Depth (inch	nes):						Hydric Soil Present?	Yes ○ N	o
Remarks:									
disturbed soils	s from past manip	oulation of la	ndscape.						

Upland 04 & 05 Project/Site: Glencoe wb	LAND DETERMINATION	City/County: Bellmont	untains and Pledmont Region
•			Sampling Date: 21-Sep-16
Applicant/Owner: AEP		State: OH	Sampling Point: UPL-JBL-160921-01,02
Investigator(s): JBL,CMS		Section, Township, Range: S	24 T 5N R 3W
Landform (hillslope, terrace, etc.):	Hillside	Local relief (concave, convex, no	one): none Slope: 0.0% / 0.0 °
Subregion (LRR or MLRA): LRR N	Lat.:	40.022703307 Long	g.:80.841787450
Soil Map Unit Name: Brookside silty c	lay loam-8-15 percent slopes		NWI classification: N/A
Are climatic/hydrologic conditions on t	he site typical for this time of y	ear? Yes No (If no,	explain in Remarks.)
			Circumstances" present? Yes ● No ○
Are Vegetation, Soil,	or Hydrology 🗌 naturally p	problematic? (If needed, e	xplain any answers in Remarks.)
		sampling point location	ns, transects, important features, etc.
J. 1 J	Yes ○ No •		
Hydric Soil Present?	Yes No	Is the Sampled Area	Yes ○ No ●
Wetland Hydrology Present?	Yes ○ No •	within a Wetland?	
Remarks:			
upland for wetlnd 1 and 2			
l Hydrology			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one r		(D4.4)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plant		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	☐ Hydrogen Sulfide (• •	Drainage Patterns (B10)
Saturation (A3)		eres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduc	• •	Dry Season Water Table (C2)
Sediment Deposits (B2)		tion in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface	` '	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in R	Remarks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	D.7.\		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (87)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes	No Depth (inches):		
Water Table Present? Yes			
		Wetland Hydro	ology Present? Yes O No 💿
(includes capillary fringe) Yes	No Depth (inches):		
Describe Recorded Data (stream gauge	e, monitoring well, aerial photos	s, previous inspections), if availab	ole:
Remarks:			

Upland 04 & 05 vegetation (Five/Four Strata) - Use scientific names of plants.

		— Sr	16CIES'/ -		
Tree Stratum (Plot size: _30')	Absolute % Cover	Re	oecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:
4	20	V	26.7%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
1. Acer rubrum 2. Ulmus americana			13.3%	FACW	That are obe, thow, of tho.
3. Prunus serotina	25	V	46.7%	FACU	Total Number of Dominant
4. Acer negundo			13.3%	FAC	Species Across All Strata:6(B)
5			0.0%	1710	Percent of dominant Species
5 6		\Box	0.0%		That Are OBL, FACW, or FAC: 33.3% (A/B)
7		\Box	0.0%		Prevalence Index worksheet:
		$\overline{\Box}$	0.0%		Total % Cover of: Multiply by:
8		= To	otal Cove	r	0BL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size: 15')				FACW species 10 x 2 = 20
1. Acer negundo	15	~	100.0%	FAC	
2	0		0.0%		·
3	0		0.0%		
4			0.0%		UPL species $0 \times 5 = 0$
5	0		0.0%		Column Totals: <u>165</u> (A) <u>595</u> (B)
6	_		0.0%		Prevalence Index = B/A = 3.606
7	0		0.0%		Hydrophytic Vegetation Indicators:
8	_		0.0%		Rapid Test for Hydrophytic Vegetation
9	0		0.0%		Dominance Test is > 50%
0	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	15	= To	otal Cove	r	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.		$\overline{\Box}$	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3		П	0.0%	-	¹ Indicators of hydric soil and wetland hydrology must
3 4		П	0.0%	-	be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
5		П	0.0%		Four Vegetation Strata:
6					Tree stratum – Consists of woody plants, excluding vines, 3
7			0.0%		in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5'</u>)	0		otal Cove	r	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Geum canadense	30	V	40.0%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Parthenocissus quinquefolia	20	~	26.7%	FACU	Herb stratum – Consists of all herbaceous (non-woody)
3. Rubus allegheniensis	10	Ц	13.3%	FACU	plants, regardless of size, and all other plants less than 3.28 ft tall.
4. Rosa multiflora	15	V	20.0%	FACU	tall. Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5	0	Ц	0.0%		
6	0	Ш	0.0%		Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately
8	0	Ш	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding woody
0	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less
1			0.0%		than 3 in. (7.6 cm) DBH.
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum_ (Plot size:)	75	= To	otal Cove	r	Herb stratum – Consists of all herbaceous (non-woody)
1	0		0.0%		plants, including herbaceous vines, regardless of size, and
2.			0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
<u>૮</u>	0		0.0%		Woody vines – Consists of all woody vines, regardless of
3 4	0		0.0%		height.
			0.0%		
5					Hydrophytic
		Ш	0.0%		Vegetation
6	0	_	otal Cove	!	Present? Yes V No V

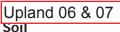


Sampling Point: UPL-JBL-160921-01,02 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) **Redox Features** Matrix Depth Color (moist) % Type 1 (inches) Color (moist) Texture Remarks 0-8 10YR 4/1 Clay Loam sand/gravel 8-16 10YR 5/1 100 Sandy Clay Loam ¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils³: Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147,148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Other (Explain in Remarks) Redox Depressions (F8) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, Sandy Muck Mineral (S1) (LRR N, MLRA 136) MLRÁ 147, 148) Umbric Surface (F13) (MLRA 136, 122) Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Yes ● No ○ **Hydric Soil Present?** Depth (inches): Remarks:

Project/Site: Glencoe_wb City/County: Bellmont Sampling Date: 21-Sep-16 Applicant/Owner: AEP State: OH Sampling Point: upl-jbl-160921-03, Investigator(s): JBL,CMS Section, Township, Range: S 24 T 5N R 3W Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): none Slope: 0.0% / 0.0 Subregion (LRR or MLRA): LRR N Lat.: 40.022345605 Long.: -80.842692894 Datum: NAD 83 Soil Map Unit Name: Brookside silty clay loam-8-15 percent slopes NWI classification: N/A
Investigator(s): JBL,CMS Section, Township, Range: S 24 T 5N R 3W Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): none Slope: 0.0% / 0.0 Subregion (LRR or MLRA): LRR N Lat.: 40.022345605 Long.: -80.842692894 Datum: NAD 83 Soil Map Unit Name: Brookside silty clay loam-8-15 percent slopes NWI classification: N/A
Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): none Slope: 0.0% / 0.0 Subregion (LRR or MLRA): LRR N Lat.: 40.022345605 Long.: -80.842692894 Datum: NAD 83 Soil Map Unit Name: Brookside silty clay loam-8-15 percent slopes NWI classification: N/A
Subregion (LRR or MLRA): LRR N Lat.: 40.022345605 Long.: -80.842692894 Datum: NAD 83 Soil Map Unit Name: Brookside silty clay loam-8-15 percent slopes NWI classification: N/A
Soil Map Unit Name: Brookside silty clay loam-8-15 percent slopes 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 🔲 , Soil 🗌 , or Hydrology 🔲 significantly disturbed? Are "Normal Circumstances" present? Yes 🔾 No 🏵
Are Vegetation . , Soil . , or Hydrology . naturally problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing sampling point locations, transects, important features, e
Hydrophytic Vegetation Present? Yes No •
Hydric Soil Present? Yes No Is the Sampled Area Yes No Yes No
Wetland Hydrology Present? Yes ○ No ● within a Wetland?
Remarks:
upland in pasture for wetland 3 and 4
Hydrology
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5) ☐ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Shallow Aquitard (D3)
Water-Stained Leaves (B9) Microtopographic Relief (D4)
Aquatic Fauna (B13) FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches):
Saturation Present? Ves No Penth (inches):
Saturation Present? (includes capillary fringe) Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches):
Saturation Present? Ves No Penth (inches):
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Yes No Depth (inches): Wetland Hydrology Present? Yes No Ves No
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? (includes capillary fringe) Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Upland 06 & 07 VEGETATION (Five/Four Strata) - Use scientific names of plants.

		C.	ecies? -		Sampling Point: upl-jbl-160921-03,04
Tree Stratum (Plot size:)	Absolute % Cover	Re	el.Strat.	Indicator Status	
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: O (A)
2	0		0.0%		Total Number of Descinant
3	0		0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4			0.0%		
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
	Λ -	= Tc	otal Cover	-	0BL species 0 x 1 = 0
Sapling-Sapling/Shrub Stratum (Plot size:					FACW species
1. Elaeagnus umbellata			42.9%	UPL	FAC species15 x 3 =45
2. Rosa multiflora			57.1%	FACU	FACU species 95 x 4 = 380
3		Н.	0.0%		' 45 75
4	0	Ц.	0.0%		(0)
5	0	Ц.	0.0%		Column Totals: <u>125</u> (A) <u>500</u> (B)
6	0	\sqsubseteq	0.0%		Prevalence Index = B/A = 4.000
7	0	\sqsubseteq	0.0%		Hydrophytic Vegetation Indicators:
8	0	\square	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	\square	0.0%		Dominance Test is > 50%
0	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	35 :	= To	otal Cover	-	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.			0.0%		¹ Indicators of hydric soil and wetland hydrology must
4		$\overline{\Box}$	0.0%		be present, unless disturbed or problematic.
5		$\overline{\Box}$	0.0%		Definition of Vegetation Strata:
		\Box	0.0%		Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3
7		 - Та	otal Cove		in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size:)			otal Covel		Sapling/shrub stratum – Consists of woody plants, excluding
1. Festuca arundinacea	35	V	38.9%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Verbesina alternifolia	15	Ц.	16.7%	FAC	Herb stratum – Consists of all herbaceous (non-woody)
3. Trifolium pratense	25	V	27.8%	FACU	plants, regardless of size, and all other plants less than 3.28 ft tall.
4. Poa pratensis	15	Ц.	16.7%	FACU	tall. Woody vines – Consists of all woody vines greater than 3.28 If in height.
5	0	Ц.	0.0%		
6		\sqsubseteq	0.0%		Five Vegetation Strata:
7	0	\square	0.0%		Tree - Woody plants, excluding woody vines, approximately
8	0	Ш.	0.0%		20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding woody
0	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less
1	0		0.0%		than 3 in. (7.6 cm) DBH.
2	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	90	= To	otal Cover	-	Herb stratum – Consists of all herbaceous (non-woody)
1.	0		0.0%		plants, including herbaceous vines, regardless of size, and
		\Box	0.0%		woody species, except woody vines, less than approximately 3 ft (1 m) in height.
2 3		\Box	0.0%		Woody vines – Consists of all woody vines, regardless of
		\exists	0.0%		height.
4			-		
5		Η.	0.0%		Hydrophytic
6	0	Ш,	0.0%		Vegetation Present? Yes No
	0	$= T_0$	otal Cove	r	11000111



Sampling Point: upl-jbl-160921-03,04 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) **Redox Features** Matrix Depth Color (moist) % Type (inches) Color (moist) Texture Remarks 0-3 10YR 3/3 Silty Clay Loam 3-13 10YR 4/3 100 Clay Loam ¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils³: Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147,148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Other (Explain in Remarks) Redox Depressions (F8) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, Sandy Muck Mineral (S1) (LRR N, MLRA 136) MLRÁ 147, 148) Umbric Surface (F13) (MLRA 136, 122) Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Yes 🔾 No 💿 **Hydric Soil Present?** Depth (inches): Remarks:

Upland 08 WETLAND DETERMINATION	DATA FORM - Eastern Mountains and Piedmont Region
Project/Site: Glencoe_wb	City/County: Bellmont Sampling Date: 22-Sep-16
Applicant/Owner: AEP	State: OH Sampling Point: upl-jbl-160922-01
Investigator(s): JBL,CMS	Section, Township, Range: S 29 T 5N R 3W
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): none Slope: 0.0% / 0.0 °
	40.012282197 Long.: -80.861005697 Datum: NAD 83
Soil Map Unit Name: Brookside silty clay loam, 15 to 25 percent slope	
Are climatic/hydrologic conditions on the site typical for this time of y	
	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . naturally p	problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ○ No ●	
Hydric Soil Present? Yes No •	Is the Sampled Area Yes No No
Wetland Hydrology Present? Yes ○ No ●	within a Wetland?
Remarks:	
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plant	
High Water Table (A2) Hydrogen Sulfide (
	neres along Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	
	ction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift deposits (B3) Thin Muck Surface	
Algal Mat or Crust (B4) Other (Explain in F	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	☐ Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches):	
	Wetland Hydrology Present? Yes ○ No ●
(includes capillary fringe) Yes V No Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:
Domonto	
Remarks:	

Upland 08 VEGETATION (Five/Four Strata) - Use scientific names of plants.

		Cmanina		Sampling Point: upl-jbl-160922-01
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC: O (A)
2	0	0.0%		Total Number of Deminent
3	0	0.0%		Total Number of Dominant Species Across All Strata:
4		0.0%		
5	0	0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6		0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
7	0	0.0%		Prevalence Index worksheet:
8	0	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:	Λ.	= Total Cove	r	0BL species x 1 =0
1		0.0%		FACW species
2		0.0%		FAC species x 3 =30
—		0.0%		FACU species85
3		0.0%		UPL species x 5 =0
4 5		0.0%		Column Totals: 105 (A) 390 (B)
5 6		0.0%		Provolence Index P/A 2.714
o 7		0.0%		Prevalence Index = B/A = 3.714
		0.0%		Hydrophytic Vegetation Indicators:
8 9.		0.0%		Rapid Test for Hydrophytic Vegetation
•		0.0%		☐ Dominance Test is > 50%
0		= Total Cove		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)			'	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
2		0.0%		
3		0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
5		0.0%_		Definition of Vegetation Strata:
6	0	0.0%		Four Vegetation Strata: Tree stratum – Consists of woody plants, excluding vines, 3 in.
7	0	0.0%		(7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size:)	:	= Total Cove	r	regardless of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Echinochloa crus-galli	10	9.5%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Oxalis corniculata	25	23.8%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Eleusine indica	40	✓ 38.1%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Asclepias syriaca	10	9.5%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Taraxacum officinale	10	9.5%	FACU	
6. Phalaris arundinacea	10	9.5%	FACW	Five Vegetation Strata:
7		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0			ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0	0.0%		Sapling stratum – Consists of woody plants, excluding woody
0	0	0.0%		vines, approximately 20 ft (6 m) or more in height and less
1	0			than 3 in. (7.6 cm) DBH.
2	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	105 :	= Total Cove	r	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1
2	0	0.0%		m) in height.
3.	0	0.0%		Woody vines – Consists of all woody vines, regardless of
4		0.0%		height.
5		0.0%		
	0	0.0%		Hydrophytic Vegetation
n				Vac () Na ()
6	0	= Total Cove	er	Present? Yes V NO S



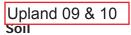
Soil Sampling Point: upl-jbl-160922-01

Profile Descr	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix		-	lox Featu	1							
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc ²	Texture	Remarks				
0-8	10YR 5/3	100										
8-16	10YR 4/2	100										
				-								
				-								
¹ Type: C=Cond	centration. D=Depletio	n. RM=Redu	uced Matrix, CS=Covere	d or Coate	d Sand Grai	ns ² Locati	ion: PL=Pore Lining. M=Ma	trix				
Hydric Soil I	Indicators:						Indicators for Droble	ematic Hydric Soils ³ :				
Histosol (☐ Dark Surface (S	57)				•				
	pedon (A2)		Polyvalue Belov	•	(S8) (MLRA	147,148)	2 cm Muck (A10)					
Black Hist			Thin Dark Surfa				Coast Prairie Redo (MLRA 147,148)	ox (A16)				
Hydrogen	Sulfide (A4)		Loamy Gleyed N	Лatrix (F2)				-i- C-il- (F10)				
Stratified	Layers (A5)		✓ Depleted Matrix				Piedmont Floodpl (MLRA 136, 147)	ain Soils (F19)				
2 cm Mucl	k (A10) (LRR N)		Redox Dark Sur				Very Shallow Dark	Surface (TF12)				
Depleted	Below Dark Surface (A	11)	Depleted Dark	Surface (F7	7)		✓ Very Shallow Dark Surface (TF12)✓ Other (Explain in Remarks)					
	k Surface (A12)	,	Redox Depressi	ons (F8)			Other (Explain in	Kemarksy				
	ıck Mineral (S1) (LRR N	l,	Iron-Manganese MLRA 136)	e Masses (F12) (LRR I	٧,						
			Umbric Surface	(F13) (MI	RA 136 12	2)						
Sandy Re	eyed Matrix (S4)		Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147)					hydrophytic vegetation and				
	Matrix (S6)						wetland hydrology must be present, unless disturbed or problematic.					
Stripped i	watiix (30)		Red Parelli Mai	enai (FZT)	(IVILKA 12)	7, 147)	uniess un	sturbed of problematic.				
	ayer (if observed):											
Туре:							Hydric Soil Present?	Yes ○ No •				
Depth (incl	hes):						nyunc son Present?	res Uno S				
Remarks:												

Upland 09 & 10 WE	TLAND D	ETERMINATION DATA	FORM - Eastern I	Mount	ains and Piedm	ont Region
Project/Site: Glencoe-WB		City/0	County: Bellmont		Sampl	ing Date: 23-Sep-16
Applicant/Owner: AEP			State:	ОН	Sampling Poi	nt: upl-jbl-160923-01,02
nvestigator(s): JBL,CMS		Section	on, Township, Range:	S 6	T 6N	R 4W
_andform (hillslope, terrace, etc.):	Hillside	Local r	elief (concave, convex	, none):	concave	Slope:0.0% /0.0 °
Subregion (LRR or MLRA): LRR N		Lat.: 40.01	3528765 L	ong.:	-80.892597102	Datum: NAD 83
Soil Map Unit Name: Lowell-Westm	oreland silt		0020700	_	NWI classification:	
Are climatic/hydrologic conditions or			(es • No · (If	no evnl	ain in Remarks.)	
Are Vegetation, Soil	, or Hydrol			•	ımstances" present	yes ● No ○
	, or Hydrol				•	•
5 — · —	,	37 — 71	•	-	in any answers in R	
Summary of Findings - At			ing point locati	ons, t	transects, imp	ortant features, etc.
Hydrophytic Vegetation Present?	Yes O	No •				
Hydric Soil Present?	Yes O	No •	Is the Sampled Area within a Wetland?	Yes	○ No ●	
Wetland Hydrology Present?	Yes 🔾	No •	within a wetland?			
Remarks:						
upland for w01 and w02						
Hydrology						
Wetland Hydrology Indicators: Primary Indicators (minimum of one	o roquirod.	chock all that apply)			ndary Indicators (mini	
Surface Water (A1)	s required, t	True Aquatic Plants (B14)			Surface Soil Cracks (B6	
High Water Table (A2)		Hydrogen Sulfide Odor (C1			Sparsely Vegetated Co Orainage Patterns (B10	
Saturation (A3)		Oxidized Rhizospheres alor			Moss Trim Lines (B16)))
Water Marks (B1)		Presence of Reduced Iron (Ory Season Water Tabl	a (C2)
Sediment Deposits (B2)		Recent Iron Reduction in T			Crayfish Burrows (C8)	6 (02)
Drift deposits (B3)		Thin Muck Surface (C7)	1100 30113 (00)		Saturation Visible on A	erial Imagery (CQ)
Algal Mat or Crust (B4)		Other (Explain in Remarks)			Stunted or Stressed Pla	
Iron Deposits (B5)		Utilei (Explain in Remarks)			Geomorphic Position (I	
Inundation Visible on Aerial Imagery	√ (B7)				Shallow Aquitard (D3)	
Water-Stained Leaves (B9)					Microtopographic Relie	f (D4)
Aquatic Fauna (B13)					AC-neutral Test (D5)	. (= 1)
Field Observations:						
Surface Water Present? Yes	No 💿	Depth (inches):				
Water Table Present? Yes	No 💿	Depth (inches):				
Saturation Present? (includes capillary frings) Yes	No 💿	Depth (inches):	Wetland Hy	/drology	Present? Yes	○ No ●
(includes capillary fringe) Describe Recorded Data (stream gau			us inspections) if ava	ilahla:		
Describe Recorded Data (stream gat	ige, monitoi	ing weir, aeriai priotos, previo	us irispections), ir ava	liable.		
Domorko						
Remarks:						

Upland 09 & 10 VEGETATION (Five/Four Strata) - Use scientific names of plants.

Tree Stratum (Plot size:) 1 2 3 4		Re	el.Strat.	Indicator Status	Dominance Test worksheet:
1	0	<u>Cc</u>		Status	Number of Deminant Species
2					Number of Dominant Species
3	0	$\overline{}$	0.0%		That are OBL, FACW, or FAC:1 (A)
4		Н.	0.0%		Total Number of Dominant
	0	Ц.	0.0%		Species Across All Strata:5(B)
		Ц.	0.0%		Demonstrate description of Consider
5	0	Ц.	0.0%		Percent of dominant Species That Are OBL, FACW, or FAC:
6		\sqsubseteq	0.0%		That Are obe, FAGW, of FAG.
7	0	Ш.	0.0%		Prevalence Index worksheet:
8	0	Ш,	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size:)	:	= To	otal Cover	-	0BL species x 1 =0
	0		0.0%		FACW species x 2 = 0
1	0	\Box	0.0%		FAC species 10 x 3 = 30
2		\Box	0.0%		FACU species $95 \times 4 = 380$
3		\Box	0.0%		UPL species 20 x 5 = 100
4		Η.	0.0%		Column Totals: <u>125</u> (A) <u>510</u> (B)
5		Н.			
6		Η.	0.0%		Prevalence Index = B/A = 4.080
7		Η.	0.0%		Hydrophytic Vegetation Indicators:
8		Н.	0.0%		Rapid Test for Hydrophytic Vegetation
9		Н.	0.0%		☐ Dominance Test is > 50%
0		Ш.	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	:	= To	otal Cover	-	☐ Morphological Adaptations ¹ (Provide supporting
1. Lonicera maackii	20	V	80.0%	UPL	data in Remarks or on a separate sheet)
2. Rosa multiflora	5	V	20.0%	FACU	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
3	0		0.0%		1 Indicators of hydric soil and wetland hydrology must
4			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
7			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size:)		= Tc	otal Cover	-	(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	10	~	50.0%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding
1. Solidago altissima	10	▼	50.0%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Verbesina alternifolia				FAC	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3	0 0	Η.	0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
4		Η.			in height.
5	0	Η.	0.0%		
6	0	Η.	0.0%		Five Vegetation Strata:
7	0	Н.	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8		Н.	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9		Н.	0.0%		Sapling stratum – Consists of woody plants, excluding woody
0	0	Н.	0.0%		vines, approximately 20 ft (6 m) or more in height and less
1	0	Ц.	0.0%		than 3 in. (7.6 cm) DBH.
2		Ш.	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size:)	:	= To	otal Cover	r	Herb stratum – Consists of all herbaceous (non-woody) plants,
1. Lonicera japonica	80	\checkmark	100.0%	FACU	including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1
2	0		0.0%		m) in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5.	0		0.0%		
	0	\Box	0.0%		Hydrophytic Vegetation
6		 _ T:	otal Cove	r	Present? Yes No
		- 1	- Cai 50VE		
Remarks: (Include photo numbers here or on a separate she	et.)				



Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) **Redox Features** Matrix Depth Color (moist) % Type 1 (inches) Color (moist) Loc2 Texture Remarks 0-5 10YR Silt Loam 3/3 100 5-11 10YR 4/3 98 10YR Silty Clay Loam ¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils³: Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147,148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) Other (Explain in Remarks) Redox Depressions (F8) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, Sandy Muck Mineral (S1) (LRR N, MLRA 136) MLRÁ 147, 148) Umbric Surface (F13) (MLRA 136, 122) Sandy Gleyed Matrix (S4) ³ Indicators of hydrophytic vegetation and Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Yes 🔾 No 💿 **Hydric Soil Present?** Depth (inches): Remarks:

Sampling Point:

upl-jbl-160923-01,02

APPENDIX B OEPA WETLAND ORAM FORMS

Wetland 01

Site: AE	P West Bell	aire-Glencoe Tline	Rater(s): M.Thoma	ıyer;	Date:	12/7/2016
				Field Id:	-	
	0 (Metric 1. Wetla	and Area (size).	w-mdt-12/7/201	6-01	
max 6 pts	subtotal	Select one size class a	pts) ><20.2ha) (5 pts) 0.1ha) (4 pts) 4ha) (3 pts) <1.2ha) (2pts) to <0.12ha) (1 pt)	0.04	acres	
	4 4	Metric 2. Uplar	nd buffers and surro	ounding land use.		
max 14 pts.	subtotal	WIDE. Buffers average MEDIUM. Buffers avera X NARROW. Buffers avera VERY NARROW. Buffer	50m (164ft) or more around we age 25m to <50m (82 to <164ft) rage 10m to <25m (32ft to <82ft sr average <10m (<32ft) around	around wetland perimeter (4)) around wetland perimeter (1) d wetland perimeter (0)	check.	
		VERY LOW. 2nd growth LOW. Old field (>10 yea X MODERATELY HIGH. HIGH. Urban, industrial	, open pasture, row cropping, m	ah, wildlife area, etc. (7) rowth forest. (5) k, conservation tillage, new fallow fi	eld. (3)	
	7.0 11.0					
max 30 pts.	subtotal	None or none apparent Recovered (7) X Recovering (3) Recent or no recovery (urface water (3) (lake or stream) (5) (pth. Select one. (6in) (2) (12) (12)	Semi- to permanently inu Regularly inundated/satu Seasonally inundated (2) X Seasonally saturated in u re one or double check and avera Check all disturbances X ditch tile dike weir stormwater input	d other human use (1) .g. forest), complex (1) corridor (1) /saturation. Score one or dbl che ndated/saturated (4) rated (3) spper 30cm (12in) (1) ge.	
	5 10		at Alteration and De	•		
max 20 pts.	subtotal 10	None or none apparent Recovered (3) X Recovering (2) Recent or no recovery (4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Yeor (1) 4c. Habitat alteration. None or none apparent Recovered (6) X Recovering (3) X Recent or no recovery (4b)	Score one or double check an	n score.	oserved X shrub/sapling removal herbaceous/aquatic bed rer X dimentation dredging farming nutrient enrichment	noval
	subtotal thi	s page ORAM v. 5.0 Field Forn	n Quantitative Rating			

Site: AEP	West Bella	aire-	Glencoe Tline	Rater(s):	M.Thomayer;	,		Date:	12/7/2016
				-			Field Id:	=	
	16	3					w-mdt-12/7/2016-01		
	subtotal this	page							
	0 16	5	Metric 5. Speci	al Wetlan	ds.				
max 10 pts.	subtotal	-	Check all that app	oly and sco	re as indicated.				
			Bog (10)	•					
			Fen (10)						
			Old growth forest (10) Mature forested wetland	(E)					
			Lake Erie coastal/tributa		estricted hydrology (10))			
			Lake Erie coastal/tributa	•		,			
			Lake Plain Sand Prairie	(Oak Opening	s) (10)				
			Relict Wet Praires (10)				(10)		
			Known occurrence state Significant migratory so				es (10)		
			Category 1 Wetland. Se						
	2 18	3	-				on, microtopography.		
max 20pts.	subtotal	-	6a. Wetland Vege	tation Com	munities.		Vegetation Community Cov	er Scale	
			Score all present using			0	Absent or comprises <0.1ha (0.2471 ad		
			Aquatic bed		_	1	Present and either comprises small par		
		1	Emergent				vegetation and is of moderate quality, o	or comprises a	
			Shrub Forest		=	2	significant part but is of low quality Present and either comprises significar	at part of wetland's 2	
			Mudflats			2	vegetation and is of moderate quality o		
			Open water				part and is of high quality	, , , , , , , , , , , , , , , , , , ,	
			Other		_	3	Present and comprises significant part,	or more, of wetland's	3
			6b. horizontal (plan vie Select only one.	w) Interspersi	on.		vegetation and is of high quality		
			High (5)				Narrative Description of Vegetation 0	Quality	
			Moderately high(4)				Low spp diversity and/or predominance	of nonnative or low	
			Moderate (3)				disturbance tolerant native species		
			Moderately low (2) Low (1)				Native spp are dominant component of although nonnative and/or disturbance		
		×	None (0)				can also be present, and species divers		
			6c. Coverage of invasi	ve plants. Refe	er		moderately high, but generallyw/o pres		
			Table 1 ORAM long form				threatened or endangered spp to		
		_	or deduct points for cov	-			A predominance of native species, with		
		-	Extensive >75% cover (Moderate 25-75% cover	,			and/or disturbance tolerant native spp a absent, and high spp diversity and often		
			Sparse 5-25% cover (-1				the presence of rare, threatened, or end		
		Х	Nearly absent <5% cover	er (0)					
			Absent (1)				Mudflat and Open Water Class Quali	ty	
			6d. Microtopography. Score all present using	O to O cools	-	1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
		1	Vegetated hummucks/tu		-	2	Moderate 1 to <4ha (2.47 to 9.88 acres)	
		Ė	Coarse woody debris >		-		High 4ha (9.88 acres) or more	,	
			Standing dead >25cm (10in) dbh					
			Amphibian breeding poo	ols		_	Microtopography Cover Scale		
					-	1	Absent Present very small amounts or if more	common	
							of marginal quality	common	
					_	2	Present in moderate amounts, but not	-	
Category 1					_		quality or in small amounts of highest q	uality	
	18 GRANI	от с	TAL(max 100 pts)			3	Present in moderate or greater amount	s	
-							and of highest quality		

aire-Glencoe Tline	Rater(s): M.Tho	mayer;	Date:	12/7/2016
	/	Field Id:	•	
Metric 1. Wetl	and Area (size).	w-mdt-12/7/201	6-02	
>50 acres (>20.2ha) (6 25 to <50 acres (10.1 to <50 acres (1.1 to <25 acres (4 to < 3 to <10 acres (1.2 to 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04	6 pts) to <20.2ha) (5 pts) t:10.1ha) (4 pts) <4ha) (3 pts) to <1.2ha) (2pts) to <1.2ha) (2pts)	0.03	_acres	
	• •	rrounding land use.		
2a. Calculate average WIDE. Buffers average MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buff	e buffer width. Select only of e 50m (164ft) or more around rage 25m to <50m (82 to <16 erage 10m to <25m (32ft to < ers average <10m (<32ft) aro	one and assign score. Do not double of the wetland perimeter (7) (4ft) around wetland perimeter (4) (82ft) around wetland perimeter (1) (1) bund wetland perimeter (0)	check.	
VERY LOW. 2nd grow LOW. Old field (>10 ye MODERATELY HIGH. X HIGH. Urban, industria	rth or older forest, prairie, save ears), shrubland, young seco Residential, fenced pasture, al, open pasture, row cropping	rannah, wildlife area, etc. (7) nd growth forest. (5) park, conservation tillage, new fallow fie	eld. (3)	
High pH groundwater (3) X Precipitation (1) Seasonal/Intermittent	surface water (3) er (lake or stream) (5) lepth. Select one. Gein) (2) natural hydrologic regime. Set (12) (1)	100 year floodplain (1) Between stream/lake and Part of wetland/upland (e X Part of riparian or upland 3d. Duration inundation. Semi- to permanently inun Regularly inundated/satur Seasonally inundated (2) X Seasonally saturated in u Score one or double check and average check all disturbances of tile dike weir stormwater input	other human use (1) .g. forest), complex (1) corridor (1) /saturation. Score one or dbl c ndated/saturated (4) rated (3) pper 30cm (12in) (1) ge.	
⊿		•		
None or none apparen Recovered (3) Recovering (2) X Recent or no recovery 4b. Habitat developm Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Y Poor (1) 4c. Habitat alteration None or none apparen Recovered (6) Recovering (3) X Recent or no recovery	(1) ent. Select only one and as . Score one or double chec t (9)	ssign score. k and average.	oserved shrub/sapling removal herbaceous/aquatic bed resedimentation dredging x farming nutrient enrichment	emoval
	Metric 1. Wetl Select one size class >50 acres (>20.2ha) (6 25 to <50 acres (10.1) 10 to <25 acres (4 to < 3 to <10 acres (0.12 to 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 to 0.1 to <0.0 acres (0.04 to 0.0 acres (0.04 to	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and su 2a. Calculate average buffer width. Select only of WIDE. Buffers average 50m (164ft) or more around MEDIUM. Buffers average 55m to <50m (82 to <16 NARROW. Buffers average 10m to <25m (32ft to <12 Very NARROW. Buffers average 10m to <25m (32ft to <12 Very NARROW. Buffers average 10m to <25m (32ft to <12 Very NARROW. Buffers average 10m (<32ft) ard 2b. Intensity of surrounding land use. Select one Very LoW. 2nd growth or older forest, prairie, save Low. Old field (>10 years), shrubland, young second MODERATELY HIGH. Residential, fenced pasture, HIGH. Urban, industrial, open pasture, row cropping Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High pH groundwater (5) X Other groundwater (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) x (0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Second (7) x Recovering (3) Recent or no recovery (1) Metric 4. Habitat Alteration and 4a. Substrate disturbance. Score one or double None or none apparent (4) Recovering (3) Recent or no recovery (1) 4b. Habitat development. Select only one and as Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double chec None or none apparent (9) Recovered (6) Recovered (6) Recovered (6) Recovered (7) A Recovered (6) Recovered (7)	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 10 to <50 acres (>10.1 to <20.2ha) (5 pts) 10 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <50 acres (10.1 to <40.2ha) (3 pts) 10 to <50 acres (0.12 to <4ha) (3 pts) 10 to <0.3 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double of the selection of	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20 /bn) (6 pts) 10 to <25 acres (4 to <10 /ths) (5 pts) 10 to <25 acres (4 to <10 /ths) (4 pts) 30 to <10 acres (2 10 to <410) (3 pts) 0.3 to <3 acres (0.2 to <10 /ths) (4 pts) 30 to 10 acres (0.2 to <10 /ths) (4 pts) 30 to 10 acres (0.2 to <10 /ths) (4 pts) Wetric 2. Upland buffers and surrounding land use. 2.a. Calculate average buffer width. Select only one and assign score. Do not double check. WIDE: Buffers average 50m (164f) or more around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32f) to <25m) around wetland perimeter (7) MEDILLA Buffers average 10m to <25m (32f) around wetland perimeter (10) 2.b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or doter forest, praife, savannah, wildlife area, etc. (7) WOED TALEST HIGH: Residential, frorde pastive, park, conservation fillage, new failow field. (3) HiGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. High pH groundwater (3) Precipitation (1) Seasonal/intermittent surface water (3) Seasonal/intermittent surface water (3) Sources of Water. Score all that apply. None or none apparent (12) Recovering (3) Recovering (2) Recevered (7) Ab. Habitat development. Select only one and assign score. Excellent (7) Very yood (6) Good (9) None or none apparent (12) Recovered (9) R

Site: AEP	West Be	ellaire	-Glencoe Tline	Rater(s):	M.Thomayer;			Date:	12/7/2016
				. ,	<u> </u>		Field Id:		-
		14					w-mdt-12/7/2016-02		
	<u> </u>								
		al this page	Matria E Once		al a				
	0	14	Metric 5. Spec						
max 10 pts.	subtot	al	_Check all that ap	ply and sco	re as indicated.				
			Bog (10)						
		-	Fen (10) Old growth forest (10)						
		-	Mature forested wetland	d (5)					
			Lake Erie coastal/tributa	ary wetland-unre	estricted hydrology (10)			
			Lake Erie coastal/tributa	,	, ,,				
		-	Lake Plain Sand Prairie Relict Wet Praires (10)	s (Oak Opening	s) (10)				
		-	Known occurrence state	e/federal threate	ned or endangered so	ecie	es (10)		
			Significant migratory so				- ()		
			Category 1 Wetland. Se	ee Question 5 Q	ualitative Rating (-10)				
	2	16	Metric 6. Plant	commun	ities, interspe	rsi	on, microtopography.		
max 20pts.	subtot	al	6a. Wetland Vege	tation Com	munities.		Vegetation Community Cove	er Scale	
			Score all present using		_		Absent or comprises <0.1ha (0.2471 ac		
			Aquatic bed				Present and either comprises small par		
		1	Emergent Shrub				vegetation and is of moderate quality, o significant part but is of low quality	r comprises a	
		-	Forest		_	$\overline{}$	Present and either comprises significan	t part of wetland's 2	
			Mudflats				vegetation and is of moderate quality or		
			Open water		_		part and is of high quality		
			Other				Present and comprises significant part,	or more, of wetland's 3	
			6b. horizontal (plan vio Select only one.	ew) interspersi	on.		vegetation and is of high quality		
			High (5)				Narrative Description of Vegetation 0	Quality	
			Moderately high(4)				Low spp diversity and/or predominance	of nonnative or low	
		_	Moderate (3)				disturbance tolerant native species	the vegetation med	
			Moderately low (2) Low (1)				Native spp are dominant component of although nonnative and/or disturbance		
		x	None (0)				can also be present, and species divers		
			6c. Coverage of invasi		r		moderately high, but generallyw/o prese	ence of rare	
			Table 1 ORAM long for				threatened or endangered spp to		
			or deduct points for cov Extensive >75% cover	-			A predominance of native species, with and/or disturbance tolerant native spp a	•	
		-	Moderate 25-75% cover	. ,			and/or disturbance tolerant native spp a absent, and high spp diversity and ofter	•	
			Sparse 5-25% cover (-1				the presence of rare, threatened, or end		
		х	Nearly absent <5% cov	er (0)					
			Absent (1)				Mudflat and Open Water Class Qualit Absent <0.1ha (0.247 acres)	У	
			6d. Microtopography.Score all present using	0 to 3 scale	_	$\overline{}$	Low 0.1 to <1ha (0.247 acres)		
		1	Vegetated hummucks/ti		_	$\overline{}$	Moderate 1 to <4ha (2.47 to 9.88 acres)	
			Coarse woody debris >		_	3	High 4ha (9.88 acres) or more		
			Standing dead >25cm (
		<u> </u>	Amphibian breeding po	DIS			Microtopography Cover Scale Absent		
					_	$\overline{}$	Present very small amounts or if more	common	
					_		of marginal quality		
					_	2	Present in moderate amounts, but not o	•	
Category 1					_		quality or in small amounts of highest quality		
	16 GR	AND TO	OTAL(max 100 pts)			3	Present in moderate or greater amounts	5	
							and of highest quality		

Site: AEI	P Glencoe-\	West Bellaire	Rater(s):	J.Lubbers, C	. Stall	one; AECO	M Cincy	Date:	9/20/2016
			-		Fie	eld ld:		-	
	2 2	Metric 1. We	tland Area (size).	w-	jbl-160920-	01		
max 6 pts	subtotal	Select one size cla >50 acres (>20.2ha 25 to <50 acres (10.	(6 pts)			0.43	acres		
		10 to <25 acres (4 to 3 to <10 acres (1.2 to	o <10.1ha) (4 pts) o <4ha) (3 pts)	5)					
		x 0.3 to <3 acres (0.1) 0.1 to <0.3 acres (0.4) <0.1 acres (0.04ha)	04 to <0.12ha) (1 p	t)					
	3 !	Metric 2. Up	and buffers	and surround	ding l	and use.			
max 14 pts.	subtotal	WIDE. Buffers avera	age 50m (164ft) or r verage 25m to <50r average 10m to <25	elect only one and as nore around wetland p n (82 to <164ft) aroun im (32ft to <82ft) around m (<32ft) around wetla	perimete d wetlan nd wetla	r (7) d perimeter (4) nd perimeter (1)	ole check.		
		VERY LOW. 2nd gr X LOW. Old field (>10	owth or older forest years), shrubland, H. Residential, fend	ced pasture, park, con	Idlife are forest. (servation	a, etc. (7) 5) n tillage, new fallo	w field. (3)		
	12.0 17.0			on otopping, timing,	00.101.40				
max 30 pts.	subtotal	3a. Sources of Wat		pply.	3b. (Connectivity. Sco	ore all that appl	y.	
		High pH groundwater	` '			year floodplain (1)		n use (1)	
		x Other groundwater (x Precipitation (1)	3)	-		veen stream/lake of wetland/upland			
		Seasonal/Intermitter	nt surface water (3)			of riparian or upla		F - ()	
		Perennial surface w	,					Score one or dbl chec	k.
		3c. Maximum wate >0.7 (27.6in) (3)	depth. Select one). 		ni- to permanently ularly inundated/s		ated (4)	
		0.4 to 0.7m (15.7 to	27.6in) (2)			sonally inundated			
		x <0.4m (<15.7in) (1)	, , ,			sonally saturated		12in) (1)	
		3e. Modifications to None or none appare		ic regime. Score one		ble check and av ck all disturbanc			
		Recovered (7)	(ditch			source (nonstormwater)	
		x Recovering (3)	440		tile			grading	
		x Recent or no recove	ery (1)	-	dike			ed/RR track	
					weir storr	mwater input	x Other:	transmission ROW	
	6 23	Metric 4. Ha	bitat Alterati	on and Devel	opme	ent.			
max 20 pts.	subtotal			or double check an	d averag	ge.			
		None or none appar Recovered (3)	ent (4)						
		x Recovering (2)							
		Recent or no recove	ery (1)						
			ment. Select only	one and assign sco	re.				
		Excellent (7) Very good (6)							
		Good (5)							
		Moderately good (4)							
		Fair (3) Poor to fair (2)							
		x Poor (1)							
			on. Score one or d	ouble check and ave	rage.				
		None or none appar		-	Che	ck all disturbance			
		Recovering (3)				wing		sapling removal	wal
		x Recovering (3) Recent or no recove	erv (1)	-	graz x clea	rcutting		ceous/aquatic bed remo entation	ovai
			7 (1)	ŀ	x sele	ctive cutting	dredgi		
						dy debris removal			
	23	ส		L	toxic	pollutants	nutrier	nt enrichment	

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP	Glend	oe-W	est Bellaire	Rater(s):	J.Lubbers, (C. S	tallone; AECOM Cincy	Date:	9/20/2016
				-			Field Id:		
		23					w-jbl-160920-01		
	sul	ototal this p	age						
	0	23	Metric 5. Spe	cial Wetlan	ds.				
max 10 pts.	su	btotal	Check all that a	pply and sco	re as indicated	l.			
			Bog (10)						
			Fen (10)						
		-	Old growth forest (10						
		-	Mature forested wetle Lake Erie coastal/trib		estricted hydrology (10)			
		F	Lake Erie coastal/trib	•		10)			
		f	Lake Plain Sand Pra	•					
			Relict Wet Praires (1						
		-	Known occurrence s		-		es (10)		
		-	Significant migratory Category 1 Wetland.						
		23					on microtonography		
	0	23			_	GI 2	on, microtopography.		
max 20pts.	su	btotal	6a. Wetland Ve	-	munities.		Vegetation Community Cove		
		Г	Score all present usi	ng 0 to 3 scale.		0	Absent or comprises <0.1ha (0.2471 ac		
		-	Aquatic bed 1 Emergent			1	Present and either comprises small par vegetation and is of moderate quality, of		
		-	Shrub				significant part but is of low quality	or comprises a	
		-	Forest			2	Present and either comprises significan	nt part of wetland's 2	
			Mudflats				vegetation and is of moderate quality or	r comprises a small	
			Open water				part and is of high quality		
		L	Other			3	Present and comprises significant part,	or more, of wetland's 3	
			6b. horizontal (plan Select only one.	view) Interspersi	on.		vegetation and is of high quality		
			High (5)				Narrative Description of Vegetation (Quality	
			Moderately high(4)				Low spp diversity and/or predominance	e of nonnative or low	
		-	Moderate (3)				disturbance tolerant native species		
		-	Moderately low (2)				Native spp are dominant component of	-	
		-	x Low (1) None (0)				although nonnative and/or disturbance can also be present, and species divers		
		L	6c. Coverage of inv	asive plants. Refe	er		moderately high, but generallyw/o prese	•	
			Table 1 ORAM long	•			threatened or endangered spp to		
		_	or deduct points for o	overage			A predominance of native species, with	nonnative spp high	
		L	Extensive >75% cov	. ,			and/or disturbance tolerant native spp a		
		-	X Moderate 25-75% co				absent, and high spp diversity and often		
		-	Sparse 5-25% cover Nearly absent <5% of	. ,			the presence of rare, threatened, or end	uangered spp	
		F	Absent (1)	0 (0)			Mudflat and Open Water Class Quali	ty	
			6d. Microtopograph	y.		0	Absent <0.1ha (0.247 acres)		
		_	Score all present usi	ng 0 to 3 scale.		1	Low 0.1 to <1ha (0.247 to 2.47 acres)		
			Vegetated hummuck				Moderate 1 to <4ha (2.47 to 9.88 acres)	
		-	Coarse woody debris			3	High 4ha (9.88 acres) or more		
		-	Standing dead >25cr Amphibian breeding	, ,			Microtopography Cover Scale		
		L	/ unpriiblan brecaing	30010		0	Absent		
						1	Present very small amounts or if more	common	
							of marginal quality		
0-1 1						2	Present in moderate amounts, but not o	-	
Category 1						_	quality or in small amounts of highest q		
	23 G	RAND	TOTAL(max 100 pt	s)		3	Present in moderate or greater amount	S	
	-						and of highest quality		

ORAM_w-jbl-160920-01.xlsm | test_Field

Site: AEP	-Glencoe-\	wb	Rater(s): J. Lubbers	; C. Stallone	Date: 09/21/16
				Field Id:	
	1 1	Metric 1. Wetla	nd Area (size).	w-jbl-09/21/16-0	02
max 6 pts	subtotal	Select one size class a >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to 10 to <25 acres (4 to <11 3 to <10 acres (1.2 to <4 0.3 to <3 acres (0.12 to < x	ots) <20.2ha) (5 pts) 0.1ha) (4 pts) Hha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)	0.16	_acres
	8 9	Metric 2. Uplan	d buffers and surrou	ınding land use.	
max 14 pts.	subtotal	WIDE. Buffers average & MEDIJUM. Buffers average & NARROW. Buffers avera VERY NARROW. Buffer 2b. Intensity of surrour VERY LOW. 2nd growth LOW. Old field (>10 yea MODERATELY HIGH. F	ouffer width. Select only one an 50m (164ft) or more around wetla ge 25m to <50m (82 to <164ft) ar age 10m to <25m (32ft to <82ft) ar sa average <10m (<32ft) around winding land use. Select one or do or older forest, prairie, savannah rs), shrubland, young second gro Residential, fenced pasture, park, open pasture, row cropping, mini	nd perimeter (7) ound wetland perimeter (4) iround wetland perimeter (1) vetland perimeter (0) buble check and average. i, wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallow f	
	9.0 18.0	Metric 3. Hydro	ology.		
max 30 pts.	subtotal	None or none apparent (Recovered (7) X Recovering (3) X Recent or no recovery (**	rface water (3) (lake or stream) (5) pth. Select one. (in) (2) tural hydrologic regime. Score (12)	Semi- to permanently inc Regularly inundated/satt Seasonally inundated (2 X Seasonally saturated in one or double check and avera Check all disturbances X ditch tile dike weir stormwater input	d other human use (1) e.g. forest), complex (1) d corridor (1) n/saturation. Score one or dbl check. undated/saturated (4) urated (3)) upper 30cm (12in) (1) age.
	4.5 22.5	Metric 4. Habita	at Alteration and Dev	elopment.	
max 20 pts.	subtotal	None or none apparent (Recovered (3) x Recovering (2) x Recent or no recovery (* 4b. Habitat development Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) x Poor (1)	nt. Select only one and assign s Score one or double check and	score.	observed X shrub/sapling removal herbaceous/aquatic bed removal sedimentation X dredging farming nutrient enrichment
	22 5	ส		· ·	

ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland 04

Site: AEP-Glencoe-wb	Rater(s): J. Lubbe	ers; C. Stallone	Date: 09/21/16
I 	* **	Field Id:	+
22.5		w-jbl-09/21/16-0	12
		11 15. 00/2 1/10 0	
subtotal this pa			
0 22.5	Metric 5. Special Wetlands.		
max 10 pts. subtotal	Check all that apply and score as indica	ited.	
<u> </u>	Bog (10)		
<u> </u>	Fen (10) Old growth forest (10)		
<u> </u>	Mature forested wetland (5)		
	Lake Erie coastal/tributary wetland-unrestricted hydrol	ogy (10)	
_	Lake Erie coastal/tributary wetland-restricted hydrolog	y (5)	
<u> </u>	Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Praires (10)		
	Known occurrence state/federal threatened or endang	ered species (10)	
	Significant migratory songbird/water fowl habitat or usa		
	Category 1 Wetland. See Question 5 Qualitative Ratin	g (-10)	
5 27.5	Metric 6. Plant communities, inte	rspersion, microtopogı	raphy.
max 20pts. subtotal	6a. Wetland Vegetation Communities.	Vegetation Comm	unity Cover Scale
_	Score all present using 0 to 3 scale.		ha (0.2471 acres) contiguous area
<u> </u>	Aquatic bed		ises small part of wetland's 1
-	1 Emergent Shrub	significant part but is of lo	erate quality, or comprises a
	Forest		ises significant part of wetland's 2
	Mudflats	vegetation and is of mode	erate quality or comprises a small
<u> </u>	Open water	part and is of high quality	
L	Other 6b. horizontal (plan view) Interspersion.	vegetation and is of high	ignificant part, or more, of wetland's 3
	Select only one.	vegetation and is of riight	quanty
	High (5)	Narrative Description of	Vegetation Quality
<u> </u>	Moderately high(4)		predominance of nonnative or low
-	Moderate (3) Moderately low (2)	disturbance tolerant nativ	e species component of the vegetation, mod
-	x Low (1)		r disturbance tolerant native spp
	None (0)	_	species diversity moderate to
	6c. Coverage of invasive plants. Refer		erallyw/o presence of rare
	Table 1 ORAM long form for list. Add or deduct points for coverage	threatened or endangered	d spp to e species, with nonnative spp high
Г	Extensive >75% cover (-5)		nt native spp absent or virtually
	Moderate 25-75% cover (-3)		ersity and often, but not always,
_	x Sparse 5-25% cover (-1)	the presence of rare, thre	atened, or endangered spp
	Nearly absent <5% cover (0) Absent (1)	Mudflat and Open Water	r Class Quality
L	6d. Microtopography.	0 Absent <0.1ha (0.247 acr	
	Score all present using 0 to 3 scale.	1 Low 0.1 to <1ha (0.247 to	,
<u> </u>	Vegetated hummucks/tussucks	2 Moderate 1 to <4ha (2.47	
<u> </u>	1 Coarse woody debris >15cm (6in) 1 Standing dead >25cm (10in) dbh	3 High 4ha (9.88 acres) or	more
<u> </u>	Amphibian breeding pools	Microtopography Cover	Scale
L		0 Absent	
		1 Present very small amou	nts or if more common
		of marginal quality 2 Present in moderate amo	unts but not of highest
Category 1		quality or in small amount	
	FOTAL(max 100 pts)	Present in moderate or gr	
	, p/	and of highest quality	
		and or highest quality	

ORAM_WJBL160921-02.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wb	Rater(s): J. Lubbers;	C. Stallone	Date:9/21/16
	•	Field Id:	
1 1	Metric 1. Wetland Area (size).	w-jbl-09/21/16-01	
max 6 pts subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.14 acres	
9 10	Metric 2. Upland buffers and surrou	nding land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one and WIDE. Buffers average 50m (164ft) or more around wetlan KIDIUM. Buffers average 25m to <50m (82 to <164ft) aro NARROW. Buffers average 10m to <25m (32ft to <82ft) ar	d perimeter (7) und wetland perimeter (4) ound wetland perimeter (1) etland perimeter (0)	
	VERY LOW. 2nd growth or older forest, prairie, savannah, LOW. Old field (>10 years), shrubland, young second grow MODERATELY HIGH. Residential, fenced pasture, park, c HIGH. Urban, industrial, open pasture, row cropping, minin	wildlife area, etc. (7) rth forest. (5) onservation tillage, new fallow field. (3)	
9.0 19.0	Metric 3. Hydrology.		
	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score of None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observed X ditch	man use (1) complex (1) 1) n. Score one or dbl check. turated (4) n (12in) (1)
5.5 24.5	Metric 4. Habitat Alteration and Deve	elopment.	
	4a. Substrate disturbance. Score one or double check a None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign so Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and a None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	core. Check all disturbances observed X mowing X shr grazing her X clearcutting X secure decreases and the control of the co	ub/sapling removal baceous/aquatic bed removal dimentation dging ming rient enrichment
24.5		_	

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Site: AEP-Glencoe-wb	Rater(s): J	l. Lubbers; C. S	Stallone	Date: 9/21/16
-			Field Id:	•
24.5			w-jbl-09/21/16-01	
			,5.: 00,2., 0.	
subtotal this page	Martin E. Ouranial Warden de			
	Metric 5. Special Wetlands			
max 10 pts. subtotal	Check all that apply and score	as indicated.		
 -	Bog (10)			
 -	Fen (10)			
	Old growth forest (10) Mature forested wetland (5)			
	Lake Erie coastal/tributary wetland-unrestri	icted hydrology (10)		
	Lake Erie coastal/tributary wetland-restricte	ed hydrology (5)		
 -	Lake Plain Sand Prairies (Oak Openings) ((10)		
	Relict Wet Praires (10) Known occurrence state/federal threatened	d or endangered enecie	as (10)	
 -	Significant migratory songbird/water fowl ha	-	55 (10)	
	Category 1 Wetland. See Question 5 Quali			
4 28.5	Metric 6. Plant communities	es, interspersi	on, microtopography.	
max 20pts. subtotal	6a. Wetland Vegetation Commu	ınities.	Vegetation Community Cov	er Scale
F	Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 a	
	Aquatic bed		Present and either comprises small pa	
	Emergent Shrub		vegetation and is of moderate quality, or significant part but is of low quality	or comprises a
	Forest		Present and either comprises significant	nt part of wetland's 2
	Mudflats		vegetation and is of moderate quality of	
	Open water		part and is of high quality	
	Other		Present and comprises significant part	, or more, of wetland's 3
	6b. horizontal (plan view) Interspersion. Select only one.		vegetation and is of high quality	
	High (5)		Narrative Description of Vegetation	Quality
	Moderately high(4)		Low spp diversity and/or predominance	e of nonnative or low
	Moderate (3)		disturbance tolerant native species	54b
	Moderately low (2) Low (1)		Native spp are dominant component of although nonnative and/or disturbance	•
	None (0)		can also be present, and species diver	• •
	6c. Coverage of invasive plants. Refer		moderately high, but generallyw/o pres	
	Table 1 ORAM long form for list. Add		threatened or endangered spp to	
F	or deduct points for coverage		A predominance of native species, with	•
	Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbance tolerant native spp absent, and high spp diversity and ofte	*
	Sparse 5-25% cover (-1)		the presence of rare, threatened, or en	• •
	Nearly absent <5% cover (0)	•		
	Absent (1)		Mudflat and Open Water Class Quali	ity
	6d. Microtopography. Score all present using 0 to 3 scale.		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	
	Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 acres	<u> </u>
 -	Coarse woody debris >15cm (6in)		High 4ha (9.88 acres) or more	,
 -	Standing dead >25cm (10in) dbh	·		
,	Amphibian breeding pools	i i	Microtopography Cover Scale	
			Absent Present very small amounts or if more	common
			of marginal quality	
		2	Present in moderate amounts, but not	•
Category 1			quality or in small amounts of highest of	quality
28.5 GRAND TO	TAL(max 100 pts)	3	Present in moderate or greater amount	ts
-			and of highest quality	

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Site: AEP-Glencoe-wb	Rater(s): J. Lubbers;	C. Stallone	Date: 09/21/16
	•	Field Id:	
1 1	Metric 1. Wetland Area (size).	w-jbl-092116-03	
max 6 pts subtotal	Select one size class and assign score.		
	>50 acres (>20.2ha) (6 pts)	0.09 acres	
<u> </u>	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)		
X	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)		
3 4	Metric 2. Upland buffers and surrou	nding land use	
	•	•	
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one and WIDE. Buffers average 50m (164ft) or more around wetlar	_	
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) are		
x			
	VERY NARROW. Buffers average <10m (<32ft) around w		
_	2b. Intensity of surrounding land use. Select one or do VERY LOW. 2nd growth or older forest, prairie, savannah,	_	
	LOW. Old field (>10 years), shrubland, young second grov		
х			
Х	HIGH. Urban, industrial, open pasture, row cropping, minir	ng, construction. (1)	
7.0 11.0	Metric 3. Hydrology.		
max 30 pts. subtotal	3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all that app	y.
<u> </u>	High pH groundwater (5) Other groundwater (3)	100 year floodplain (1) x Between stream/lake and other huma	nuse (1)
×	```	Part of wetland/upland (e.g. forest), co	
	Seasonal/Intermittent surface water (3)	x Part of riparian or upland corridor (1)	Caara ana ay dhi ahaal
	Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one.	3d. Duration inundation/saturation. Semi- to permanently inundated/satur	
	>0.7 (27.6in) (3)	Regularly inundated/saturated (3)	. ,
	0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1)	Seasonally inundated (2) x Seasonally saturated in upper 30cm (12in) (1)
L	3e. Modifications to natural hydrologic regime. Score		,(.)
	None or none apparent (12)	Check all disturbances observed	acurae (nanatarmustar)
×	Recovered (7) Recovering (3)		source (nonstormwater) grading
х	Recent or no recovery (1)		ped/RR track
		weir dredg stormwater input x Other	ing : cattle
6 17	Metric 4. Habitat Alteration and Dev		
		•	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double check None or none apparent (4)	and average.	
	Recovered (3)		
X	Recovering (2) Recent or no recovery (1)		
	4b. Habitat development. Select only one and assign s	core.	
	Excellent (7)		
-	Very good (6) Good (5)		
	Moderately good (4)		
X	Fair (3) Poor to fair (2)		
	Poor (1)		
	4c. Habitat alteration. Score one or double check and a None or none apparent (9)	Average. Check all disturbances observed	
	Recovered (6)		/sapling removal
	Recovering (3)		ceous/aquatic bed removal
Х	Recent or no recovery (1)	clearcutting x sedim x selective cutting dredg	entation ing
		woody debris removal farming	ng
4-1		toxic pollutants nutrie	nt enrichment
17	ORAMy 5 0 Field Form Oversitative Dating		
subtotal this page	ORAM v. 5.0 Field Form Quantitative Rating		

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Total color	Site: AEP-	Glencoe-w	b	Rater(s):	J. Lubbers; C	. Sta	llone	Date: 9/21/	1/0/1900
Metric 5. Special Wetlands. Check all that apply and score as indicated. Bog (10) Fin (10) Old growth treats (10) Muture forested wetland (8) Lake Eric costablibibidary wetland-unrestricted hydrology (10) Lake Eric costablibibidary wetland-restricted hydrology (10) Lake Planis Sand Prainies (Dak Openings) (10) Retict Wet Pariars (10) Retict of Pariars (10) Retict wet Pariars (10) Retict	<u></u>			•		Fi	ield ld:		
Metric 5. Special Wetlands. Check all that apply and score as indicated. Sog (10) Fen (10) Org growth forest (10) Mature forested wetland (5) Lake Eine constal/brituary wetland-unrestricted hydrology (10) Lake Eine constal/brituary wetland-unrestricted hydrology (10) Lake Eine constal/brituary wetland-unrestricted hydrology (10) Lake Eine constal/brituary wetland-vasitived hydrology (10) Lake Eine constal/brituary wetland vasitive Patient (10) Kown on currence statefederal mereating (10) Socie all present using 0 to 3 scale. Apualto bed Lake Eine constal/brituary wetland-vasitived hydrology (10) Lake Eine constal/brituary wetland the metal research (10) Lake Eine constal/brituary wetland the metal research (10) Lake Eine Constal/brituary wetland the metal research (10) Lake Eine Constal/brituary wetland to metal research (10) Lake Eine Constal/brituary wetland to Sevential and the Comprises significant part or wetland's 3 vegetation and so in fing quality Low spo dversity and of end to law quality Low spo dversity and of rest or wetland's 3 vegetation and so in fing quality Low spo dversity and of rest or wetland's 3 vegetation and so in fing quality Low spo dversity and of rest or wetland's 3 vegetation and so in fing quality Low spo dversity and of rest or wetland's 3 vegetation and so in fing quality Low spo dversity and of rest or wetland's 3 vegetation and so in fing quality Low spo dversity and of rest or wetland'		17				W	-jbl-092116-03		
Check all that apply and score as indicated. Bog (10) Bog (10) Oid grown forest (10) Mature forested welland (5) Lake Eric constabilituation welland-unrestricted hydrology (10) Lake Plans Sand Private (John Constability) Replied Well Privars (10) Constability (10) Room occurrence statefederal threatendor or endangered species (10) Significant migratory songbird/water fowt habitat or usage (10) Song all present using 0 to 3 scale. Aquatic bed Emergent Shrub Forest Open water Open water Open water Open water One water Check all that apply and score as indicated. Present and either comprises significant part of welfands 1 vegetation and is of moderate quality or comprises a small part of welfands 1 vegetation and is of moderate quality or comprises a small part of welfands 2 vegetation and is of moderate quality or comprises a small part of welfands 3 vegetation and is of moderate quality or comprises a small part and is of high quality Difference of the present and celler comprises significant part or welfands 3 vegetation and is of moderate quality or comprises a small part and is of high quality Other Score all present using the present of the vegetation and is of moderate quality or comprises a small part of welfands 3 vegetation and is of high quality I was provided to some the comprises significant part, or more, of welfands 3 vegetation and is of high quality Low spot developed and present using the present of are developed to the present and cellerate comprises significant part, or more, of welfands 3 vegetation and is of high quality Low spot developed and present using the present of a developed presented or developed and in the present and cellerate three comprises a significant part, or more, of welfands 3 vegetation and is of moderate quality or comprises a small part of welfands 2		subtotal this p	age						
Bog (10) Fen (10) Old growth forest (10) Old		0 17	Metric 5. Speci	al Wetlan	ds.				
Fen (10)	max 10 pts.	subtotal	Check all that app	oly and scor	e as indicated.				
Old growth forest (10) Matter forested wetland (5) Lake Eric coastalimbutary wetland-unrestricted hydrology (5) Lake Place coastalimbutary wetland-restricted hydrology (5) Lake Place Sand Prairites (20th Openings) (10) Related Wet Prairies (10) Related Fowl habitat or usage (10) Category 1 Wetland. See Question 5 Jouillative Rating (-10) Related Wetland See Question 5 Jouillative Rating (-10) Related Rating (-10) Related Vegetation Communities. Rocre all present using 0 to 3 scale. Present and either comprises a small part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part of wetland's 2 vegetation and is of moderate quality or comprises a significant part of wetland's 2 vegetation and is of moderate quality or comprises a significant part of wetland's 2 vegetation and is of moderate quality or comprises a significant part of wetland's 2 vegetation and is of moderate quality or comprises a significant part of wetland's 3 vegetation and is of moderate quality or comprises a significant part of wetland's 3 vegetation and is of moderate quality or comprises a significant part of wetland's 3 vegetation and is of moderate quality or comprises a significant part of wetland's 3 vegetation and is of moderate quality or comprises a significant part of wetland's 3 vegetation and is of moderate quality or comprises a significant part of wetland's 3 vegetation and is of moderate quality or presence of moderate part and is of high quality or presence of moderate part of wetland's 3 vegetation and is of moderate quality or presence of reate part of high quality or presence of reate part of high quality or pr									
Mature forested wetland (5) Lake Eric constalt/but/lary wetland-unrestricted hydrology (5) Lake Plans Sand Prianse (Oak Optimise) (10) Relict Wet Prainse (10) Rown occurrence staffedderal threatened or endangered species (10) Significant migratory songbirdwater fowl habitat or usage (10) Category 1 Waturout See Question Southalable Rating (10) Metric 6. Plant communities, interspersion, microtopography. Score all present using 0 to 3 scale. Aquatic bed Emergent Shrub Forest Mudflats Open water Other Ot									
Lake Eric coastalitributary wetland-urrestricted hydrology (10) Lake Flac Coastalitributary wetland-urrestricted hydrology (5) Lake Flac Sand Prairies (2ak Openings) (10) Relatif Wet Prairies (10) Romon occurrence state/flederal threatened or endangered species (10) Significant migratory songitridivater frow habitat or usage (10) Category 1 Wetland See Question S Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. Vegetation Community Cover Scale Score all present using 0 to 3 scale. Score all present using 0 to 3 scale. Persent and either comprises of 0 the (2 421 acres) configuous area Present and either comprises of 0 the (0 2471 acres) configuous area Present and either comprises significant part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part of wetland's 2 vegetation and is of moderate quality, or comprises a significant part of wetland's 2 vegetation and is of moderate quality, or comprises a significant part or divelland's 2 vegetation and is of moderate quality, or comprises a significant part or divelland's 2 vegetation and is of moderate quality, or comprises a significant part or ormprises a significant part ormprises a significant part ormprises and a signific		ŀ		(5)					
Lake Plain Sand Prairies (Oak Openings) (10) Relief Wet Prairies (10) Known occurrence state/federal threatened or endangered species (10) Significant migraty sosphorized water fowl habitat or usage (10) Category 1 Welland. See Question 5 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. 6a. Wetand Vegetation Communities. Score all present using 0 to 3 scale. 2 Emergent Shrub Forest Cher Cohe Cohe Cohe Cohe Cohe Cohe Cohe Cohe		ľ		. ,	stricted hydrology (10))			
Relict Wet Praires (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songhridwater fow habitat or usage (10) Category 1 Wetland See Question Soutalitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. Vegetation Community Cover Scale Socre all present using 0 to 3 scale. Aquatic bed Aquatic bed Aquatic bed Perest Shrub Forest Open water Open water Open water Open water High (5) Moderately high(4) Moderately high(4) Moderately (10) None (0) Ec. Coverage of invasive plants. Refertable 10 of deduct points for coverage Extensive 75% cover (-1) None (0) Ec. Coverage of invasive plants. Refertable 25-75% cover (-2) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) X heartly sbeent <5% cover (-1) Sparse 5-25% cover (-1) X heartly sbeent <5% cover (-1) Sparse 5-25% cover (-1) Amphibian breeding pools Category 1 Zeraphor Wetland See Question for more state/federal threatened or endangered species (10) Sparse 5-25% cover (-1) Amphibian breeding pools Reference of rare, threatened, or endangered species (10) Sparse 5-25% cover (-1) Sparse 5-25% co				,	, ,,				
Significant ingriatory asophicitwater fow habitat or usage (10)				(Oak Opening	s) (10)				
Significant migratory sopidirdwater fow habitat or usage (10)		ŀ		/federal threate	ned or endangered sp	ecies (10)		
Metric 6. Plant communities, interspersion, microtopography. 6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale. Aquatic bed 2 Emergent Shrub Forest Other Other Bb. horizontal (plan view) interspersion. Select only one. High (5) Moderately high(4) Moderately (3) Moderately (4) Moderately (3) Moderately (4) Moderately (3) Moderately (4) Moderately (3) Moderately (3) Moderately (4) Moderately (4) Moderately (4) Moderately (4) Moderately (5) Moderately (4) Moderately (5) Moderately (4) Moderately (4) Moderately (4) Moderately (5) Moderately (4) Moderately (5) Moderately (4) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (4) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (4) Moderately (5) Moderately (5) Moderately (4) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (4) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (5) Moderately (6) Mod		ľ							
### Subtool Score all present using 0 to 3 scale.			Category 1 Wetland. Se	e Question 5 Qu	ualitative Rating (-10)				
Score all present using 0 to 3 scale. Aquatic bed Present and either comprises small part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part but is of low quality (Present and either comprises significant part of wetland's 2 vegetation and is of moderate quality, or comprises a significant part but is of low quality (Present and either comprises significant part of wetland's 2 vegetation and is of moderate quality or comprises a small part and is of high quality (Present and either comprises significant part of wetland's 2 vegetation and is of moderate quality or comprises a small part and is of high quality (Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality (Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality (Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality (Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality (Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality (Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality (Present and Section 2014) and and is of moderate and section and is of high quality (Present and Section 2014) and is of high quality (Present and Section 2014) and is of high quality (Present and Section 2014) and is of high quality (Present and Section 2014) and is of disturbance tolerant native spotes and and is of moderate and section 2014 and section		5 22	Metric 6. Plant	communi	ties, interspei	rsior	n, microtopography.		
Aqualic bed Emergent Emergent Shrub Forest Wudflats Open water Other Other Other High (5) Moderately low (2) Low (1) None (0) Extensive 75% cover (-5) Moderate 25x-75% cover (-5) Moderate 25x-75% cover (-5) Moderate 25x-75% cover (-7) X Nearly absent <-5% cover (-6) Absent (1) Absent (1) Cd. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucksflussucks Coarse woody debris >15cm (6in) Slanding dead >25cm (10in) dbh 1 Amphibian breeding pools Category 1 Category 2 Category 2 Category 3 Category 3 Category 4 Category 4 Category 4 Categ	max 20pts.	subtotal	6a. Wetland Vege	tation Comr	nunities.		<u> </u>		
Emergent Shrub S		r		to 3 scale.	_				
Shrub Forest Present and either comprises significant part of wetland's 2 Present and either comprises significant part of wetland's 2 vegetation and is of moderate quality or comprises a small part and is of high quality									
Forest Mudflats Open water Other Other Select only one. High (5) Moderately ligh(4) Moderately low (2) X Low (1) None (0) Extensive >75% cover (-5) Moderately points for coverage Extensive >5% cover (-5) Moderately (-1) X Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/fussuscks C carse woody debris >15cm (6in) Standing dead >25cm (10in) oth 1 Amphibian breeding pools Category 1 Z Present and either comprises significant part of wetland's 2 vegetation and is of high quality and is of high quality a Present and is of high quality 3 Present and is of high quality 3 Present and is of high quality 3 Present and is of high quality 4 Present and is of high quality 3 Present and is of high quality 4 Present and is of high quality 3 Present and is of high quality 4 Present and is of high quality 5 Present and is of high quality 4 Present and is of high quality 5 Present and is of high quality 5 Present in moderate and is of high quality 2 Present in moderate or or nonative or low disturbance tolerant native species 8 Narrative Description of Vegetation Quality 1 Low speciation and is of high quality 2 Present in moderate and is of high quality 2 Present in moderate or greater amounts		ŀ					-	i comprises a	
Open water		ľ			_			t part of wetland's 2	
Other Sebect only one. High (5)							-	comprises a small	
Select only one. High (5) Moderately high(4) Moderately low (2) X Low (1) None (0) Extensive >75% cover (-5) Moderate 25-75% cover (-3) X Sparse 5-25% cover (-3) X New (1) X New (1) Moderate 25-75% cover (-1) X New (1) X New (2) Moderate 25-75% cover (-1) X New (1) X New (1) X New (1) Moderate 25-75% cover (-1) X New (2) X New (3) X Sparse 5-25% cover (-1) X New (4) X New (5) X New (7) X New (7) X New (8) X Sparse 5-25% cover (-1) X New (1) X New (2) X New (1) X New (2)			 ·		_	_		or more, of wetland's 2	
Select only one. High (5) Moderately high(4) Moderately how (2) X Low (1) None (0) 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) X Nearly absent -5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated humnucks/fussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 Category 1 Category 1 Category 1 Amage And ToTAL(max 100 pts) Narrative Description of Vegetation Quality Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species. What is species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to the moderately high, but generallyw/o presence of rare threatened or endangered spp to have disturbance tolerant native spp to can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to have death or virtually absent species, with nonnative spp high threatened or endangered spp to have death or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Mudflat and Open Water Class Quality Absent <0.1ha (0.247 to 2.47 acres) I Low 0.1 to <1ha (0.247 to 2.47 acres) Microtopography Cover Scale Absent Present very small amounts or if more common or marginal quality or in small amounts of highest quality or in small amounts of highest quality or in small amounts of highest quality or in small amounts of moderate amounts.		L		 w) Interspersion				of more, or welland's 3	
Moderately high(4) Moderate (3) Moderately low (2) Low (1) None (0) 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-1) X Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated humanuck/stussucks Carse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 Category 1 Low sp diversity and/or predominance of nonnative or low disturbance tolerant native species disturbance tolerant native species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to A predominance of native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species with nonnative spp high and/or disturbance tolerant native species with nonnative spp high and/or disturbance tolerant native species diversity moderate to moderate by high, but generallyw/o presence of rare threatened or endangered spp to A predominance of native species, with nonnative spp high and/or disturbance tolerant native species diversity moderate to work and species diversity and often, but not always, the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Mudflat and Open Water Class Quality Description of the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Description of the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Description of the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Description of the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Description of the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Description of the presence of rare threatened, or endangered spp Mudflat and Open Water Class Q		_		,,		-	3 4 3		
Moderate (3) Moderately low (2) X Low (1) None (0) None (0) None (0) Bethanking 175% cover (-5) Moderate 25-5% cover (-3) X Dearly absent <5% cover (0) Absent (1) Geth Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 Moderate (3) Moderate (3) Moderate (25-5%) Moderate (27-5%) Moderate (25-5%) Moderate (2						_			
Moderately low (2)								of nonnative or low	
Low (1) None (0) None (0) Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) X Nearly absent <5% cover (0) Absent (1) Coverage and for invasive plants and for invasive plants Nearly absent <5% cover (0) Absent (1) Coverage and/or disturbance tolerant native spp can and/or disturbance of rare Threatened or endangered spp to A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp can and/or disturbance of rare Threatened or endangered spp to A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp can and/or disturbance tolerant native spp absent or virtually and/or disturbance tolerant native spp can and/or disturbance tolerant native spp absent or virtually and/or disturbanc		ŀ				_	•	the vegetation, mod	
6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) X Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummuck/stussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 Category 1 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage threatened or endangered spp to A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality 0 Absent <0.1ha (0.247 acres) 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 2 Moderate 1 to <4ha (2.47 to 9.88 acres) 3 High 4ha (9.88 acres) or more Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 1 Present in moderate or greater amounts		ľ						-	
Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) X Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 Category 1 Table 1 ORAM long form for list. Add or deduct points for coverage A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Mudflat and Open Water Class Quality 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 2 Moderate 1 to <4ha (2.47 to 9.88 acres) Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 2 Present in moderate or greater amounts			` '						
or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) x Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh 1 Amphibian breeding pools Category 1 Category 1 A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Mudflat and Open Water Class Quality Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 acres) 2 Moderate 1 to <4ha (2.47 to 9.88 acres) 3 High 4ha (9.88 acres) or more Microtopography Cover Scale Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality 3 Present in moderate or greater amounts			-		r			ence of rare	
Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh 1 Amphibian breeding pools Category 1 Extensive >75% cover (-5) and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Mudflat and Open Water Class Quality 0 Absent <0.1ha (0.247 acres) 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 1 Low 0.1 to <1ha (0.247 to 9.88 acres) 1 High 4ha (9.88 acres) or more Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 2 Present in moderate or greater amounts 3 Present in moderate or greater amounts						_		nonnative snn high	
Sparse 5-25% cover (-1) x Nearly absent <5% cover (0) Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 Category 1 Sparse 5-25% cover (-1) the presence of rare, threatened, or endangered spp Mudflat and Open Water Class Quality Mudflat and Open Water Class Quality 6d. Microtopography. 0 Absent <0.1ha (0.247 to 2.47 acres) 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 2 Moderate 1 to <4ha (2.47 to 9.88 acres) 3 High 4ha (9.88 acres) or more Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 3 Present in moderate or greater amounts		[-					
X Nearly absent <5% cover (0)			Moderate 25-75% cover	(-3)				•	
Absent (1) 6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Microtopography Cover Scale Absent Moderate 1 to <4ha (2.47 to 9.88 acres) Microtopography Cover Scale Absent Microtopography Cover Scale Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality Present in moderate or greater amounts Present in moderate or greater amounts				•		the	e presence of rare, threatened, or end	langered spp	
6d. Microtopography. Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools Category 1 6d. Microtopography. Score all present using 0 to 3 scale. 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 1 Low 0.1 to <4ha (2.47 to 9.88 acres) 1 Moderate 1 to <4ha (2.47 to 9.88 acres) Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 22 GRAND TOTAL(max 100 pts) 3 Present in moderate or greater amounts		ŀ		er (U)		Mı	udflat and Open Water Class Qualit	v	
1 Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh 1 Amphibian breeding pools Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality Category 1 Category 1 GRAND TOTAL(max 100 pts) 3 High 4ha (9.88 acres) or more Microtopography Cover Scale 0 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality		ı					•	,	
Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Microtopography Cover Scale Description Amphibian breeding pools Microtopography Cover Scale Description Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Category 1 Category 1 22 GRAND TOTAL(max 100 pts) 3 High 4ha (9.88 acres) or more Microtopography Cover Scale Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality 7 Present in moderate or greater amounts					<u>-</u>	_	,		
Standing dead >25cm (10in) dbh Amphibian breeding pools Microtopography Cover Scale Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Present in moderate or greater amounts Present in moderate or greater amounts					_)	
Amphibian breeding pools Microtopography Cover Scale Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Present in moderate or greater amounts Present in moderate or greater amounts		}				3 HI	gn 4na (9.88 acres) or more		
0 Absent		ŀ				Mi	crotopography Cover Scale		
of marginal quality 2 Present in moderate amounts, but not of highest quality quality or in small amounts of highest quality 22 GRAND TOTAL(max 100 pts) 3 Present in moderate or greater amounts									
Category 1 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 22 GRAND TOTAL(max 100 pts) 3 Present in moderate or greater amounts							•	common	
Category 1 quality or in small amounts of highest quality 22 GRAND TOTAL(max 100 pts) 3 Present in moderate or greater amounts					_	_	• • •	of highest	
22 GRAND TOTAL(max 100 pts) 3 Present in moderate or greater amounts	Category 1							•	
		22 GRAND	TOTAL(max 100 pts)		_				
			, ,				•		

ORAM_WJBL160921-03.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wb	Rater(s): J. Lubbers;	C. Stallone	Date: 9/21/16
	•	Field Id:	
0 0	Metric 1. Wetland Area (size).	w-jbl-092116-04	
max 6 pts subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.01 acres	
3 3	Metric 2. Upland buffers and surrour	nding land use.	
max 14 pts. subtotal	2b. Intensity of surrounding land use. Select one or dou	d perimeter (7) und wetland perimeter (4) bund wetland perimeter (1) bund wetland perimeter (0) uble check and average.	
x	HIGH. Urban, industrial, open pasture, row cropping, mining	th forest. (5) onservation tillage, new fallow field. (3)	
9.0 12.0	Metric 3. Hydrology.		
x x x x x x x x x x x x x x x x x x x	Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4 m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score of None or none apparent (12) Recovered (7) Recovering (3)	Check all disturbances observed ditch tile dike weir stormwater input Check all disturbances observed point storms filling/g troad b dredgi stormwater input Check all disturbances observed point storms point sto	use (1) mplex (1) Score one or dbl check. Ited (4) 2in) (1) ource (nonstormwater) grading ed/RR track
x	4a. Substrate disturbance. Score one or double check a None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign sc Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and av None or none apparent (9) Recovered (6) Recovered (6) Recent or no recovery (1)	verage. Check all disturbances observed mowing x shrub/ x grazing herbac clearcutting x sedime x selective cutting dredgi woody debris removal farmin	
	ORAM v. 5.0 Field Form Quantitative Rating		

ORAM_WJBL160921-04.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wb Rater(s): J. Lubbers; C. S	Stallone	Date: 9/21/16
-		Field Id:	
16		w-jbl-092116-04	
		W JSI-032110-04	
subtotal this page			
0 16 Metric 5. Special Wetl	ands.		
max 10 pts. subtotal Check all that apply and s	core as indicated.		
Bog (10)			
Fen (10)			
Old growth forest (10)			
Mature forested wetland (5)			
Lake Erie coastal/tributary wetland- Lake Erie coastal/tributary wetland-			
Lake Plain Sand Prairies (Oak Ope			
Relict Wet Prairies (10)	90) (10)		
Known occurrence state/federal thr	eatened or endangered speci	es (10)	
Significant migratory songbird/wate			
Category 1 Wetland. See Question	5 Qualitative Rating (-10)		
5 21 Metric 6. Plant comm	unities, interspers	ion, microtopography.	
max 20pts. subtotal 6a. Wetland Vegetation Co	ommunities.	Vegetation Community Cove	er Scale
Score all present using 0 to 3 scale	. 0	Absent or comprises <0.1ha (0.2471 ac	res) contiguous area
Aquatic bed	1	Present and either comprises small par	
1 Emergent		vegetation and is of moderate quality, o	r comprises a
Shrub		significant part but is of low quality	tt ftl 0
Forest Mudflats	2	Present and either comprises significan vegetation and is of moderate quality or	•
Open water		part and is of high quality	comprises a small
Other	3	Present and comprises significant part,	or more, of wetland's 3
6b. horizontal (plan view) Interspo	ersion.	vegetation and is of high quality	
Select only one.			
High (5)		Narrative Description of Vegetation C	
Moderately high(4) Moderate (3)		Low spp diversity and/or predominance	of nonnative or low
Moderately low (2)		disturbance tolerant native species Native spp are dominant component of	the vegetation mod
x Low (1)		although nonnative and/or disturbance t	=
None (0)		can also be present, and species divers	
6c. Coverage of invasive plants. I	Refer	moderately high, but generallyw/o prese	ence of rare
Table 1 ORAM long form for list. Ac	ld	threatened or endangered spp to	
or deduct points for coverage		A predominance of native species, with	•
Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbance tolerant native spp a absent, and high spp diversity and ofter	•
Sparse 5-25% cover (-1)		the presence of rare, threatened, or end	
Nearly absent <5% cover (0)			, rr
x Absent (1)		Mudflat and Open Water Class Qualit	y
6d. Microtopography.		Absent <0.1ha (0.247 acres)	
Score all present using 0 to 3 scale		Low 0.1 to <1ha (0.247 to 2.47 acres)	
1 Vegetated hummucks/tussucks 1 Coarse woody debris >15cm (6in)	2	Moderate 1 to <4ha (2.47 to 9.88 acres) High 4ha (9.88 acres) or more)
Standing dead >25cm (10in) dbh	3	11911 - THE (0.00 BOIGS) OF THOIS	
Amphibian breeding pools		Microtopography Cover Scale	
	0	Absent	
	1	Present very small amounts or if more of	common
		of marginal quality	
Category 1	2	Present in moderate amounts, but not of quality or in small amounts of highest quality	•
			•
21 GRAND TOTAL(max 100 pts)	3	Present in moderate or greater amounts	5
		and of highest quality	

ORAM_WJBL160921-04.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wb	Rater(s): J. Lubbers;	C. Stallone	Date: 9/22/16
	•	Field Id:	
0 0	Metric 1. Wetland Area (size).	w-jbl-09/22/16-01	
max 6 pts subtotal	Select one size class and assign score.	•	
max o pis subtotal	>50 acres (>20.2ha) (6 pts)	0.01 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)		
<u></u>	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
X	<pre></pre>		
3 3	Metric 2. Upland buffers and surrour	nding land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one and	_	
	WIDE. Buffers average 50m (164ft) or more around wetland MEDIUM. Buffers average 25m to <50m (82 to <164ft) arou		
	NARROW. Buffers average 10m to <25m (32ft to <82ft) and		
Х	VERY NARROW. Buffers average <10m (<32ft) around we		
	2b. Intensity of surrounding land use. Select one or dou	ble check and average.	
	VERY LOW. 2nd growth or older forest, prairie, savannah,		
X	LOW. Old field (>10 years), shrubland, young second growt MODERATELY HIGH. Residential, fenced pasture, park, co		
^	HIGH. Urban, industrial, open pasture, row cropping, mining	-	
9.0 12.0	Metric 3. Hydrology.		
	3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all that apply	ı.
max 30 pts. subtotal	High pH groundwater (5)	100 year floodplain (1)	y.
X	Other groundwater (3)	Between stream/lake and other human	
х	Precipitation (1)	Part of wetland/upland (e.g. forest), co	mplex (1)
	Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)	Part of riparian or upland corridor (1) 3d. Duration inundation/saturation.	Score one or dbl check.
	3c. Maximum water depth. Select one.	Semi- to permanently inundated/satura	
	>0.7 (27.6in) (3)	Regularly inundated/saturated (3)	
X	0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1)	Seasonally inundated (2) x Seasonally saturated in upper 30cm (1	2in) (1)
	3e. Modifications to natural hydrologic regime. Score or		, , ,
	None or none apparent (12) Recovered (7)	Check all disturbances observed	ourse (negatermyster)
X	Recovering (3)		ource (nonstormwater) grading
	Recent or no recovery (1)	dike road b	ed/RR track
		weir dredgii stormwater input x Other:	ng spring box
41 40	Markets A. Hall Stat Alternation and I David		Spring box
4 16	Metric 4. Habitat Alteration and Deve	•	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double check a None or none apparent (4)	ind average.	
	Recovered (3)		
	Recovering (2)		
X	Recent or no recovery (1) 4b. Habitat development. Select only one and assign sc	ore	
	Excellent (7)		
	Very good (6)		
-	Good (5) Moderately good (4)		
	Fair (3)		
Х	Poor to fair (2)		
	Poor (1) 4c. Habitat alteration. Score one or double check and av	verage.	
	None or none apparent (9)	Check all disturbances observed	
	Recovered (6)		sapling removal
X	Recovering (3) Recent or no recovery (1)		ceous/aquatic bed removal entation
	• • • • • • • • • • • • • • • • • • • •	selective cutting dredging dre	ng
		woody debris removal farming toxic pollutants nutrier	g it enrichment
16			
	ORAM v. 5.0 Field Form Quantitative Rating		

ORAM_WJBL160922-01.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wb		vb	Rater(s): J. Lubber	s; C. S	Stallone	Date: 9/22/	1/0/1900
					Field Id:		
	16	3			w-jbl-09/22/16-01		
	subtotal this	page					
	0 16	3	Metric 5. Special Wetlands.				
max 10 pts.	subtotal		Check all that apply and score as indicat	ed.			
			Bog (10)				
			Fen (10)				
			Old growth forest (10) Mature forested wetland (5)				
			Lake Erie coastal/tributary wetland-unrestricted hydrolog	av (10)			
			Lake Erie coastal/tributary wetland-restricted hydrology				
			Lake Plain Sand Prairies (Oak Openings) (10)				
			Relict Wet Praires (10)				
		-	Known occurrence state/federal threatened or endanger		es (10)		
			Significant migratory songbird/water fowl habitat or usag Category 1 Wetland. See Question 5 Qualitative Rating				
	3 19		Metric 6. Plant communities, inters		ion, microtopography.		
max 20pts.	subtotal	-	6a. Wetland Vegetation Communities.	•	Vegetation Community Cov	er Scale	
,			Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 ac		
			Aquatic bed	1	Present and either comprises small par		
		1	Emergent		vegetation and is of moderate quality, of	or comprises a	
			Shrub		significant part but is of low quality	-tt -ftlll- 0	
		-	Forest Mudflats	2	Present and either comprises significar vegetation and is of moderate quality o	•	
			Open water		part and is of high quality	Comprised a smail	
			Other	3	Present and comprises significant part,	or more, of wetland's 3	
			6b. horizontal (plan view) Interspersion.		vegetation and is of high quality		
			Select only one. High (5)		Narrative Description of Vegetation	Quality	
			Moderately high(4)		Low spp diversity and/or predominance		
			Moderate (3)		disturbance tolerant native species		
			Moderately low (2)		Native spp are dominant component of		
		Х	Low (1)		although nonnative and/or disturbance		
			None (0) 6c. Coverage of invasive plants. Refer		can also be present, and species diver- moderately high, but generallyw/o pres	•	
			Table 1 ORAM long form for list. Add		threatened or endangered spp to	crioc of raic	
			or deduct points for coverage		A predominance of native species, with	nonnative spp high	
			Extensive >75% cover (-5)		and/or disturbance tolerant native spp	•	
			Moderate 25-75% cover (-3)		absent, and high spp diversity and ofte	•	
		-	Sparse 5-25% cover (-1) Nearly absent <5% cover (0)		the presence of rare, threatened, or en	dangered spp	
		×	Absent (1)		Mudflat and Open Water Class Quali	tv	
			6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	,	
			Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)		
			Vegetated hummucks/tussucks	2)	
		-	Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more		
			Standing dead >25cm (10in) dbh Amphibian breeding pools		Microtopography Cover Scale		
			This is a second pools	0	Absent		
				1	Present very small amounts or if more	common	
					of marginal quality	61:1	
Category 1				2	Present in moderate amounts, but not quality or in small amounts of highest q	•	
Jategory I	10 GD AND	ח דר	TAL(max 100 pts)			-	
	19 GKANI	, 10	TAL(IIIAX TOU PIS)	3	Present in moderate or greater amount	5	
					and of highest quality		

ORAM_WJBL160922-01.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wb	Rater(s): J. Lubbers;	C. Stallone	Date: 9/23/2016
	•	Field Id:	
1 1	Metric 1. Wetland Area (size).	w-jbl-09/23/16-01	
max 6 pts subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.05 acres	
8 9	Metric 2. Upland buffers and surrou	nding land use.	
	2a. Calculate average buffer width. Select only one and WIDE. Buffers average 50m (164ft) or more around wetland X MEDIUM. Buffers average 25m to <50m (82 to <164ft) arou NARROW. Buffers average 10m to <25m (32ft to <82ft) ard VERY NARROW. Buffers average <10m (<32ft) around we 2b. Intensity of surrounding land use. Select one or dou VERY LOW. 2nd growth or older forest, prairie, savannah, X LOW. Old field (>10 years), shrubland, young second grow	d perimeter (7) und wetland perimeter (4) bund wetland perimeter (1) etland perimeter (0) uble check and average. wildlife area, etc. (7)	
	MODERATELY HIGH. Residential, fenced pasture, park, or	onservation tillage, new fallow field. (3)	
13.0 22.0	HIGH. Urban, industrial, open pasture, row cropping, mining Metric 3. Hydrology.	g, construction. (1)	
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) x (0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score of None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch point stille x filling/s dike road b weir dredgi stormwater input x Other:	n use (1) mplex (1) Score one or dbl check. ated (4) (2in) (1) source (nonstormwater) grading ed/RR track
8.5 30.5	Metric 4. Habitat Alteration and Deve	elopment.	
	4a. Substrate disturbance. Score one or double check at None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign so Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and at None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	verage. Check all disturbances observed mowing grazing X shrub/ grazing X clearcutting X sedim x very clearcutting X woody debris removal farmin	
30.5			

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP-Glencoe-wb	Rater(s):	J. Lubbers; C. S	Stallone	Date: 9/23/16
-		·	Field Id:	
30.5			w-jbl-09/23/16-01	
			,5. 00,20, 10 0 .	
subtotal this page	tale E. Ou a siel Wetler	1.		
	etric 5. Special Wetland			
	eck all that apply and score	e as indicated.		
Bog	, ,			
Fen Old ((10) growth forest (10)			
——————————————————————————————————————	ure forested wetland (5)			
Lake	e Erie coastal/tributary wetland-unres	tricted hydrology (10)		
	Erie coastal/tributary wetland-restric			
 -	e Plain Sand Prairies (Oak Openings) ct Wet Praires (10)) (10)		
	wn occurrence state/federal threaten	ed or endangered speci	es (10)	
	ificant migratory songbird/water fowl			
Cate	egory 1 Wetland. See Question 5 Qua	alitative Rating (-10)		
4 34.5 Me	etric 6. Plant communit	ies, interspersi	ion, microtopography.	
max 20pts. subtotal 6a.	Wetland Vegetation Comm	nunities.	Vegetation Community Cove	er Scale
Scor	re all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 ac	res) contiguous area
	atic bed	1	Present and either comprises small par	
2 Eme	•		vegetation and is of moderate quality, o significant part but is of low quality	r comprises a
Fore		2	Present and either comprises significan	t part of wetland's 2
Mud		_	vegetation and is of moderate quality or	•
·	n water		part and is of high quality	
Othe			Present and comprises significant part,	or more, of wetland's 3
	horizontal (plan view) Interspersion ct only one.	n.	vegetation and is of high quality	
High			Narrative Description of Vegetation 0	Quality
	erately high(4)		Low spp diversity and/or predominance	
	erate (3)		disturbance tolerant native species	the vegetation med
x Low	erately low (2)		Native spp are dominant component of although nonnative and/or disturbance	•
None			can also be present, and species divers	
	Coverage of invasive plants. Refer		moderately high, but generallyw/o prese	ence of rare
	e 1 ORAM long form for list. Add		threatened or endangered spp to	
	educt points for coverage ensive >75% cover (-5)		A predominance of native species, with and/or disturbance tolerant native spp a	•
	erate 25-75% cover (-3)		absent, and high spp diversity and ofter	•
	rse 5-25% cover (-1)		the presence of rare, threatened, or end	·
 -	rly absent <5% cover (0)			
	ent (1)	0	Mudflat and Open Water Class Qualit Absent <0.1ha (0.247 acres)	У
	Microtopography. re all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 acres)	
	etated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 acres)
	rse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
	iding dead >25cm (10in) dbh		Mi	
0_Amp	phibian breeding pools	0	Microtopography Cover Scale Absent	
		1	Present very small amounts or if more	common
			of marginal quality	
0-1	0.4	2	Present in moderate amounts, but not o	
Category 2	34 2		quality or in small amounts of highest quality	
34.5 GRAND TOTAL	_(max 100 pts)	3	Present in moderate or greater amounts	3
			and of highest quality	

ORAM_WJBL160923-01.xlsm | test_Field 12/27/2016

Site: AEP-Glencoe-wl	Rater(s): J. Lubbers;	C. Stallone	Date:9/23/2016
		Field Id:	
0 0	Metric 1. Wetland Area (size).	w-jbl-09/23/16-02	
max 6 pts subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)	0.03 acres	
8 8	Metric 2. Upland buffers and surrou	nding land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one and WIDE. Buffers average 50m (164ft) or more around wetland MEDIUM. Buffers average 25m to <50m (82 to <164ft) around NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland VERY NARROW. Buffers average <10m (<32ft) around wetland.	d perimeter (7) und wetland perimeter (4) ound wetland perimeter (1)	
[2b. Intensity of surrounding land use. Select one or dout VERY LOW. 2nd growth or older forest, prairie, savannah, LOW. Old field (>10 years), shrubland, young second grow MODERATELY HIGH. Residential, fenced pasture, park, cut HIGH. Urban, industrial, open pasture, row cropping, mining.	wildlife area, etc. (7) th forest. (5) onservation tillage, new fallow field. (3)	
14.0 22.0	Metric 3. Hydrology.		
max 30 pts. subtotal	3a. Sources of Water. Score all that apply. High PH groundwater (5) Other groundwater (3) Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score o None or none apparent (12) X Recovered (7) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch point: tile X filling dike road t weir dredg stormwater input X Other	n use (1) pmplex (1) Score one or dbl check. ated (4) 12in) (1) source (nonstormwater) grading ped/RR track
9 31	Metric 4. Habitat Alteration and Deve	elopment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double check a None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign so Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and an None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	verage. Check all disturbances observed X mowing	
subtotal this p	age ORAM v. 5.0 Field Form Quantitative Rating		

Wetland 10

Site: AEP-	Glencoe-w	/b	Rater(s): J. Lubbers; C.	Stallone	Date: 9/23/16
		<u> </u>	·	Field Id:	•
	31]		w-jbl-09/23/16-02	
	subtotal this	page		-	
	0 31	1	Wetlands.		
max 10 pts.	subtotal	4	and score as indicated.		
max to pts.	Subtotal	Bog (10)	and score as malcatea.		
		Fen (10)			
		Old growth forest (10)	-		
		Mature forested wetland (5	•		
			wetland-unrestricted hydrology (10) wetland-restricted hydrology (5)		
		Lake Plain Sand Prairies (, ,,		
		Relict Wet Praires (10)			
			deral threatened or endangered spe	cies (10)	
			pird/water fowl habitat or usage (10)		
	FI 20	-	Question 5 Qualitative Rating (-10)		
	5 36		•	sion, microtopography.	
max 20pts.	subtotal	6a. Wetland Vegeta		Vegetation Community Cov	
		Score all present using 0 to	3 scale.	, , , , , , , , , , , , , , , , , , ,	, ,
		Aquatic bed 1 Emergent		Present and either comprises small par vegetation and is of moderate quality, or	
		Shrub		significant part but is of low quality	or comprises a
		Forest	- :	Present and either comprises significan	nt part of wetland's 2
		Mudflats		vegetation and is of moderate quality o	r comprises a small
		Open water	_	part and is of high quality	
		Other		Present and comprises significant part,	or more, of wetland's 3
		6b. horizontal (plan view) Select only one.	interspersion.	vegetation and is of high quality	
		High (5)		Narrative Description of Vegetation	Quality
		Moderately high(4)		Low spp diversity and/or predominance	e of nonnative or low
		Moderate (3)		disturbance tolerant native species	
		Moderately low (2)		Native spp are dominant component of	•
		x Low (1) None (0)		although nonnative and/or disturbance can also be present, and species diver-	• • • • • • • • • • • • • • • • • • • •
		6c. Coverage of invasive	plants. Refer	moderately high, but generallyw/o pres	
		Table 1 ORAM long form for		threatened or endangered spp to	
		or deduct points for covera	~	A predominance of native species, with	
		Extensive >75% cover (-5)		and/or disturbance tolerant native spp a	•
		Moderate 25-75% cover (-3 Sparse 5-25% cover (-1)	3)	absent, and high spp diversity and ofte the presence of rare, threatened, or en-	
		x Nearly absent <5% cover (0)	the presence of fare, threatened, or en	uangered spp
		Absent (1)	-,	Mudflat and Open Water Class Quali	ty
		6d. Microtopography.		Absent <0.1ha (0.247 acres)	
		Score all present using 0 to		Low 0.1 to <1ha (0.247 to 2.47 acres)	
		Vegetated hummucks/tuss Coarse woody debris >150		Moderate 1 to <4ha (2.47 to 9.88 acres High 4ha (9.88 acres) or more	3)
		1 Coarse woody debris >15c Standing dead >25cm (10ii		Flight 4fla (9.00 acres) of filore	
		Amphibian breeding pools	.,	Microtopography Cover Scale	
				Present very small amounts or if more	common
			-	of marginal quality	of bighoot
Category 2			:	Present in moderate amounts, but not of quality or in small amounts of highest of present in the present in moderate amounts.	•
Catogory 2	36 GDANE	TOTAL(max 100 pts)			
	30 GRANL	TOTAL(max 100 pts)	:	3	s
				and of highest quality	

ORAM_WJBL160923-02.xlsm | test_Field 12/27/2016

APPENDIX C OEPA QHEI & HHEI STREAM FORMS

Stream 01 **Modified Class 1**



16

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-091916-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.02470 LONG80.80574 RIVER CODE RIVER MILE	
DATE 09/19/16 SCORER jbl/cms comments ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Previous disturbance from clearing	OVERY
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (May of 20) Add total surples of significant substrate types found (May of 2). Find a training some of significant substrate types found (May of 2).	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]	Points
BEDROCK [16 pt]	Substrate
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0% GRAVEL (2-64 mm) [9 pts] 15% MUCK [0 pts] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 0%	11
Total of Percentages of 5.00% (A) Substrate Percentage (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 Check 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	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]	0
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] (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
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 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
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 This information must also be completed	Width Max=30
> 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] COMMENTS 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 PLOODPLAIN QUALITY	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 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] COMMENTS 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 L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m None Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
> 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] COMMENTS 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 Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Nor conservation (Interstitial) Nor conservation (Interstitial)	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Vide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Narrow <5m None Residential, Park, New Field Ploop Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 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] COMMENTS 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 RIPARIAN WIDTH L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Residential, Park, New Field Narrow <5m Residential, Park, New Field None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10 m Narrow <5 m Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] 1.0 m (<=3' 3") [5 pts] 2.00 2.00 3.0 m - 4.0 m (<=3' 3") [5 pts] 4.0 m (<=3' 3") [5 pts] 5.1.0 m (<=3' 3	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30

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: 09/19/16 Quantity: 0.10
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 70%
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) 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
hh-03 cleared
existing ROW > West Bellaire
Substation
FLOW -V
steep wooded
cleared
cleared

Modified Class 1 Stream 02



26

SITE NAME/LOCATION AEP Glencoe-Wes	stBellaire	
hh-jbl-091916-02 SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)	
\ / 	LAT. 40.02911 LONG80.80741 RIVER CODE RIVER MILE	
DATE 09/19/16 SCORER jbl/cms	COMMENTS intermittent	
NOTE: Complete All Items On This Form	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NAT MODIFICATIONS: culvert under acces ro	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVER	OVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
, ,	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B. ERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]	0% SILT [3 pt] 45% LEAF PACK/WOODY DEBRIS [3 pts] 10%	Points
BEDROCK [16 pt]	3% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	5% CLAY or HARDPAN [0 pt] 0% 15% MUCK [0 ptc] 0%	Wax = 40
GRAVEL (2-04 IIIII) [9 pis]	20% MUCK [0 pts] 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	16
Total of Percentages of	0.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBST	TRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 7	
	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	d culverts or storm water pipes) (Check ONLY one box): > 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): 1.00	
	(monco).	
3. BANK FULL WIDTH (Measured as the	average of 3-4 measurements) (Check ONLY one box):	Bankfull
		Bankfull Width Max=30
3. BANK FULL WIDTH (Measured as the a > 4.0 meters (> 13') [30 pts]	average 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]	Width
3. BANK FULL WIDTH (Measured as the a > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
3. BANK FULL WIDTH (Measured as the a > 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]	average of 3-4 measurements) (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the a > 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] COMMENTS RIPARIAN ZONE AND FLOODP	average of 3-4 measurements) (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	Width Max=30
3. BANK FULL WIDTH (Measured as the a > 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] COMMENTS	average of 3-4 measurements) (Check <i>ONL</i> Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the a > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R ✓ ✓ Mature Forest, Wetland Conservation Tillage	Width Max=30
3. BANK FULL WIDTH (Measured as the a > 4.0 meters (> 13') [30 pts]	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Field Urban or Industrial	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 4.0 meters (> 13') [30 pts]	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) L R (Conservation Tillage Immature Forest, Wetland Immature Forest, Shrub or Old Immature Industrial	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 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] COMMENTS RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH L R (Per Bank) V V Wide >10m Moderate 5-10m	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) I R (Most Predominant per Bank)	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 4.0 meters (> 13') [30 pts]	This information must also be completed LAIN QUALITY	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Department of the process of the pro	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Department of the process of the pro	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 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] COMMENTS RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation of	average 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] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Whature Forest, Wetland Conservation Tillage Immature Forest, Wetland Urban or Industrial Field Open Pasture, Row Crown Residential, Park, New Field Open Pasture, Row Crown Fenced Pasture Mining or Construction Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) er 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 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] COMMENTS RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation of	This information must also be completed LAIN QUALITY	Width Max=30
3. BANK FULL WIDTH (Measured as the as > 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] COMMENTS RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation of	AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Wature Forest, Wetland Immature Forest, Wetland Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Wining or Construction Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) er 61 m (200 ft) of channel) (Check ONLY one box): 1.0 Check ONLY one box): Check ONLY one box): 2.0 3.0	Width Max=30

. = :	Yes ✓ No QHEI Sco	ore (If Yes.	Attach Complete	ed QHEI Form)	
DOWNSTREAM DESIG		(, maon comprote	,	
			Distance	from Evaluated Strear	m
CWH Name:			Distance f	rom Evaluated Strean	n
EWH Name:			Distance fi	rom Evaluated Strean	ı
MAPPING: ATTACH CO	PIES OF MAPS, INCLUDING	3 THE ENTIRE WATERS	HED AREA. CLE	EARLY MARK THE SIT	E LOCATION
USGS Quadrangle Name:		NRCS Soil Ma	ap Page:	NRCS Soil Map Str	eam Order
County:		Township / City:			
MISCELLANEOUS					
Base Flow Conditions? (Y/N):_Y	Date of last precipitat	ion: 09/19/16	Quantit	y: 0.05	
Photograph Information:					
Elevated Turbidity? (Y/N):	Canopy (% open): _	0%			
Were samples collected for water		(Note lab sample no. or	id and attach re	eulte) Lah Number	
Field Measures: Temp (°C)	Dissolved Oxygen (m	,	,	ductivity (µmhos/cm)	
s the sampling reach representati	ve of the stream (Y/N)	If not, please explain:			
ID	Yes, Record all observations number. Include appropriate ucher? (Y/N) N Salama V) N Voucher? (Y/N) N	field data sheets from the anders Observed? (Y/N)	Primary Headwa	ater Habitat Assessmer (Y/N)	
Comments Regarding Biology:					
DRAWING AND	NARRATIVE DESCRI	PTION OF STREAT	M REACH /TI	his must he com	nleted):
	NARRATIVE DESCRI		•		
Include important landmar			•		
Include important landmar			•		
Include important landmar	ks and other features of in	wooded	•		
Include important landmar	ks and other features of in	terest for site evaluation	•		
Include important landmar	ks and other features of in	wooded	•		
nh-02	ks and other features of in	wooded	•		
Include important landmar	ks and other features of in	wooded	•		
nh-02	ks and other features of in	wooded steep	•		

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

16

SITE NAME/LOCATION West Bellaire-Glei	ncoe	
SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft)	LAT. LONG. RIVER CODE RIVER MILE	
DATE 12/07/16 SCORER MDT, CS	COMMENTS Intermittent	
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATE MODIFICATIONS: periodic dumping by lo	URAL CHANNEL ☐ RECOVERED ☐ RECENT OR NO RECOVERING ☐ RECENT OR NO RECOVERING	COVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	
, , , , , , , , , , , , , , , , , , , ,	Int substrate types found (Max of 8). Final metric score is sum of boxes A & B. RCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts]	0% SILT [3 pt] 40%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]	0% LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% 0%	Substrate
COBBLE (65-256 mm) [12 pts]	0% CLAY or HARDPAN [0 pt] 50%	Max = 40
	10% MUCK [0 pts] 0%	6
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%	
Total of Percentages of 0.	00% (A) Substrate Percentage (B) Check	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBST		
2. Maximum Pool Depth (Measure the ma	aximum 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):	Max = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	> 5 cm - 10 cm [15 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 a		Bankfull
> 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
`	average of 3-4 measurements) (Check ONLY one box):	
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 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]	Check ONLY one box):	Width Max=30
> 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] COMMENTS	Average 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] AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed	Width Max=30
> 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]	AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY	Width Max=30
> 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] COMMENTS RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH L R (Per Bank)	AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) L R (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 2 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 1.00	Width Max=30
> 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH L R (Per Bank) Wide >10m	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank)	Width Max=30
> 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] COMMENTS RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH L R (Per Bank)	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Check ONLY one box): AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed LAIN QUALITY AVERAGE BANKFULL WIDTH (Feet): 1.00 L R Conservation Tillage Urban or Industrial	Width Max=30
> 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH L R (Per Bank) Wide >10m	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) Mature Forest, Wetland Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed LAIN QUALITY	Width Max=30
> 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) Conservation Tillage Tillage (Dren Pasture Row Conservation Pasture Row Conser	Width Max=30
> 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] COMMENTS	This information must also be completed AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed LAIN QUALITY ♣NOTE: River Left (L) and Right (R) as looking downstream ♣ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Penced Pasture (Check ONLY one box): 1.00 L R(Feet): 1.00 L R Conservation Tillage Urban or Industrial Open Pasture, Row C	Width Max=30
> 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] COMMENTS	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Wation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitten) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitten) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitten)	Width Max=30
> 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] COMMENTS	This information must also be completed LAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Wation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitten) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitten) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitten)	Width Max=30
A 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m V Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 1.00 This information must also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Wining or Construction Wation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittential Dry channel, no water (Ephemeral)	Width Max=30
A 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m V Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Subsurface flow with isolated pools COMMENTS SINUOSITY (Number of bends per None)	This information must also be completed LAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream FLOODPLAIN QUALITY L R (Most Predominant per Bank) Immature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Fenced Pasture Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral) Ter 61 m (200 ft) of channel) (Check ONLY one box): 2.0 3.0	Width Max=30
A 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m V Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools COMMENTS SINUOSITY (Number of bends per	This information must also be completed LAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream froodpelaln QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Woist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) AVERAGE BANKFULL WIDTH (Feet): 1.00 1.00 L R Conservation Tillage Urban or Industrial Open Pasture, Row C Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30
A 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] COMMENTS RIPARIAN ZONE AND FLOODPLE RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m V Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Subsurface flow with isolated pools COMMENTS SINUOSITY (Number of bends per None)	This information must also be completed LAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream FLOODPLAIN QUALITY L R (Most Predominant per Bank) Immature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Fenced Pasture Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral) Ter 61 m (200 ft) of channel) (Check ONLY one box): 2.0 3.0	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Att	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHE	
USGS Quadrangle Name: NRCS Soil Map	Page: NRCS Soil Map Stream Order
County: Belmont 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): 90%	
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 ID number. Include appropriate field data sheets from the Post of Voucher? (Y/N) N Salamanders Observed? (Y/N) N Salamanders Observed? (Y/N) N Aquatic Macroinvertebrate Comments Regarding Biology:	Voucher? (Y/N)
Include important landmarks and other features of interest for site evaluation a	· · · · · · · · · · · · · · · · · · ·

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

25

					1, 2, 3, 1	
SITE NAME/LOCATION <u>V</u>	Vest Bellaire-Glend	coe				
	SITE NUMBER	RIVER			DRAINAGE AREA (mi²)	
LENGTH OF STREAM REA			NG	RIVER CODE	RIVER MILE	<u> </u>
DATE 12/07/16 SO	CORER MDT, CS	COMMENTS _	pnemerai			• • • • • • • • • • • • • • • • • • • •
NOTE: Complete All It	ems On This Form -	Refer to "Field Ev	aluation Manual	for Ohio's PH	IWH Streams" for In	structions
STREAM CHANNEL MODIFICATIONS: per	NONE / NATUR		RECOVERED	RECOVERING	RECENT OR NO R	RECOVERY
(Max of 32). Add to TYPE BLDR SLABS BOULDER (>2: BEDROCK [1]	[16 pts] 0' 56 mm) [16 pts] 0' 6 pt] 0' 56 mm) [12 pts] 0'	substrate types found CENT TYPE %		netric score is su DODY DEBRIS [3 G [3 pts]	Im of boxes A & B. PERCENT 70%	HHI Metr Poin Substr Max =
SAND (<2 mm)	0° [6 pts]	%	ARTIFICIAL [3 p	ts]	0%	
Total of Pero Bldr Slabs, Boulde	centages of 0.00 r, Cobble, Bedrock	0% ^(A)	Substrate Percentage Check		(B)	A + E
SCORE OF TWO MOST PR	REDOMINATE SUBSTR	ATE TYPES: 12	TOTAL NU	MBER OF SUBS	STRATE TYPES: 3	
	pts]		pipes) (Check C > 5 cm - 10 cm < 5 cm [5 pts]	NLY one box):		Pool Do Max =
COMMENTS			MAXIMU	M POOL DEPTI	H (Inches): 0.50	
3. BANK FULL WIDT > 4.0 meters (> 13') > 3.0 m - 4.0 m (> 9 > 1.5 m - 3.0 m (> 9	' 7" - 13') [25 pts]	erage of 3-4 measur		Check ONLY one (> 3' 3" - 4' 8") [1 ") [5 pts]		Bank Widt Max=
COMMENTS	,, ,		AVERAG	SE BANKFULL V	WIDTH (Feet): 2.00	5 5
					` ′ ′	- L
RIPARIAN RIPARIAN L R (Per Bar Wide >1	nk) 0m	IN QUALITY AN FLOODPLAIN QUAL L R (Most Pred Mature For Immature F	•	and Right (R) a	s looking downstream of the conservation Tillage Urban or Industrial	
Narrow •		Field Residential	, Park, New Field		Open Pasture, Row	Crop
None COMMENT		Fenced Pas			Mining or Construct	ion
Stream Flow	flow with isolated pools (, (✓ Moist C	hannel, isolated innel, no water (pools, no flow (Intermitt Ephemeral)	ent)
SINUOSITY None 0.5	Y (Number of bends per	61 m (200 ft) of chanr 1.0 1.5	(Check <i>ONLY</i> 2.0 2.5	one box):	3.0 >3	
STREAM GRADIE Flat (0.5 ft/100 ft)	NT ESTIMATE Flat to Moderate	Moderate (2 ft/100 ft) Mode	rate to Severe	Severe (10) ft/100 ft)

		Must Also be Complete	<u>ed):</u>		
QHEI PERFORMI	ED? - Yes No QHEIS	Score (If Yes	s, Attach Completed	I QHEI Form)	
DOWNSTREAM [DESIGNATED USE(S)				
				om Evaluated Stream	
				om Evaluated Stream	
				om Evaluated Stream	
MAPPING: ATTAC	CH COPIES OF MAPS, INCLUDI	ING THE <u>ENTIRE</u> WATER	SHED AREA. CLE	ARLY MARK THE SITE LO	CATION
SGS Quadrangle Name:		NRCS Soil N	Map Page:	NRCS Soil Map Stream	Order
ounty: Belmont		Township / City:			
MISCELLANEOU	S				
ase Flow Conditions? (Y/N):Y Date of last precipi	itation:12/06/16	Quantity		
hotograph Information:					
levated Turbidity? (Y/N):	N Canopy (% open	20%			
				lta\ I ala Nirala am	
vere samples collected for	water chemistry? (Y/N): N	(Note lab sample no. o		,	
reld Measures: Temp (°	,		U.) Cond	uctivity (µmhos/cm)	
the sampling reach repres	entative of the stream (Y/N)	If not, please explai	n:		
dditional comments/descrip	otion of pollution impacts:				
BIOTIC EVALUA	TION_				
erformed? (Y/N): N ish Observed? (Y/N) N rogs or Tadpoles Observed	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salating (Y/N) N Voucher? (Y/N)	ate field data sheets from tamanders Observed? (Y/I	he Primary Headwat	er Habitat Assessment Mai	nual)
erformed? (Y/N): N sh Observed? (Y/N) N rogs or Tadpoles Observed	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salating (Y/N) N Voucher? (Y/N)	ate field data sheets from t	he Primary Headwat	er Habitat Assessment Mai	nual)
erformed? (Y/N): N sh Observed? (Y/N) N rogs or Tadpoles Observed	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salating (Y/N) N Voucher? (Y/N)	ate field data sheets from t	he Primary Headwat	er Habitat Assessment Mai	nual)
erformed? (Y/N): N sh Observed? (Y/N) rogs or Tadpoles Observed omments Regarding Biolog	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salating (Y/N) N Voucher? (Y/N)	ate field data sheets from to amanders Observed? (Y/I N Aquatic Macroinver	N Voucher?	er Habitat Assessment Mai (Y/N) N Voucher? (Y/N) N	(/N) N
erformed? (Y/N): N N Ish Observed? (Y/N) rogs or Tadpoles Observed omments Regarding Biolog DRAWING A	(If Yes, Record all observatio ID number. Include appropriation Voucher? (Y/N) N Sala Sala (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)	ate field data sheets from the manders Observed? (Y/N) Aquatic Macroinver	N Voucher? tebrates Observed	r Habitat Assessment Man (Y/N) N Voucher? (Y	nual) //N) N ed):
erformed? (Y/N): N Ish Observed? (Y/N) rogs or Tadpoles Observed omments Regarding Biolog DRAWING A Include important lan	(If Yes, Record all observation ID number. Include appropriation Voucher? (Y/N) N Salative (Y/N) N Voucher? (Y/N) N Salative (Y/N) N Voucher? (Y/N) N Salative Noucher? (Y/N)	ate field data sheets from the amanders Observed? (Y/N Aquatic Macroinver RIPTION OF STRE/	N Voucher? tebrates Observed	r Habitat Assessment Man (Y/N) N Voucher? (Y	nual) //N) N ed):
erformed? (Y/N): N ish Observed? (Y/N) rogs or Tadpoles Observed omments Regarding Biolog DRAWING A	(If Yes, Record all observatio ID number. Include appropria Voucher? (Y/N) N Voucher? (Y/N) Iy: AND NARRATIVE DESC dmarks and other features of	ate field data sheets from the amanders Observed? (Y/N Aquatic Macroinver RIPTION OF STREATING interest for site evaluation reside	N Voucher? tebrates Observed	r Habitat Assessment Man (Y/N) N Voucher? (Y	nual) //N) N ed):
erformed? (Y/N): N ish Observed? (Y/N) rogs or Tadpoles Observed comments Regarding Biolog DRAWING A Include important lan	(If Yes, Record all observatio ID number. Include appropria Voucher? (Y/N) N Voucher? (Y/N) Iy: AND NARRATIVE DESC dmarks and other features of	ate field data sheets from the amanders Observed? (Y/N Aquatic Macroinver interest for site evaluation residents)	N Voucher? tebrates Observed	r Habitat Assessment Man (Y/N) N Voucher? (Y	nual) //N) N ed):
erformed? (Y/N): N ish Observed? (Y/N) rogs or Tadpoles Observed omments Regarding Biolog DRAWING A Include important lan tree	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salat? (Y/N) N Voucher? (Y/N	ate field data sheets from the amanders Observed? (Y/N Aquatic Macroinver interest for site evaluation residents)	N Voucher? tebrates Observed	is must be complet description of the stream	ed):
erformed? (Y/N): N ish Observed? (Y/N) rogs or Tadpoles Observed omments Regarding Biolog DRAWING A Include important lan tree	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salate? (Y/N) N Voucher? (Y/N) Sy: AND NARRATIVE DESC! dmarks and other features of the bridge / culver.	RIPTION OF STREA interest for site evaluation resider	N Voucher? tebrates Observed? AM REACH (The long and a narrative ential	is must be complet description of the stream	ed):
erformed? (Y/N): N ish Observed? (Y/N) rogs or Tadpoles Observed comments Regarding Biolog DRAWING A Include important lan tree	(If Yes, Record all observation ID number. Include appropriate Voucher? (Y/N) N Salate? (Y/N) N Voucher? (Y/N) Sy: AND NARRATIVE DESC! dmarks and other features of the bridge / culver.	ate field data sheets from the amanders Observed? (Y/N Aquatic Macroinver interest for site evaluation residents)	N Voucher? tebrates Observed? AM REACH (The long and a narrative ential	is must be complet description of the stream	nual) //N) N ed):

Stream 05 **Modified Class 2**



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SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-091916-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.03008 LONG80.81159 RIVER CODE RIVER MILE	
DATE 09/19/16 SCORER jbl/cms 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 Formerly impounded section	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
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 7% CLAY or HARDPAN [0 pt] 0% GRAVEL (2-64 mm) [9 pts] 50% MUCK [0 pts] 0%	IVIAX = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 0%	21
Total of Percentages of 8.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Check SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 6	A + D
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] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 8.00	
	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]	Bankfull Width
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (Feet): 6.00 RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R V Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial	Width 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) V Wide >10 m (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\text{NOTE: River Left (L) and Right (R) as looking downstream \$\text{RIPARIAN WIDTH} \ R (Per Bank)	Width 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) V Wide >10 m (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 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 Vide >10 m (=3' 3") [5 pts] L R (Most Predominant per Bank) L R Mature Forest, Wetland Conservation Tillage mmature Forest, Wetland Conservation Tillage	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30 20
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 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 RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Narrow <5m Narrow <5m Residential, Park, New Field Open Pasture, Row Credential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30 20
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R)	Width Max=30 20
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 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 RIPARIAN WIDTH FLOODPLAIN QUALITY Mide >10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS Fenced Pasture Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) COMMENTS	Width Max=30 20
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Note Note	Width Max=30 20
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS 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 Wide >10 m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Narrow <5m None Residential, Park, New Field Open Pasture, Row Cr None 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 (Check ONLY one box): None	Width Max=30 20

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Distance from Evaluated Stream Distance from Evaluated Stream 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: Lansing NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Belmont Township / City: Neff
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.15
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
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 steep Wooded
FLOW
residential wooded steep

Primary Headwater Habitat Evaluation Form

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SITE NAME/LOCATION West Bellaire-Glencoe SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) LENGTH OF STREAM REACH (ft) LAT. LONG. RIVER CODE RIVER MILE DATE 12/07/16 SCORER MDT, CS 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: periodic dumping by locals, some disturbance from cell tower access road 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] D'A BEDROCK [16 pt] BEDROCK [16 pt] GRAVEL (2-64 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] D'A ARTIFICIAL [3 pts] D'A ARTIFICIAL [3 pts]
LENGTH OF STREAM REACH (ft) LAT. LONG. RIVER CODE RIVER MILE DATE 12/07/16 SCORER MDT, CS 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: periodic dumping by locals, some disturbance from cell tower access road 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] 09% SILT [3 pt] PERCENT 25% DO% 09% DO% DEBRIS [3 pts] 09% 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. HHE Metri Point CATHONIC (16 pts) 09% DO% DEBRIS [3 pts] 09% 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. HHE Metri Point CATHONIC (16 pts) 09% DO% DOW DEBRIS [3 pts] 09% 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. HHE Metri Point DOW DEBRIS [3 pts] 09% 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. HHE Metri Point DOW DEBRIS [3 pts] 09% Substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHE Metri Point DOW DEBRIS [3 pts] 09% Substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHE Metri Point DOW DEBRIS [3 pts] 09% Substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHE Metri Point DOW DEBRIS [4 pts] 15% SILT [4 pts] 15% SI
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: periodic dumping by locals, some disturbance from cell tower access road 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] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] ARTIFICIAL [3 pts]
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 RECENT OR NO RECOVERY MODIFICATIONS: periodic dumping by locals, some disturbance from cell tower access road 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] 25% DWG DEBRIS [3 pts] 0% DWG DEBRIS [3 p
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: periodic dumping by locals, some disturbance from cell tower access road 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] BOULDER (>256 mm) [16 pts] BDULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] TRECOVERING RECENT OR NO RECOVERY METON TO RECOVERY MICH AND RECOVERY METON TO RE
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] 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] SAND (<2 mm) [6 pts]
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] 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] SAND (<2 mm) [6 pts]
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] 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] ARTIFICIAL [3 pts] ARTIFICIAL [3 pts] TYPE PERCENT 25% D% Substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 8). Final metric score is sum of boxes A & B. HHE Metri Point Substrate PERCENT 25% D% Substrate Nuck [0 pts] ARTIFICIAL [3 pts] 7
(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] 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] Max of 8). Final metric score is sum of boxes A & B. PERCENT TYPE SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] O% CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] THE Metri Point ARTIFICIAL [3 pts]
TYPE PERCENT TYPE PERCENT Metripe (a) □ BLDR SLABS [16 pts] 0% □ SILT [3 pt] 25% □ Discourse (a) 0% □ SILT [3 pt] 0% □ Discourse (a) 0% □ Substrate (a) 0% 0% Substrate (a) 0%
SLEAR SLEAR 10 pts
D BEDROCK [16 pt] 0%
COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] 7
SAND (<2 mm) [6 pts] O% ARTIFICIAL [3 pts]
Onto (2 mm) [opto]
Total of Percentages of 5.00% (A) Substrate Percentage (B) A + B Bldr Slabs, Boulder, Cobble, Bedrock
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 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): Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 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 ONL Y one box): > 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]
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
Field Open Pasture, Row Crop
Narrow <5m Residential, Park, New Field Open Fasture, Now Crop
None Fenced Pasture Mining or Construction
None Fenced Pasture Mining or Construction COMMENTS
None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):
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) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)
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)
None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Phemeral SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):
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 ephemeral Mining or Construction Dry Channel, isolated pools, no flow (Intermittent) Dry Channel, no water (Ephemeral)

Moderate (2 ft/100 ft)

✓ Moderate to Severe

Severe (10 ft/100 ft)

Flat to Moderate

ADDITIONAL STREAM INFORMATION (This Information Must Also be 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
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: 12/06/16 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 10%
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:
is the sampling reach representative of the stream (17/4) in not, please explain
<u> </u>
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 s 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)
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 must be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
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FLOW
SLOPE
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October 24, 2002 Revision

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Reset Form

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION | West Bellaire-Glencoe RIVER BASIN SITE NUMBER DRAINAGE AREA (mi2) LAT. RIVER CODE LENGTH OF STREAM REACH (ft) LONG. RIVER MILE DATE 12/07/16 SCORER MDT, CS **COMMENTS** | ephemeral NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** periodic dumping by locals 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. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 10% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 20% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 4055% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 32 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) Substrate Percentage 75.00% A + BBldr Slabs, Boulder, Cobble, Bedrock 28 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 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): 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 1.00 COMMENTS **MAXIMUM POOL DEPTH** (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.00 COMMENTS **AVERAGE BANKFULL WIDTH** (Feet): 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** R (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture Mining or Construction None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS_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 15 >3 STREAM GRADIENT ESTIMATE ✓ Moderate to Severe Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):		
QHEI PERFORMED? - Yes V No QHEI Score (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		
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: 12/06/16 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		
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Onclude important landmarks and other features of interest for site evaluation and a narrative description of the stream's location		
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Reset Form

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October 24, 2002 Revision

Stream 07

Class 3



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092016-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.03065 LONG80.81437 RIVER CODE RIVER MILE	
DATE 09/20/16 SCORER jbl/cms 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 RECENT OR NO RECENT OR NO RECOVERING □ RECENT OR NO	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 TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt] 0% MUCK [0 pts] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts]	22
Total of Percentages of 27.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	
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
> 22.5 - 30 cm [30 pts]	15
	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.50	
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
> 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] \(\begin{align*} \] \(\) 1.0 m (<=3' 3") [5 pts]	
> 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] > 1.0 m (<=3' 3") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 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] \(\begin{align*} \] \(\) 1.0 m (<=3' 3") [5 pts]	Width
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00 This information must also be completed	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00	Width Max=30
> 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] ≤ 1.0	Width Max=30
> 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] COMMENTS 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) V Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Irban or Industrial	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m	Width Max=30
> 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] COMMENTS	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m	Width Max=30
> 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] COMMENTS 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) Wide >10m Mature Forest, Wetland	Width Max=30 20
> 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] COMMENTS 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) V Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS 1.0 m (-1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] X NOTE: River Left (L) and Right (R) as looking downstream NoTE: River Left (L) and Right (R) as looking downstream Note: Residential park, New Field Open Pasture, Row Creation None Fenced Pasture Mining or Construction	Width Max=30 20
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Noter Ploophalm QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Vide >10 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 6.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) Vide >10 mature Forest, Wetland Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Field Narrow <5m Residential, Park, New Field Open Pasture, Row Crown Comments Comment	Width Max=30 20
> 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] COMMENTS 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 ↑ Wide > 10m Moderate 5-10m Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30 20
> 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] COMMENTS 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 L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old Immature Forest, Shrub or Old Field Narrow <5m Narrow <5m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	Width Max=30 20
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30 20

ADDITIONAL STREAM INFORMATION (This Information Must Also be 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 ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order County belmont NRCS Soil Map Page: NRCS Soil Map Stream Order NRCS Soil Map Stream Order NRCS Soil Map Page: NRCS Soil Map Stream Order NR	_
County: belmont Township / City: Neff	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10	1
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 15%	
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 to the primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Voucher	he sit
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 residential garde	
hh-02 \ wooded/scrub shrub	
wooded/soldb sillab	
FLOW	
wooded/scrub shrub residential	
steep	
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STREAM 08



15

SITE NAME/LOCATION AEP-Glencoe_West Bellaire	THIEF COOLS (Sum of metrics 1, 2, 3) :
OTTE NAME/EGOATION	
450	BASIN DRAINAGE AREA (mi²)
	ONG80.82005 RIVER CODE RIVER MILE
	Intermittent
NOTE: Complete All Items On This Form - Refer to "Field B	Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL MODIFICATIONS:	RECOVERED RECOVERING RECENT OR NO RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate p	
(Max of 32). Add total number of significant substrate types for	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
TYPE PERCENT TYPE BLDR SLABS [16 pts] 0%	SILT [3 pt] PERCENT Met i
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts] 0%
BEDROCK [16 pt] 0%	Max = 4
COBBLE (65-256 mm) [12 pts] 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	MICK [0 ptg]
SAND (<2 mm) [6 pts] 0%	ARTIFICIAL [3 pts]
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A)	Substrate Percentage (B) A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:	TOTAL NUMBER OF SUBSTRATE TYPES: 2
2. Maximum Pool Depth (Measure the maximum pool depth ve evaluation. Avoid plunge pools from road culverts or storm wat	er pipes) (Check ONLY one box): Max = 3
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	> 5 cm - 10 cm [15 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 meas	urements) (Check ONLY one box): Bankfu
> 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] Max=3
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 1.50
This is former	tion must be a second s
	tion <u>must</u> also be completed rNOTE: River Left (L) and Right (R) as looking downstream☆
RIPARIAN WIDTH FLOODPLAIN QUA	
	edominant per Bank) L R orest, Wetland
Moderate 5-10m Immature	Forest, Shrub or Old Urban or Industrial
Field	Open Pasture Pow Crop
	ai, Park, New Field
None Fenced F	Pasture Mining or Construction
FLOW REGIME (At Time of Evaluation) (Check ONL) Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS	one box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)
SINUOSITY (Number of bends per 61 m (200 ft) of cha	nnel) (Check <i>ONLY</i> one box): 2.0 2.5 3.0 >3
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/10	oft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also	be 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:	
EWH Name:	Distance from Evaluated Stream
	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lansing	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Belmont Towns	ship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 20°	/o
Were samples collected for water chemistry? (Y/N): N (Note la	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:	
ID number. Include appropriate field data Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders O	r 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 Voucher? (Y/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 fo	r site evaluation and a narrative description of the stream's location
	CULVER
WETLA	ND 01 /
FLOW	WETLAND 01

Stream 09 Fair Warmwater



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 52.5

Stream & Location: Little McMahon Creek	_RM:	Date	<u>·</u> 9/20/16
Scorers Full Name & Affiliation	JBL,	, CMS AECO	√
River Code: STORET #: Lat./ Long.: 40.028561	, -80.8	320596	Office verified location
BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN BLDR /SLABS [10] 10 20 HARDPAN [4] ITILLS [1] BOULDER [9] DETRITUS [3] ITILLS [1] COBBLE [8] 20 40 MUCK [2] WETLANDS [0] GRAVEL [7] 20 SILT [2] 70 20 HARDPAN [0] SAND [6] ARTIFICIAL [0] SANDSTONE [0] BEDROCK [5] (Score natural substrates; ignore RIP/RAP [0] NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) LACUSTURINE [0] COmments SHALE [-1] COAL FINES [-2]	El[c	☐ HEAVY ☐ MODE ☐ NORM ☐ FREE ☐ EXTEN ☐ MODE ☐ NORM ☐ NONE	ALITY ([-2] RATE [-1] Substrate AL [0]
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more community; 2-Moderate amounts, but not of highest quality or in small amounts quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional to the community of the community o	er, large il pools. ERS [1] TES [1]	Check ONE EXTENSI MODERA SPARSE	OUNT (Or 2 & average) VE >75% [11] TE 25-75% [7] 5-<25% [3] ABSENT <5% [1] Cover Maximum 20 13
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4]	1		Channel Maximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (River right looking downstream RIPARIAN WIDTH RIP	ITY	R CONSERVAT	nstruction [0] at land use(s) Riparian
Comments			Maximum 10
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH Check ONE (ONLY!) Check ONE (Or 2 & average) 1 > 1m [6] 0.7-<1m [4] 0.4-<0.7m [2] 0.2-<0.4m [1] 0.0.2-<0.4m [1] 1 < 0.2m [0] Comments CURRENT VELOCITY Check ALL that apply Check ALL that apply TORRENTIAL [-1] VERY FAST [1] INTERST MODERATE [1] Indicate for reach - pools and incomments	 TIAL [-1 TENT [1]	Primal Second (circle one and	on Potential ry Contact lary Contact d comment on back) Pool / Current Maximum 12 4.5
Indicate for functional riffles; Best areas must be large enough to support	a pop	ulation _{□N}	O RIFFLE [metric=0]
of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIF	FLE /	RUN EMBED	
□ BEST AREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2]	ļ	☐ NONE [2]	
☑ BEST AREAS 5-10cm [1] ☑ MAXIMUM < 50cm [1] ☐ MOD. STABLE (e.g., Large Gravel) [1] ☐ BEST AREAS < 5cm ☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	I	☐ LOW [1] ☑ MODERATE [0] Riffle
[metric=0] Comments	Ì	EXTENSIVE [-	Maximum 8
6] GRADIENT (20 ft/mi) VERY LOW - LOW [2-4] %POOL: 30	0/01	IDE:	
DRAINAGE AREA) %GL)%RIF	=	Gradient Maximum 10

FORESTED

Modified Class 1 Stream 10



17

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092016-07 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.02707 LONG80.82719 RIVER CODE RIVER MILE	
DATE 09/20/16 SCORER jbl/cms COMMENTS Ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Atv crossing	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
BLDR SLABS [16 pts]	Politis
BEDROCK [16 pt] 5% FINE DETRITUS [3 pts] 0% CORRIE (65.256 mm) [12 pts] 15% CLAY or HAPDRAN [0 pt] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	40
SAND (<2 mm) [6 pts]	12
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 20.00% (A) Substrate Percentage Check (B)	A + B
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 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]	IWIAX = 30
> 22.5 - 30 cm [30 pts]	0
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.00	
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]	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	
> 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
> 3.0 m - 4.0 m (> 9 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed	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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 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	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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) V ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) V Wide >10m Moderate 5-10m Moderate 5-10m V Mature Forest, Wetland Urban or Industrial	Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) RIPARIAN WIDTH L R (Most Predominant per Bank) L R (Most Predominant per Bank) RIPARIAN WIDTH RIPARIAN WID	Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Vide >10m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m None Residential, Park, New Field Vining or Construction	Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Vide >10m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m None Residential, Park, New Field Vining or Construction	Max=30 5
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Max=30 5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH RIPARIAN WIDTH	Max=30 5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH RIPARIAN WIDTH	Max=30 5
SINUOSITY (Number of bends per 61 m (200 ft) of channel) AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream: AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream: AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 4.00 AVERAGE BANKFULL WIDTH (Feet): 5.00 AVERAGE BANKFULL WIDTH (Feet): 6.00 AVERAGE BANKFU	Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lansing	NRCS Soil Map Page: NRCS Soil Map Stream Order
halmant	hip / City: Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 5%	
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:	
	<u> </u>
ID number. Include appropriate field data Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders O	r collections optional. NOTE: all voucher samples must be labeled with the site is heets from the Primary Headwater Habitat Assessment Manual) bserved? (Y/N) N Voucher? (Y/N) N
	OF STREAM REACH (This <u>must</u> be completed): site evaluation and a narrative description of the stream's location
foreste	ed
FLOW	
hh-07	
forested	

Stream 11

Class 3



Primary Headwater Habitat E

valuation Form	77
Score (sum of metrics 1, 2, 3):	

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092016-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 09/20/16 SCORER jbl/cms COMMENTS 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 Former impacts for T line	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 TYPE PERCENT	Metric
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] O% SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] O%	Points
BEDROCK [16 pt] 40% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 30% CLAY or HARDPAN [0 pt] 0% MUCK [0 pts] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] 0% ARTIFICIAL [3 pts] 0%	32
Total of Percentages of 70.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	
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
> 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 ONLY one box):	Bankfull
(Bankfull Width 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]	Width 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]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L)	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS 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) V Wide >10 m Moderate 5-10 m Moderate 5-10 m Moderate 5-10 m Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 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 V Wide >10 m V Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) V Wide >10m Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cr	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 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)	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY *NOTE: River Left (L) and Right (R) as looking downstream *1000000000000000000000000000000000000	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) Check ONLY one box): > 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] OMMENTS AVERAGE BANKFULL WIDTH (Feet): 10.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS 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) V Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m None COMMENTS 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))	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 3.0 m - 4.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 Wide >10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Cr None 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 Check ONLY one box): Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): Check ONLY one box): None 1.0 Check ONLY one box): None	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS 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: RIPARIAN WIDTH FLOODPLAIN QUALITY **Wide > 10 m Wide > 10 m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cr None 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 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 3.0 m - 4.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 Wide >10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Cr None 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 Check ONLY one box): Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): Check ONLY one box): None 1.0 Check ONLY one box): None	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be 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 ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Township / City: Neff
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 5%
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)
s 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
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
WATERFALL 10' forested POOL RIFFLE POOL RIFFLE hh-06

forested



Modified Class 1 Stream 12



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SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092016-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.02601 LONG80.83353 RIVER CODE RIVER MILE	
DATE 09/20/16 SCORER jbl/cms comments ephemeral	
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 RECENT OR N	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 TYPE PERCENT	Metric
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] 0% SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] 0%	Points
BEDROCK [16 pt]	Substrate
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 0% 0%	16
Total of Percentages of 5,00% (A) Substrate Percentage (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
> 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
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 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
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50	Width Max=30
> 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]	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50 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	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Wide > 10m Mature Forest, Wetland Conservation Tillage	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m NOTE: River Left (L) and Right (R) as looking downstream Conservation Tillage Immature Forest, Shrub or Old Utban or Industrial	Width Max=30
> 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] ≤ 1.0	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m NOTE: River Left (L) and Right (R) as looking downstream L R (Most Predominant per Bank) Mature Forest, Wetland Urban or Industrial	Width Max=30
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Wide >10m Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Wide >10 m Mature Forest, Shrub or Old Immature Forest, Shrub or Old Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) None Moist Channel, isolated pools, no flow (Intermittent) Pry channel, no water (Ephemeral)	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Wide >10 m Moderate 5-10 m Narrow <5 m Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 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] COMMENTS 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 ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Mature Forest, Shrub or Old Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row Cr None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Wide >10 m Mature Forest, Wetland Moderate 5-10 m Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral))	Width Max=30
> 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] COMMENTS 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH 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 ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) a	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information	n Must Also be Completed	d):
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
	DING THE <u>ENTIRE</u> WATERS	HED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lansing	NRCS Soil M	ap Page: NRCS Soil Map Stream Order
County: belmont	Township / City:Ne	ff
MISCELLANEOUS		
Base Flow Conditions? (Y/N): Y Date of last precip	oitation: 09/19/16	Quantity: 0.10
Photograph Information:		
Elevated Turbidity? (Y/N): N Canopy (% ope	n): 50%	
Were samples collected for water chemistry? (Y/N):	(Note lab sample no. or	id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxyger		Conductivity (µmhos/cm)
	γ	· · · · · · · · · · · · · · · · · · ·
is the sampling reach representative of the stream (1714)	II Hot, please explain	
Additional comments/description of pollution impacts:		
BIOTIC EVALUATION		
,	· ·	ional. NOTE: all voucher samples must be labeled with the sit
		e Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Sa Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N	amanders Observed? (Y/N)	Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	N Aquatic Macioniverte	N Voucier (1777)
	······································	
		M REACH (This <u>must</u> be completed):
Include important landmarks and other features of	f interest for site evaluatio	n and a narrative description of the stream's location
hh-05 steep		
55		
	:17	wooded
FLOW	ently	
. 201	W @Q	
	NO Y	
wooded	ed ing	
	a ti	
	-	steep
	0 0	J

Stream 13

Class 1



Primary Headwater Habitat Evaluation Form

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HHEI Score (sum of metrics 1, 2, 3): **AEP Glencoe-WestBellaire** SITE NAME/LOCATION hh-jbl-092016-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi2) 200 LAT. 40.02517 LONG. -80.83735 RIVER CODE LENGTH OF STREAM REACH (ft) RIVER MILE DATE 09/20/16 **COMMENTS** ephemeral jbl/cms SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** 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. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 0% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 20% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 4033% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 14% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 22 33% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) Substrate Percentage 33.00% A + BBldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 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): 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] 0 0.00 COMMENTS **MAXIMUM POOL DEPTH** (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 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] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None 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 15 >3 STREAM GRADIENT ESTIMATE ✓ Moderate to Severe Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) 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 F	Form)
	USE(S) Distance from Evaluation Distance from Evaluation Distance from Evaluation Distance from Evaluation	uated Stream _
	MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MA	
USGS Quadrangle Name:		Soil Map Stream Order
County: belmont	Township / City: Neff	
MISCELLANEOUS		
Base Flow Conditions? (Y/N): Y	ate of last precipitation: 09/19/16 Quantity: 0.	10
Photograph Information:		
Elevated Turbidity? (Y/N): N	Canopy (% open): 5%	
Were samples collected for water chemis	ry? (Y/N): Note lab sample no. or id. and attach results) Lab	o Number:
	ssolved Oxygen (mg/l) pH (S.U.) Conductivity ((µmhos/cm)
Is the sampling reach representative of th	e stream (Y/N) If not, please explain:	
Additional comments/description of pollution	on impacts:	
() (cord all observations. Voucher collections optional. NOTE: all voucher sa Include appropriate field data sheets from the Primary Headwater Habita (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) N	at Assessment Manual)
nclude important landmarks and	ATIVE DESCRIPTION OF STREAM REACH (This must other features of interest for site evaluation and a narrative description of the existing ROW	
hh-04	CHIEF TON	
forested forested		Roa
	hh-03	
forested		
	DHWH Form Bono 2	
October 24, 2002 Revision	PHWH Form Page - 2	Reset Form

Stream 14 **Modified Class 2**



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SITE NAME/LOCATION AEP	Glencoe-WestBella		IIIEI GOOTE (Suin C		
hh-ihl-002016-03	E NUMBER	RIVER BASII	V	DRAINAGE AF	REA (mi²)
LENGTH OF STREAM REACH (1	000	0.02473 LONG.			'ER MILE
DATE 09/20/16 SCORE		COMMENTS Inter	mittent		
NOTE: Complete All Items				PHWH Streams	" for Instructions
	NONE / NATURAL Characteristics of the control of th		OVERED RECOVERI	NG RECENT O	OR NO RECOVERY
	mber of significant substr	rate types found (Ma	t. Check <i>ONL</i> Y <u>two</u> predom x of 8). Final metric score i LT [3 pt]		B. HHE Metri
BOULDER (>256 mr BEDROCK [16 pt] COBBLE (65-256 mr	0%	□□ FI	EAF PACK/WOODY DEBR NE DETRITUS [3 pts]	IS [3 pts]0%	Substra Max =
GRAVEL (2-64 mm) SAND (<2 mm) [6 pt	[9 pts]	ПП м	_AY or HARDPAN [0 pt] UCK [0 pts] RTIFICIAL [3 pts]	0% 10%	10
Total of Percentag Bldr Slabs, Boulder, Cob	ble, Bedrock	Cr	bstrate Percentage eck	(E	
SCORE OF TWO MOST PREDO	MINATE SUBSTRATE T	YPES: 15	TOTAL NUMBER OF S	UBSTRATE TYPES	S: 4
evaluation. Avoid plunge > 30 centimeters [20 pts]		or storm water pipe	the 61 meter (200 ft) evaluates (Check ONLY one boxes 5 cm - 10 cm [15 pts]		me of Pool De Max =
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]			5 cm [5 pts] NO WATER OR MOIST CH		15
COMMENTS			MAXIMUM POOL DE	PTH (Inches	s): 4.00
3. BANK FULL WIDTH (M. > 4.0 meters (> 13') [30 pts > 3.0 m - 4.0 m (> 9' 7" - 1 > 1.5 m - 3.0 m (> 9' 7" - 4	3') [25 pts]	✓ ;	nts) (Check ONL) 1.0 m - 1.5 m (> 3' 3" - 4' 8 1.0 m (<=3' 3") [5 pts]	,	Bankfu Width Max=3
COMMENTS	, , [20 80]		AVERAGE BANKFU	LL WIDTH (Fee	4.50 15
		This information m	ust also be completed		
	AND FLOODPLAIN QU	ALITY ☆NOTE	:: River Left (L) and Right (I	R) as looking down	stream ☆
<u>RIPARIAN WID</u> L R (Per Bank)	<u>TH </u>	DPLAIN QUALITY (Most Predomin	ant ner Bank) I	R	
✓ ✓ Wide >10m		Mature Forest, V	Vetland	Conservation	on Tillage
Moderate 5-10)m	Immature Fores Field	t, Shrub or Old	Urban or In	dustrial
Narrow <5m		Residential, Par	k, New Field	Open Pastu	ure, Row Crop
None COMMENTS		Fenced Pasture		Mining or C	onstruction
Stream Flowing	(At Time of Evaluation) (vith isolated pools (Interst	`	ox): Moist Channel, isola Dry channel, no wa		(Intermittent)
SINUOSITY (Nur None 0.5	mber of bends per 61 m (7 1.0 1.5	200 ft) of channel)	(Check ONLY one box): 2.0 2.5	3.0	
STREAM GRADIENT ES		oderate (2 ft/100 ft)	☐ Moderate to Sever	e S	evere (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION	(This Information Must Also be Completed):		
QHEI PERFORMED? - Ye	es V No QHEI Score (If Yes, Attach Completed QHEI Form)		
DOWNSTREAM DESIGNATE	D USE(S)		
WWH Name:	Distance from Evaluated Stream		
CWH Name: Distance from Evaluated Stream			
	OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION		
USGS Quadrangle Name: Lansing	NRCS Soil Map Page: NRCS Soil Map Stream Order		
County: belmont	Township / City:Neff		
MISCELLANEOUS			
Base Flow Conditions? (Y/N):_Y	Date of last precipitation: 09/19/16 Quantity: 0.10		
Photograph Information:			
Elevated Turbidity? (Y/N): N	Canopy (% open): 15%		
Were samples collected for water chemi	stry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:		
	Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)		
Is the sampling reach representative of t	he stream (Y/N) Y If not, please explain:		
Additional comments/description of pollu	ition impacts:		
ID numbe	ecord all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site er. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) ? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N)		
	RATIVE DESCRIPTION OF STREAM REACH (This must be completed): I other features of interest for site evaluation and a narrative description of the stream's location existing ROW		
hh-03 forested			
FLOW RIFFLE	POOL RIFFLE Culvert		
forested	Access Road Road		
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Stream 15 Modified Class 2



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SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092116-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.02242 LONG80.84253 RIVER CODE RIVER MILE	
DATE 09/21/16 SCORER jbl/cms comments intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Previous channelization/culvert	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. TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] COBBLE (65-256 mm) [12 pts] COBBLE (65-256 mm) [19 pts] COBBLE (65-256 mm) [19 pts] COBBLE (12 64 mm) [10 pts] COBBLE (13 64 mm) [10 pts] COBBLE (14 64 mm) [10 pts] COBBLE (15 64 mm) [10 pts]	HHEI Metric Points Substrate Max = 40
GRAVEL (2-64 mm) [9 pts]	18
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 Substrate Percentage (B) Check TOTAL NUMBER OF SUBSTRATE TYPES: 6	A + B
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
> 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): 2.50	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 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] (Check ONL Y 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): 6.00	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field	
Narrow <5m Residential, Park, New Field None Fenced Pasture Open Pasture, Row Cri Mining or Construction COMMENTS	qu
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	·)
	L
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 0.5 1.0 2.0 3.0 >3.0 >3.0 >3.0	L

ADDITIONAL STREAM INFORMATION (This Information Must	Also be 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:EWH Name:	
EWH Name:	Distance from Evaluated Stream
	HE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Lansing	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont	ownship / City: Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open):	15%
Were samples collected for water chemistry? (Y/N): N (No	ote lab 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) Y	f not, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field Voucher? (Y/N) N Salamando	oucher collections optional. NOTE: all voucher samples must be labeled with the sit d data sheets from the Primary Headwater Habitat Assessment Manual) ers Observed? (Y/N) N Voucher? (Y/N) N V
	ION OF STREAM REACH (This must be completed): est for site evaluation and a narrative description of the stream's location
hh-01 residential	residential
wooded	steep wooded/scrub shrub
	hh-02
PH October 24, 2002 Revision	Save as pdf Reset Form

Modified Class 1 Stream 16



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SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092116-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.02209 LONG80.84230 RIVER CODE RIVER MILE	
DATE 09/21/16 SCORER jbl/cms comments ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING	COVERY
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] 40%	Metric
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	Cubatrat
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0% COBBLE (65-256 mm) [12 pts] 10% CLAY or HARDPAN [0 pt] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] 10% CLAY or HARDPAN [0 pt] MUCK [0 pts] 0%	
✓ ✓ SAND (<2 mm) [6 pts] 25% ARTIFICIAL [3 pts] 0%	14
Total of Percentages of 10.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 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	Pool Dept
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] > 5 cm - 10 cm [5 pts]	l
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
MAXIMOM 1 GGE BEI 111 (IIICIES).	
(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]	Bankfull Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 RIPARIAN ZONE AND FLOODPLAIN QUALITY ∴ NOTE: River Left (L) and Right (R) as looking downstream ∴ RIPARIAN WIDTH □ RIPARIAN WIDTH □ RIPARIAN W	Width 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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) V Wide >10m Mature Forest, Wetland Conservation Tillage	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS 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)	Width 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (Feet): AVERAGE BANKFULL WIDTH (Feet): 3.00 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 >10 m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Cr	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ARIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Open Pasture Row Completed Urban or Industrial Field	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Mature Forest, Wetland Conservation Tillage Immature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Field Narrow <5m Residential, Park, New Field Open Pasture, Row Cr. None Residential, Park, New Field Open Pasture, Row Cr. None Fenced Pasture Mining or Construction Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Mining or Construction Mining or Constructi	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) Check ONLY one box): > 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH L R (Per Bank) V Vide > 10 m V Vide > 10 m Vi	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements)	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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" - 13') [20 pts] COMMENTS 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** RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field Open Pasture, Row Cr None 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 1.5 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements)	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complete	ed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes,	, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERS	SHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil M	lap Page: NRCS Soil Map Stream Order
County: belmont Township / City: Ne	eff
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16	Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 15%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or	r id. and attach results) Lab Number:
	J.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain	1:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data sheets from the Voucher? (Y/N) N Salamanders Observed? (Y/N)	
DRAWING AND NARRATIVE DESCRIPTION OF STREA	M REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation	on and a narrative description of the stream's location hh-01
hh-02 wooded/scrub shrub	steep residential
FLOW	
residential	steep
PHWH Form Page - 2	
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Stream 17 **Modified Class 1**



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SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092116-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.02226 LONG80.84360 RIVER CODE RIVER MILE	
DATE 09/21/16 SCORER jbl/cms COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ıctions
STREAM CHANNEL	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 TYPE PERCENT	Metric
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] O% SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] 5%	Points
BEDROCK [16 pt]	Substrate
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt]	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ ARTIFICIAL [3 pts] ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	17
Total of Percentages of 5 00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 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	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] > 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.25	
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]	Bankfull Width Max=30
	Width
> 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] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 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]	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A FLOODPLAIN QUALITY	Width Max=30
> 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] COMMENTS 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	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) V Wide > 10m Mature Forest, Wetland Immature Forest, Shrub or Old Urban or Industrial	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 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) V Wide >10m	Width Max=30
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ♣ NOTE: River Left (L) and Right (R) as looking downstream ♣ RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] X NOTE: River Left (L) and Right (R) as looking downstream ♣ RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Immature Forest, Shrub or Old Open Pasture, Row Crop None Open Pasture, Row Crop Mining or Construction COMMENTS	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Notes and Not	Width Max=30
> 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] COMMENTS 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 Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 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] COMMENTS 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 Wide >10 m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old Immature Forest, Shrub or Old Field Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS None (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS None (Check ONLY one box): Open Pasture, Row Crop Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A Note Predominant per Bank) RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Narrow <5 m Residential, Park, New Field Open Pasture, Row Crop None 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 1.0 1.0 1.0 1.0 1.0 1.0 1.	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Atta	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	
USGS Quadrangle Name: Lansing NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: belmont Township / City: Neff	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16	Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 15%	
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. a	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 Prish Observed? (Y/N) N Salamanders Observed? (Y/N) N	imary Headwater Habitat Assessment Manual)
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrai	tes Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM F	REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation ar	nd a narrative description of the stream's location
Wooded/cerub chrub	wooded pasture
FLOW	wetland 4 steep, no swale or
pasture	any connection to stream

Modified Class 2 Stream 18



37

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092116-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01747 LONG80.85048 RIVER CODE RIVER MILE	
DATE 09/21/16 SCORER jbl/cms COMMENTS intermittent, receives outfall frm pond	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Impounded channel for pond	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 TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt]	Substrate
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] 25% MUCK [0 pts] ARTIFICIAL [3 pts] 5%	17
Total of Percentages of 20.00% (A) Substrate Percentage (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 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	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): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] (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
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 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] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 4.00	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 4.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (Feet): 4.00 **NOTE: River Left (L) and Right (R) as looking downstream ** RIPARIAN WIDTH FLOODPLAIN QUALITY FLOODPLAIN QUALITY	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) V Wide > 10m Conservation Tillage	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (Feet): 4.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 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] COMMENTS 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) V Wide >10m Moderate 5-10m Moderate 5-10m V Mature Forest, Wetland Immature Forest, Shrub or Old Urban or Industrial	Width Max=30
> 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] ≤ 1.0	Width Max=30
> 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] > 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 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] COMMENTS 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 Wide >10m Moderate 5-10m Narrow <5m None Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Moderate (Per Bank) None (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Moderate (Per Bank) Residential, Park, New Field Modest Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field Penced Pasture FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] 4.00 4.00 5 pts 5 pts 6 pts 6 pts 6 pts 7 pts 7 pts 7 pts 8 pts 9 pts 1.0 m (<=3' 3") [5 pts] 5 pts 1.0 m (<=3' 3") [5 pts] 5 pts 6 pts 6 pts 7 pts 7 pts 7 pts 7 pts 9 pts 1.0 m (<=3' 3") [5 pts] 5 pts 6 pts 6 pts 7 pts 7 pts 7 pts 9 pts 1.0 m (<=3' 3") [5 pts] 6 pts 1.0 m (<=3' 3") [5 pts] 7 pts 1.0 m (<=3' 3") [5 pts] 8 pts 1.0 m (<=3' 3") [5 pts] 9 pts 1.0 m (<=3' 3")	Width Max=30
> 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] COMMENTS 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 Wide >10 m Wide >10 m Moderate 5-10 m Narrow <5 m Narrow <5 m None 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 Check ONLY one box): Check ONLY one box): None 1.0 Check ONLY one box): Check ONLY one box): Check ONLY one box): None 1.0 3.0	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also	be 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:	
EWH Name:	Distance from Evaluated Stream
	ITIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order NRCS Soil Map Stream Order
County: belmont Towns	ship / City:Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): N (Note lab	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:	
ID number. Include appropriate field data Fish Observed? (Y/N) N Voucher? (Y/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) bserved? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
	OF STREAM REACH (This <u>must</u> be completed):
cleared of interest fo	wooded steep
FLOW pond culvert	
	steep
	wooded

Stream 19

Class 2



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092116-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01750 LONG80.85104 RIVER CODE RIVER MILE	
DATE 09/21/16 SCORER jbl/cms COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	ı 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]	Points
BEDROCK [16 pt] 5% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	
SAND (<2 mm) [6 pts] 15% ARTIFICIAL [3 pts]	22
Total of Percentages of 30.00% (A) Substrate Percentage (B)	A + B
Bidr Slabs, Boulder, Cobble, Bedrock	
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 ONL Yone 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): 0.50	
	l
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
> 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] \(\leq 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
> 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]	Width Max=30
> 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] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY % NOTE: River Left (L) and Right (R) as looking downstream %	Width Max=30
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS	Width Max=30
> 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] ≤ 1.0	Width Max=30
> 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] COMMENTS	Width Max=30 5
> 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] ≤ 1.0	Width Max=30 5
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30 5
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30 5
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH L R (Per Bank) V Wide >10 m Mature Forest, Wetland Moderate 5-10 m Narrow <5 m Narrow <5 m Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): Average BANKFUL WIDTH (Feet): Average BANKFULL WIDTH (Feet): Average BANKF	Width Max=30 5
A 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] COMMENTS 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) Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30 5
> 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] COMMENTS 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 Wide >10 m (See 10 m) Wide >10 m (See 10 m) Narrow <5m Residential, Park, New Field Open Pasture, Row Completed Narrow <5m Residential, Park, New Field Open Pasture, Row Completed Narrow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral))	Width Max=30 5
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Floodplain Quality RIPARIAN WIDTH L R (Per Bank) Wide >1.0 m (× = 3' 3") [5 pts] L R (Per Bank) Wide >1.0 m - 1.5 m (× 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (× 3' 3" - 4' 8") [15 pts] > 1.0 m (× = 3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And the substraint of the substr	Width Max=30 5

QHEI PERFORMED? - Yes V 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 MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION USGS Quadrangle Name: Lansing NRCS Soil Map Page: NRCS Soil Map Stream Order County: belmont Township / City: Neff MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10 Photograph Information:
WWH Name: CWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION USGS Quadrangle Name: Lansing NRCS Soil Map Page: NRCS Soil Map Stream Order Township / City: Neff MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10 Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 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) Additional comments/description of pollution impacts:
CWH Name: EWH 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: Lansing NRCS Soil Map Page: NRCS Soil Map Page: NRCS Soil Map Stream Order Township / City: Neff MISCELLANEOUS Base Flow Conditions? (Y/N): Value of last precipitation: Distance from Evaluated Stream NRCS Soil Map Page: NRCS Soil Map Stream Order Township / City: Neff Quantity: O.10 Photograph Information: Elevated Turbidity? (Y/N): Name Canopy (% open): Name Canopy
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION USGS Quadrangle Name: Lansing NRCS Soil Map Page: NRCS Soil Map Stream Order County: belmont Township / City: Neff MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10 Photograph Information:
USGS Quadrangle Name: Lansing NRCS Soil Map Page: NRCS Soil Map Stream Order County: belmont Township / City: Neff MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10 Photograph Information:
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10 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:
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10 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:
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Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): O% Were samples collected for water chemistry? (Y/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) Additional comments/description of pollution impacts:
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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:
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 Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (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 WOODED hh-04
steep
FLOW -
steep wooded wooded wooded
wooded

Stream 20 Fair Warmwater



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 43.5

Stream & Location: Williams Creek	RM:	_ Date: 9/21/16
gh-jbl-092116-01 Scorers Full Name & Affiliation:		
River Code: STORET #: Lat./ Long.: 40.015339.	, -80.853	167 Office verified location □
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES HARDPAN [4]	SILT	& average) QUALITY HEAVY [-2] MODERATE [-1] NORMAL [0] FREE [1] EXTENSIVE [-2] MODERATE [-1] NORMAL [0] NONE [1]
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common quality; 2-Moderate amounts, but not of highest quality or in small amounts quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional over the common over the commo	r, large pools. ERS [1] TES [1]	AMOUNT Check ONE (Or 2 & average) EXTENSIVE >75% [11] MODERATE 25-75% [7] SPARSE 5-<25% [3] NEARLY ABSENT <5% [1] Cover Maximum 20 9
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Comments		Channel Maximum 20 8.5
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Converged to looking downstream RIPARIAN WIDTH EROSION WIDE > 50m [4] FOREST, SWAMP [3] SHRUB OR OLD FIELD [2] SHRUB OR OLD FIELD [2] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD HEAVY / SEVERE [1] VERY NARROW < 5m [1] FENCED PASTURE [1] OPEN PASTURE, ROWCROP [0] Comments	TY R	CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] te predominant land use(s) 00m riparian. Riparian Maximum 10 5
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH Check ONE (ONLY!) Check ONE (Or 2 & average) POOL WIDTH > RIFFLE WIDTH [2] 0.7-<1m [4] 0.4-<0.7m [2] 0.2-<0.4m [1] columnments CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SLOW [1] Very FAST [1] INTERSTI MODERATE [1] SIDDIES [1] Indicate for reach - pools and ri	TIAL [-1] TENT [-2]	Recreation Potential Primary Contact Secondary Contact (circle one and comment on back) Pool/ Current Maximum 3
Indicate for functional riffles; Best areas must be large enough to support of riffle-obligate species: Check ONE (Or 2 & average).	··· FLE / RU □ I □ I	12
6] GRADIENT (30 ft/mi)	%GLID	E: Gradient 7

AJ SAMPLED REACH

Check ALL that apply

STAGE	1st -sample pass- 2nd HIGH UP UP UP UP UP UP UP U	DRY
METHOD	☐ BOAT ☑ WADE ☐ L. LINE ☐ OTHER	DISTANCE

□ LOW 0.5 Km

CLARITY

--sample pass--□ 20-<40 cm ☐ 40-70 cm √ 20 cm 0.15 Km 0.12 Km 0.2 Km OTHER 200 feet

INVASIVE MACROPHYTES

EXCESS TURBIDITY ☐ NUISANCE ALGAE☐ INVASIVE MACROPI

DISCOLORATION

FOAM / SCUM **OIL SHEEN**

BI AESTHETIC

CANOPY

□ > 70 cm/ CTB

E ☐ SECCHI DEPTH☐ □ > 85%- OPEN

E CJ REC

Stream Drawing:

☐ 10%-<30% < < 10%- CLOSED

55%-<85% 30%-<55%

<u></u>

POOL: □>100ft²□>3ft AREA DEPTH

SLUDGE DEPOSITS

NUISANCE ODOR

TRASH / LITTER

CSOs/SSOs/OUTFALLS

PUBLIC / PRIVATE / BOTH / NA FLOOD CONTROL / DRAINAGE ACTIVE / HISTORIC / BOTH / NA **MODIFIED / DIPPED OUT / NA** MOVING-BEDLOAD-STABLE IMPOUNDED / DESICCATED YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED DI MAINTENANCE RELOCATED/CUTOFFS **ARMOURED / SLUMPS** ISLANDS / SCOURED LEVEED / ONE SIDED

Circle some & COMMENT

HARDENED / URBAN / DIRT&GRIME **LOGGING / IRRIGATION / COOLING** FALSE BANK / MANURE / LAGOON BMPs-CONSTRUCTION-SEDIMENT NATURAL / WETLAND / STAGNANT WWTP / CSO / NPDES / INDUSTRY ACID / MINE / QUARRY / FLOW WASH H₂0 / TILE / H₂0 TABLE BANK / EROSION / SURFACE PARK / GOLF / LAWN / HOME CONTAMINATED / LANDFILL El ISSUES

FI MEASUREMENTS x bankfull width zυπ bankfull x depth 3ft entrench. ratio x width 15ft x depth 2in max. depth W/D ratio

bankfull max. depth

floodprone x² width

re Te

ATMOSPHERE / DATA PAUCITY

Residential

ROAD

RIFFLE

RIFFL

Pool

RIFFLE

foot bridge

bridge-driveway

FORESTED

Modified Class 1 Stream 21



Г	
	25

SITE NAME/LOCATION AEP Glencoe-We	estBellaire	
hh-jbl-092216-01 SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200	LAT. 40.01223 LONG80.86339 RIVER CODE RIVER MILE	
DATE 09/22/16 SCORER jbl/cms	COMMENTS ephemeral	
NOTE: Complete All Items On This Form	m - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	ructions
STREAM CHANNEL NONE / NA MODIFICATIONS: disturbance from ROV	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	COVERY
	ery type of substrate present. Check ONLY two predominant substrate TYPE boxes cant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
<u>TYPE</u> P	PERCENT TYPE PERCENT	Metric Points
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]	0% SILT [3 pt] 30% SILT [3 pt] UEAF PACK/WOODY DEBRIS [3 pts] 0%	Politis
BEDROCK [16 pt]	0% FINE DETRITUS [3 pts]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts]	15% CLAY or HARDPAN [0 pt] 0% 0% MUCK [0 pts] 0%	
SAND (<2 mm) [6 pts]	5% ARTIFICIAL [3 pts]	15
Total of Percentages of	15.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBS	STRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	naximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from roa	ad culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	> 5 cm - 10 cm [15 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	
OOMINI LIVI O	MAXIMUM POOL DEPTH (Inches): 0.50	
BANK FULL WIDTH (Measured as the	(Bankfull
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	e average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
3. BANK FULL WIDTH (Measured as the	e average of 3-4 measurements) (Check ONLY one box):	
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	e average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
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3. BANK FULL WIDTH (Measured as the > 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] COMMENTS	e average 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] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODER RIPARIAN WIDTH	This information must also be completed PLAIN QUALITY PE average 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] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed PLAIN QUALITY ☆ NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE	## average 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] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) L R Mature Forest, Wetland I Mature Forest, Shrub or Old Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed PLAIN QUALITY AVERAGE BANKFULL WIDTH (Feet): 3.00 L R Conservation Tillage Urban or Industrial	Width Max=30
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) Mature Forest, Wetland Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed PLAIN QUALITY	Width Max=30
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Check ONLY one box): AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 3.00 L R Conservation Tillage Urban or Industrial Conservation Flourity Conservation Flourity Conservation Tillage	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Moderate 5-10m Narrow < 5m	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field (Check ONLY one box): 2 1.0 m (-3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 3.00 L R Conservation Tillage Urban or Industrial Open Pasture, Row Cr	Width Max=30
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 3.00 L R Conservation Tillage Urban or Industrial Open Pasture, Row Cr Mining or Construction	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Moderate 5-10m Narrow < 5m None COMMENTS FLOW REGIME (At Time of Even Stream Flowing Subsurface flow with isolated poor	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Moist Channel, isolated pools, no flow (Intermittent) Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Moderate 5-10m Narrow < 5m None COMMENTS FLOW REGIME (At Time of Every Stream Flowing)	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Moist Channel, isolated pools, no flow (Intermittent) Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
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3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Moderate 5-10m Narrow < 5m None COMMENTS FLOW REGIME (At Time of Every Stream Flowing Subsurface flow with isolated poor COMMENTS	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Plain Quality Root Predominant per Bank) Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Every Stream Flowing Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends of None 0.5	This information must also be completed PLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)) Moist Channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box): 1.0 1.5 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODE RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Moderate 5-10m Narrow < 5m None COMMENTS FLOW REGIME (At Time of Every Stream Flowing Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends processed in the stream Flowing) SINUOSITY (Number of bends processed in the stream Flowing) None 0.5	This information must also be completed PLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Residential, Park, New Field Residential, Park, New Field Residential, Park, New Field Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box): 1.0 Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30

QIILII LIXI	ORMED? - Yes V No Q	HEI Score	(If Yes, Attach Co	mpleted QHEI Form)	
DOWNSTRI WWH Name:	EAM DESIGNATED USE(S)		Dia	ance from Evaluated Stream	
CWH Name:			D: 4	ance from Evaluated Stream	
EWH Name:				ance from Evaluated Stream	
MAPPING:	ATTACH COPIES OF MAPS, INC	LUDING THE <u>EN</u>	ITIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCA	TION
USGS Quadrangle Na	me:		NRCS Soil Map Page:	NRCS Soil Map Stream Ord	er
County: belmont		Towns	ship / City:Neff		
MISCELLAN					
Base Flow Conditions	? (Y/N): Y Date of last pro	ecipitation:	09/19/16	uantity: 0.10	
Photograph Informatio	n:				
Elevated Turbidity? (Y	N	onen). 50%	/o		
, ,	, 	N	eample no orid and att	ach results) Lab Number:	
·	ou for water enemies y : (1714).	(rtoto id.			
	emp (°C) Dissolved Oxy			Conductivity (µmhos/cm)	
Is the sampling reach	representative of the stream (Y/N	N) If not,	please explain:		
Additional comments/o	description of pollution impacts:_				
Performed? (Y/N):	(If Yes, Record all observed and the served and the	ropriate field data Salamanders C	a sheets from the Primary F	E: all voucher samples must be labele leadwater Habitat Assessment Manual bucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)) N
DRAWI	NG AND NARRATIVE DE	SCRIPTION	OF STREAM REAC	H (This must be completed	١٠
				rrative description of the stream's	
· [I	
ED		ROW		WOO	DED
N	• *				
▲ —	BBLE			COBBLE	
FLOW -					COE
COPPLE	COBBLE				
COPPLE	COBBLE		`		

19

SITE NAME/LOCATION West Bellaire-Glencoe		Coore (sum or n		
SITE NUMBER	RIVER BASIN		DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT.	LONG.	RIVER CODE	RIVER MILE	
	OMMENTS ephemera		NIVER IN	•
NOTE: Complete All Items On This Form - Refer			WH Streams" for Insti	ructions
·				
STREAM CHANNEL NONE / NATURAL CH MODIFICATIONS: periodic dumping by locals	ANNEL RECOVERE	D RECOVERING	RECENT OR NO REC	OVERY
1. SUBSTRATE (Estimate percent of every type of				
(Max of 32). Add total number of significant substra TYPE PERCENT	ate types found (Max of 8). TYPE	Final metric score is su	m of boxes A & B. PERCENT	HH Met
BLDR SLABS [16 pts] 0%	SILT [3 p	t]	50%	Poir
BOULDER (>256 mm) [16 pts]		CK/WOODY DEBRIS [3		Subst
BEDROCK [16 pt] 0%		TRITUS [3 pts]	0%	Max :
COBBLE (65-256 mm) [12 pts] 0% CRAVEL (2-64 mm) [9 pts] 20%		HARDPAN [0 pt]	0%	
SAND (<2 mm) [6 pts] 0%	☐☐ MUCK [0	AL [3 pts]	0%	9
T.1.1 (D			(D)	
Total of Percentages of 0.00% Bldr Slabs, Boulder, Cobble, Bedrock	(A) Substrate Pe	ercentage	(B)	A +
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TY	PES: 6 TOT	AL NUMBER OF SUBS	TRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum p	oool depth within the 61 r	neter (200 ft) evaluation	reach at the time of	Pool
evaluation. Avoid plunge pools from road culverts of				Max
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	> 5 cm - < 5 cm [10 cm [15 pts]		l —
> 10 - 22.5 cm [25 pts]		TER OR MOIST CHANN	NEL [0 pts]	5
COMMENTS	м	AXIMUM POOL DEPTH	(Inches): 0.50	
-				
BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts]		(Check ONLY one - 1.5 m (> 3' 3" - 4' 8") [1		Bank Wid
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		(<=3' 3") [5 pts]	3 pts]	Max:
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]				
COMMENTS	A	VERAGE BANKFULL V	VIDTH (Feet): 1.50	5
			, ,	
T RIPARIAN ZONE AND FLOODPLAIN QUA	This information must als	•	s looking downstream☆	
	PLAIN QUALITY	Lon (L) and raight (iv) as	s looking downstream &	
L R (Per Bank) L R	(Most Predominant per			
₩ide >10m	Mature Forest, Wetland Immature Forest, Shrut		Conservation Tillage	
Moderate 5-10m	Field		Urban or Industrial	
Narrow <5m	Residential, Park, New	Field	Open Pasture, Row Cr	ор
None None	Fenced Pasture		Mining or Construction	
COMMENTS				L
FLOW REGIME (At Time of Evaluation) (
Stream Flowing Subsurface flow with isolated pools (Interstit		Moist Channel, isolated Dry channel, no water (l	pools, no flow (Intermittent Enhameral)	:)
COMMENTS_	iidi)	ory chainies, no water (-риспистат <i>)</i>	1
SINI IOSITY (Number of hands nor 64 m /3	00 ft) of channel) (Charle	OM Vana bay):		
SINUOSITY (Number of bends per 61 m (2 None 1.0	100 π) of channel) (Check		3.0	
✓ 0.5	2.		>3	
STREAM GRADIENT ESTIMATE		1	-	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate	derate (2 ft/100 ft)	Moderate to Severe	Severe (10 ft/1	00 ft)

<u> </u>	ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
	QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
_	DOWNSTREAM DESIGNATED USE(S)
F	WWH Name: Distance from Evaluated Stream CWH Name: Distance from Evaluated Stream
Ė	EWH Name: Distance from Evaluated Stream Distance from Evaluated Stream
_	MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
ı	USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
	County: Belmont Township / City:
•	MISCELLANEOUS
	Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/06/16 Quantity:
	Photograph Information: N Canopy (% anop): 10%
	Carropy (% open).
١	Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
F	Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
1	Is the sampling reach representative of the stream (Y/N) If not, please explain:
A	Additional comments/description of pollution impacts:
F	Performed? (Y/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?
-	
•	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
	TRANSMISSION LINE ROW
IN	G BOX WOODY WOODY
	FLOW Dridge/culvert WOODY WOODY DEBRIS DEBRIS
	WOODS
, ,	

Primary Headwater Habitat Evaluation Form

GIBLIZ	HHEI Score (sum of metrics 1, 2, 3):
SITE NAME/LOCATION West Bellaire-Glencoe	
SITE NUMBER RI	VER BASIN DRAINAGE AREA (mi²)
LENGTH OF STREAM REACH (ft)LAT.	LONGRIVER CODERIVER MILE
DATE 12/07/16 SCORER MDT, CS COMMEN	ephemeral
NOTE: Complete All Items On This Form - Refer to "Fie	ld Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL MODIFICATIONS: periodic dumping by locals	✓ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY
(Max of 32). Add total number of significant substrate types	Atte present. Check ONLY two predominant substrate TYPE boxes of found (Max of 8). Final metric score is sum of boxes A & B. YPE SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] FINE DETRITUS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] PERCENT 10% Substrate Max = 40
SAND (<2 mm) [6 pts] 0%	ARTIFICIAL [3 pts]
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 55.00% SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:	Substrate Percentage (B) A + B TOTAL NUMBER OF SUBSTRATE TYPES: 5
	oth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth
evaluation. Avoid plunge pools from road culverts or storm > 30 centimeters [20 pts]	water pipes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	< 5 cm [5 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 m > 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]	easurements) (Check ONL Y 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): 3.00
This info RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN	rmation must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream☆ QUALITY
L R (Per Bank) L R (Mos Wide >10m	t Predominant per Bank) re Forest, Wetland ature Forest, Shrub or Old Urban or Industrial
	dential, Park, New Field
FLOW REGIME (At Time of Evaluation) (Check Constraints of Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS ephemeral	ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)
SINUOSITY (Number of bends per 61 m (200 ft) of None 1.0 1.5	channel) (Check <i>ONLY</i> one box): 2.0 2.5 3.0 >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 V No QHEI Score (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
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: Belmont Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/06/16 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)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Active important landmarks and other features of interest for site evaluation and a narrative description of the stream's location.
J CP forest (4)
FLOW
7 PP PP PSlove
PHWH Form Page - 2

Stream 24

Class 3



ChieFP Primary Headwater Habitat Evaluation Form HHE

Lvaldation i onni	
I Score (sum of metrics 1, 2, 3):	L

SITE NAME/LOCATION AEP Glencoe-WestBellaire				
hh-jbl-092216-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)				
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01256 LONG80.87085 RIVER CODE RIVER MILE				
DATE 09/22/16 SCORER jbl/cms COMMENTS intermittent				
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ıctions			
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECO	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 TYPE PERCENT	Metric			
BLDR SLABS [16 pts] 0% SILT [3 pt] 15%	Points			
BOULDER (>256 mm) [16 pts] 3% LEAF PACK/WOODY DEBRIS [3 pts] 5% BEDROCK [16 pt] 17% FINE DETRITUS [3 pts] 0%	Substrate			
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 0%	Max = 40			
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] 15% MUCK [0 pts] 0% 07 ARTIFICIAL [3 pts]	28			
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage (B) Check	A + B			
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 7				
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]	IVIAX = 30			
> 22.5 - 30 cm [30 pts]	30			
COMMENTS MAXIMUM POOL DEPTH (Inches): 10.00				
	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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30			
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 6.00	20			
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 V V Wide >10m V 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 Cro	р			
None				
COMMENTS				
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):				
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	0.60			

ADDITIONAL STREAM INFORMATION (This Information Must Al	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	ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Tow	nship / City:Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 1	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)	ot, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field d Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders	her collections optional. NOTE: all voucher samples must be labeled with the sit ata sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) Voucher? (Y/N) N Voucher? (Y/N) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTIO	N OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest	
hh-02 very steep wooded wooded wooded	
wooded	very steep hh-03
DUM	L Form Page - 2

Modified Class 1 Stream 25



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SITE NAME/LOCATION AEP Glencoe-WestBellaire					
hh-jbl-092216-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)					
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01225 LONG80.87097 RIVER CODE RIVER MILE					
DATE 09/22/16 SCORER jbl/cms COMMENTS intermittent					
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	ructions				
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING CUIVERT	COVERY				
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] 5% SILT [3 pt] 30% BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	Points				
BEDROCK [16 pt]	Substrate				
COBBLE (65-256 mm) [12 pts] 15% CLAY or HARDPAN [0 pt] 0%	Max = 40				
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 0%	19				
Total of Percentages of 25 00% (A) Substrate Percentage (B)	A + B				
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 7					
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				
> 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				
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width Max=30				
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width				
> 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				
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	Width Max=30				
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed	Width Max=30				
> 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] COMMENTS 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	Width Max=30				
> 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30				
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) V Wide >10m Moderate 5-10m Moderate 5-10m Noderate 5-10m	Width Max=30				
> 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] ≤ 1.0	Width Max=30				
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Vide >10m Moderate 5-10m Residential, Park, New Field P 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 3.00 AVERAGE BANKFULL WIDTH (Feet): 3.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Vide >10m Nature Forest, Wetland Urban or Industrial Open Pasture, Row Cr	Width Max=30				
> 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] ≤ 1.0	Width Max=30				
> 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]	Width Max=30				
> 4.0 meters (> 13') [30 pts]	Width Max=30				
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Vide >10 m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field Open Pasture, Row Cr RIPARIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30				
> 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] COMMENTS 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) V Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30				
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Moderate 5-10m Narrow <5m Narrow <5m Narrow <5m Residential, Park, New Field Penced Pasture FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts]	Width Max=30				
> 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30 5				

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Att	ach 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 WATERSHE	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map	Page: NRCS Soil Map Stream Order
County: belmont Township / City: Neff	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16	Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 5%	
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 options ID number. Include appropriate field data sheets from the Program of Tadpoles Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebra Comments Regarding Biology:	Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	
Include important landmarks and other features of interest for site evaluation a	nd a narrative descrip
hh-03 very steep	wooded very steep visiting shifts
wooded hh-02	very steep
PHWH Form Page - 2	

Stream 26 **Modified Class 2**



30

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092216-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01304 LONG80.88030 RIVER CODE RIVER MILE	
DATE 09/22/16 SCORER jbl/cms 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 RECOMMODIFICATIONS: Cattle in pasture	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 TYPE PERCENT	Metric
□ □ BLDR SLABS [16 pts] 0% SILT [3 pt] 35%	Points
BOULDER (>256 mm) [16 pts]	Substrate
☐ COBBLE (65-256 mm) [12 pts] ☐ CLAY or HARDPAN [0 pt] 0 %	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	20
Total of Percentages of 30.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	ATB
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]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.50	
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] ≤ 1.0 m (<=3' 3") [5 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 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	
Field Open Pasture Pow Cro	nn
Residential, Park, New Field	γP
None Fenced Pasture Mining or Construction COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, isolated pools, no flow (Intermittent)	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
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 Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Check ONLY one box): 2.0 3.0	
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 0.5 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3	
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 Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Check ONLY one box): 2.0 3.0	

ADDITIONAL STREAM INFORMATION (This Information Must Also be 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 ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Township / City: Neff
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 60%
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) N Vouc
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and VETY ures of interest for site evaluation and a narrative description of the stream's location
hh-06 wooded very steep
FLOW old field
old field

Stream 27

Class 1



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION AEP Glencoe-WestBellaire			
hh-jbl-092216-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)			
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE			
DATE 09/22/16 SCORER jbl/cms 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.	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. 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] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5	HHEI Metric Points Substrate Max = 40		
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] > 5 cm - 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			
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]	Bankfull Width Max=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			
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 3.0 7.5 1.5 2.5 3.0 3.0 3.0 3.0 3.0			
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10)0 ft)		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complete	eed):
QHEI PERFORMED? - Yes V No QHEI Score (If Ye	s, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evolunted Observe
WWH Name:	Distance from Evaluated Stream
CWH Name:EWH 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: St Clairsville NRCS Soil	Map Page: NRCS Soil Map Stream Order
	Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16	Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 20%	
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) $\underline{\underline{Y}}$ If not, please explain	in:
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/N)	
DRAWING AND NARRATIVE DESCRIPTION OF STRE	<u> </u>
hh-05 Include important landmarks and other fivery steep wooded	bridge residential
very steep wooded very	hh-04

Stream 28

Class 3



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

66	
00	

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092216-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01330 LONG80.88804 RIVER CODE RIVER MILE	
DATE 09/22/16 SCORER jbl/cms COMMENTS perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for In	structions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS: Channelzation	ECOVERY
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]	Points
BOULDER (>256 mm) [16 pts]	Substrate
BEDROCK [16 pt] 25% FINE DETRITUS [3 pts] 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 15% MUCK [0 pts] 0%	26
SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] 5%	26
Total of Percentages of 35.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	
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]	IWIAX = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	- 11
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	20
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 18.0	
	1
COMMENTS MAXIMUM POOL DEPTH (Inches): 18.0 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]	Bankfull
COMMENTS MAXIMUM POOL DEPTH (Inches): 18.0 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 Max=30
COMMENTS MAXIMUM POOL DEPTH (Inches): 18.0 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 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] AND MAXIMUM POOL DEPTH (Inches): 18.0 SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): SAME FULL WIDT	Bankfull Width Max=30
COMMENTS BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 9.00 This information must also be completed	Bankfull Width Max=30
Sank Full Width (Measured as the average of 3-4 measurements) Check ONLY one box):	Bankfull Width Max=30
AVERAGE BANKFULL WIDTH (Measured as the average of 3-4 measurements) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Per Bank) MAXIMUM POOL DEPTH (Inches): 18.0 MAXIMUM POOL DEPTH (Inches): 18.0 (Check ONLY one box): > 1.0 m - 1.5 m (> 3′ 3″ - 4′ 8″) [15 pts] > 1.0 m (<=3′ 3″) [5 pts] AVERAGE BANKFULL WIDTH (Feet): 9.00	Bankfull Width Max=30
AVERAGE BANKFULL WIDTH (Measured as the average of 3-4 measurements) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY Conservation Tillage RIPARIAN WIDTH FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average of 3-4 measurements) AND AND AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY AND AVERAGE BANKFULL WIDTH AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY AND AVERAGE BANKFULL WIDTH AVERAGE BANKFULL WIDTH AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY AND AVERAGE BANKFULL WIDTH AVERAGE BANKFULL WIDTH FLOODPLAIN QUALITY AND AVERAGE BANKFULL WIDTH	Bankfull Width Max=30
MAXIMUM POOL DEPTH (Inches): 18.0 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements)	Bankfull Width Max=30
AVERAGE BANKFULL WIDTH (Measured as the average of 3-4 measurements) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) MAXIMUM POOL DEPTH (Inches): 18.0 (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (Feet): 9.00 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) Moderate 5-10m Moderate 5-10m Moderate 5-10m Urban or Industrial	Bankfull Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY *NOTE: River Left (L) and Right (R) as looking downstream *RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Conservation Tillage Immature Forest, Wetland Urban or Industrial Moderate 5-10 m Residential, Park, New Field Open Pasture, Row None Residential, Park, New Field Mining or Construction Mining or Construction Mining or Construction Mining or Construction **Note	Bankfull Width Max=30 20
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): ###	Bankfull Width Max=30 20
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Mature Forest, Wetland Conservation Tillage Conservation Tillage	Bankfull Width Max=30 20
AVERAGE BANKFULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30 20
AVERAGE BANKFULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field Open Pasture, Row None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitte	Bankfull Width Max=30 20
AVERAGE BANKFULL WIDTH (Measured as the average of 3-4 measurements)	Bankfull Width Max=30 20
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) Unide > 10 m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial Field Narrow <5m Residential, Park, New Field Open Pasture, Row 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 MAXIMUM POOL DEPTH (Inches): 18.0 (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitted Dry channel, no water (Ephemeral))	Bankfull Width Max=30 20
BANK FULL WIDTH (Measured as the average of 3-4 measurements)	Bankfull Width Max=30 20
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Bankfull Width Max=30 20 Crop on ent)

ADDITIONAL STREAM INFORMATION (This Information Must Also	be 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:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	ITIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Towns	hip / City:Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 50%	6
Were samples collected for water chemistry? (Y/N): N (Note lat	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)	please explain:
is the sampling reach representative of the stream (T/N)	picase explain.
Additional comments/description of pollution impacts:	
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 sit a sheets from the Primary Headwater Habitat Assessment Manual) bserved? (Y/N) N Voucher? (Y/N) N
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest h	h-05 on and a narrative description of the stream's location
very	very
steep	steep
hh-04 wooded	, citop
	residential \ Ş.\
FLOW	residential bridge
	road
l lucadad	ery
	eep

Modified Class 1 Stream 29



22	2
	_

SITE NAME/LOCATION AEP Glencoe-Wes	stBellaire		
hh-jbl-092216-07 SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)		
	LAT. 40.01355 LONG80.88821 RIVER CODE RIVER MILE		
DATE 09/22/16 SCORER jbl/cms	COMMENTS ephemeral, roadside ditch		
NOTE: Complete All Items On This Form	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions	
STREAM CHANNEL NONE / NATE MODIFICATIONS: cattle in past	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	COVERY	
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI	
, ,	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B. ERCENT TYPE PERCENT	Metric	
BLDR SLABS [16 pts]	0% SILT [3 pt] 35%	Points	
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]	0% LEAF PACK/WOODY DEBRIS [3 pts] 30% 0%	Substrate	
COBBLE (65-256 mm) [12 pts]	5% CLAY or HARDPAN [0 pt] 0%	Max = 40	
GRAVEL (2-04 IIIII) [9 pts]	15% MUCK [0 pts] 0% 10%	12	
SAND (<2 mm) [6 pts]	5% ARTIFICIAL [3 pts] 10%		
Total of Percentages of 5. Bldr Slabs, Boulder, Cobble, Bedrock	.00% (A) Substrate Percentage (B) Check	A + B	
SCORE OF TWO MOST PREDOMINATE SUBST	TRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 6		
	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth	
evaluation. Avoid plunge pools from road> 30 centimeters [20 pts]	culverts or storm water pipes) (Check ONLY one box): > 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): 1.00			
		1	
3. BANK FULL WIDTH (Measured as the a	average of 3-4 measurements) (Check ONLY one box):	Bankfull	
> 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width	
•	average of 3-4 measurements) (Check ONLY one box):		
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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 Distance from Evaluated Stream
	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Towns	hip / City: Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 15%	Ó
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	
N	and the state of t
	r collections optional. NOTE: all voucher samples must be labeled with the site sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders O	bserved? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquat	ic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
<u></u>	
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
· · · · · · · · · · · · · · · · · · ·	site evaluation and a narrative description of the stream's location
steep	residential
hh-07	
road	
<u>J</u>	
FLOW	
very wooded	wooded
steep	

Stream 30 **Modified Class 1**



21

SITE NAME/LOCATION AEP Glencoe-We	stBellaire	
hh-jbl-092316-03 SITE NUMBER	RIVER BASINDRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200	LAT. 40.01374 LONG80.89216 RIVER CODE RIVER MILE	
DATE 09/23/16 SCORER jbl/cms	COMMENTS intermittent	
NOTE: Complete All Items On This Form	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Insti	uctions
STREAM CHANNEL NONE / NAT MODIFICATIONS: Culvert	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
, , , , , , , , , , , , , , , , , , , ,	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
,	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B. ERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]	0 % SILT [3 pt] 45 %	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]	0% LEAF PACK/WOODY DEBRIS [3 pts] 25% 0%	Substrate
COBBLE (65-256 mm) [12 pts]	15% CLAY or HARDPAN [0 pt] 0%	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 Bldr Slabs, Boulder, Cobble, Bedrock	5.00% (A) Substrate Percentage (B) Check	A + B
SCORE OF TWO MOST PREDOMINATE SUBS		
	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	d culverts or storm water pipes) (Check ONLY one box): > 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): 0.25	
COMMENTS	MAXIMUM POOL DEPTH (Inches): 0.25	
3. BANK FULL WIDTH (Measured as the	average of 3-4 measurements) (Check ONLY one box):	Bankfull
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
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3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval. Stream Flowing Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends p	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] AVERAGE BANKFULL WIDTH (Feet): 2.50 This information must also be completed PLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Mature Forest, Wetland Mature Forest, Shrub or Old Immature Forest, Shrub or Old Residential, Park, New Field Residential, Park, New Field Open Pasture, Row Cr Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.0 3.0	Width Max=30
BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends p None 0.5	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] AVERAGE BANKFULL WIDTH (Feet): 2.50 This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Mature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Shrub or Old Residential, Park, New Field Penced Pasture Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the > 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] COMMENTS RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval. Stream Flowing Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends p	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] AVERAGE BANKFULL WIDTH (Feet): 2.50 This information must also be completed PLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Mature Forest, Wetland Mature Forest, Shrub or Old Immature Forest, Shrub or Old Residential, Park, New Field Residential, Park, New Field Open Pasture, Row Cr Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.0 3.0	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also be 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
WAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION USGS Quadrangle Name: St. Clairsville NRCS Soil Map Page: NRCS Soil Map Stream Order
No. 25
County Township / City
MISCELLANEOUS Page Flow Conditions? (V/N): Y Date of last precipitation: 09/19/16 Oughtity: 0.10
Date of last precipitation.
Photograph Information: N Canopy (% open): 20%
Carropy (% Open).
(Note that earlies of the unit
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:
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 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
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
hh-03 wooded/scrub shrub
FLOW W01
wooded wooded
steep hh-02

Stream 31 **Modified Class 1**



23
23

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092316-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01315 LONG80.89199 RIVER CODE RIVER MILE	
DATE 09/23/16 SCORER jbl/cms comments ephemeral	
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 RECOVERING CUIVERT	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 TYPE PERCENT	Metric
□ □ BLDR SLABS [16 pts] 0% SILT [3 pt] 30%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] D BEDROCK [16 pt] D LEAF PACK/WOODY DEBRIS [3 pts] 0% FINE DETRITUS [3 pts] 0%	Substrate
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	13
SAND (<2 mm) [6 pts]	
Total of Percentages of 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: 7	
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
> 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 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): 3.00	5
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information must also be completed	5
	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	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Viv Wide >10m	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 Forest, Shrub or Old Urban or Industrial Field Open Pasture Row Co	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank) Residential, Park, New Field Open Pasture, Row Cr	
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 Forest, Shrub or Old Urban or Industrial Field Open Pasture Row Co	
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 Forest, Shrub or Old Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Cr None Fenced Pasture Mining or Construction COMMENTS	
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 (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Deservation Tillage) Urban or Industrial Open Pasture, Row Credominant per Bank) Fenced Pasture Mining or Construction COMMENTS FLOOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	op
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 Forest, Shrub or Old Urban or Industrial	op
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIVER LEft (L) and Right (R) as looking downstream ANOTE: RIVER LEft (L) and Right (R) as looking downstream ANOTE: RIVER LEft (L) and Right (R) as looking downstream ANOTE: RIVER LEft (L) and Right (R) as looking downstream ANOTE: RIVER LEft (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and River Left (L	op
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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 ** RIPARIAN WIDTH 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 ** RIPARIAN WIDTH 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 ** 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 ** **NOTE: River Left (L) and Right (R) as looking downstream ** **NOTE: River Left (L) and Right (R) as looking downstream ** **INDAMINE Solution Tillage Department of the properties of the propert	op
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) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 1.0 Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 3.0	op

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: CWH Name: EWH Name:	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Towns	hip / City: Neff
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	09/19/16 Quantity: 0.10
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 20%	o l
Were samples collected for water chemistry? (Y/N): N (Note lab	sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not,	please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
· / ·	collections optional. NOTE: all voucher samples must be labeled with the situsheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Salamanders O	bserved? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
	
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
Include imp landmarks and other features of interest for	site evaluation and a narrative description of the st
hh-01 wooded	
FLOW Steep	<u> </u>

Stream 32 Fair Warmwater



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score:	49
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Stream & Location: McMahon Creek	<i>RM</i> : Date : 9/23/16
qh-jbl-092316-01 Scorers Full Name & Affiliation	on: JBL, CMS
River Code: STORET #: Lat./ Long.: 40.0133	48, -80.893891 Office verified location
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE BLDR /SLABS [10] 5 5	MODEPATE I-11 Substrate
□ COBBLE [8] 15 25 □ MUCK [2] □ WETLANDS [0] □ GRAVEL [7] 10 10 ☑ SILT [2] 60 10 □ HARDPAN [0] □ SAND [6] 5 □ □ ARTIFICIAL [0] □ SANDSTONE □ BEDROCK [5] 5 50 (Score natural substrates; ignore □ RIP/RAP [0] NUMBER OF BEST TYPES: ☑ 4 or more [2] sludge from point-sources) □ LACUSTURIN	O] SILI NORMAL [0]
Comments SHALE [-1] SHALE [-1] COAL FINES	□ NONE [1] -2]
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more conquality; 2-Moderate amounts, but not of highest quality or in small amounts; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast w diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional under the control of the con	Check ONE (<i>Or 2 & average</i>) vater, large conal pools. EXTENSIVE >75% [11] WATERS [1]
Comments	Cover Maximum 20
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY	,
☐ HIGH [4] ☐ EXCELLENT [7] ☐ NONE [6] ☐ HIGH [3] ☐ MODERATE [3] ☐ GOOD [5] ☐ RECOVERED [4] ☐ MODERATE ☐ LOW [2] ☐ FAIR [3] ☐ RECOVERING [3] ☐ LOW [1] ☐ NONE [1] ☐ POOR [1] ☐ RECENT OR NO RECOVERY [1]	Channel
Comments	Maximum 11
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK River right looking downstream RIPARIAN WIDTH FLOOD PLAIN QUAL FOREST, SWAMP [3] FOREST, SWAMP [3] SHRUB OR OLD FIELD [2] MODERATE [2] MODERATE 10-50m [2] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD [4] HEAVY / SEVERE [1] VERY NARROW < 5m [1] FENCED PASTURE [1]	CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] ELD [1] MINING / CONSTRUCTION [0] Indicate predominant land use(s)
□ □ NONE [0] □ OPEN PASTURE, ROWCROF	P[0] past 100m riparian. Riparian Maximum 6.5
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH Check ONE (ONLY!) Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply Check ALL that ap	Primary Contact [1] STITIAL [-1] MITTENT [-2] S [1] nd riffles. Primary Contact Secondary Contact (circle one and comment on back) Pool / Current Maximum 3
Indicate for functional riffles; Best areas must be large enough to supp	ort a nonulation
of riffle-obligate species: Check ONE (Or 2 & average).	□ NO RIFFLE [metric=0] RIFFLE / RUN EMBEDDEDNESS □ NONE [2]
□ BEST AREAS 5-10cm [1] □ BEST AREAS 5-10cm [1] □ BEST AREAS < 5cm □ metric=0] □ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☑ LOW [1]
Comments	Maximum 8
6] GRADIENT (10 ft/mi)	Adayimum 6

AJ SAMPLED REACH

FI MEASUREMENTS bankfull max. depth floodprone x² width bankfull x depth 3ft x bankfull width 30 entrench. ratio x width 20ft x̄ depth 1 ^π 01 max. depth W/D ratio Wetland re Te HARDENED / URBAN FOIRT & GRIME **LOGGING / IRRIGATION / COOLING** FALSE BANK / MANURE / LAGOON NATURAL/WETLAND/STAGNANT BMPs-CONSTRUCTION-SEDIMENT WWTP / CSO / NPDES / INDUSTRY WASH H₂0 / TILE / H₂0 TABLE ACID / MINE / QUARRY / FLOW ATMOSPHERE / DATA PAUCITY BANK / EROSION / SURFACE PARK / GOLF / LAWN / HOME CONTAMINATED / LANDFILL El ISSUES HH-01 Circle some & COMMENT ROAD side channel PUBLIC / PRIVATE / BOTH / NA FLOOD CONTROL / DRAINAGE ACTIVE / HISTORIC / BOTH / NA **MODIFIED / DIPPED OUT / NA** MOVING-BEDLOAD-STABLE IMPOUNDED / DESICCATED YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED DI MAINTENANCE RELOCATED/CUTOFFS **ARMOURED / SLUMPS** ISLANDS / SCOURED LEVEED / ONE SIDED existing T line INVASIVE MACROPHYTES ☐ SLUDGE DEPOSITS ☐ CSOs/SSOs/OUTFALLS **BI AESTHETIC EXCESS TURBIDITY** ☑ EXCESS TURBIDITY
☑ DISCOLORATION
☐ FOAM / SCUM
☐ OIL SHEEN
☐ TRASH / LITTER
☐ NUISANCE ODOR ☐ NUISANCE ALGAE POOL: □>100ft²□>3ft Glencoe sub station AREA DEPTH <u></u> E E ☐ SECCHI DEPTH☐ ☐ HIGH ☐ UP ☐ NORMAL ☐ ☐ LOW ☐ DRY ☐ DRY CJ REC --sample pass--□ > 70 cm/ CTB CLARITY 20-<40 cm Stream Drawing. 40-70 cm √ 20 cm □ 10%-<30% □ <10%- CLOSED □ > 85%- OPEN CANOPY DISTANCE 55%-<85% **√** 30%-<55% 0.5 Km 0.15 Km 0.12 Km 0.2 Km OTHER 200 feet

RIFFLE

Pool

RIFFLE

BOULDER

Pool

Modified Class 1 Stream 33



21

SITE NAME/LOCATION AEP Glencoe-WestBellaire	
hh-jbl-092316-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 40.01379 LONG80.89318 RIVER CODE RIVER MILE	
DATE 09/23/16 SCORER jbl/cms COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL	COVERY
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] 50%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] D' LEAF PACK/WOODY DEBRIS [3 pts] O% FINE DETRITUS [3 pts] O%	Substrat
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	11
SAND (<2 mm) [6 pts]	
Total of Percentages of 5.00% (A) Substrate Percentage (B) Check (B)	A + 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	Pool Dep
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): 0.50	
(1101)	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
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. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 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] (Check ONL Y one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] < 1.0 m (<=3' 3") [5 pts]	Width 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]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 This information must also be completed	Width 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] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	Width Max=30
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3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00 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 (Most Predominant per Bank) L R (Most Predominant per Bank) Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row C	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Narrow <5 m Residential, Park, New Field Open Pasture, Row C None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Width Max=30
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3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 4' 8") [25 pts] > 3.0 m - 4.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 Residential, Park, New Field Open Pasture, Row C Narrow <5m Residential, Park, New Field Open Pasture, Row C 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And PLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Vide >10 m Mature Forest, Wetland Moderate 5-10 m Viver Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row C None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral))	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 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] COMMENTS 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 RIPARIAN WIDTH FLOODPLAIN QUALITY Mide > 10 m Mature Forest, Wetland Conservation Tillage Moderate 5-10 M Mature Forest, Shrub or Old Wrban or Industrial Narrow <5 m Residential, Park, New Field Open Pasture, Row C None Fenced Pasture Mining or Construction COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: CWH Name: Distance from Evaluated Stream 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: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: belmont Township / City: Neff
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/19/16 Quantity: 0.10
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 5%
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 Salamanders Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
DRAWING AND NARRATIVE DESCRIPTION OF STREAM BEACH (This must be completed): Include important steep and other features of intesteep e evaluation with the stream's location with the s
wooded wooded wooded/scrub shrub

APPENDIX D DELINEATED FEATURES PHOTOGRAPHS



Wetland Delineation Report

D1- DELINEATED WETLANDS



PHOTOGRAPHIC RECORD REPRESENTATIVE WETLANDS

Client Name:

AEP Ohio Transco

Site Location:

West Bellaire-Glencoe 138 kV Transmission Line Project

Project No.

60518004

Photo No. 1

Date:

November 21, 2016

Description:

Wetland 04

POW wetland

Category 1

Facing east



Photo No. 2

Date:

November 22, 2016

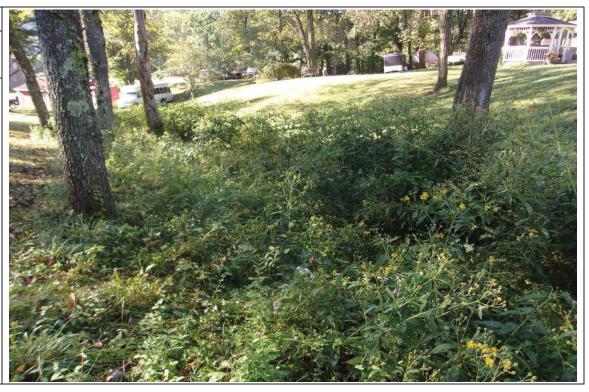
Description:

Wetland 08

PEM wetland

Category 1

Facing south





PHOTOGRAPHIC RECORD REPRESENTATIVE WETLANDS

Client Name:

AEP Ohio Transco

Site Location:

West Bellaire-Glencoe 138 kV Transmission Line Project

Project No.

60518004

Photo No. 3

Date:

November 23, 2016

Description:

Wetland 10

PEM wetland

Category 2

Facing north





Wetland Delineation Report

D2 - DELINEATED STREAMS



PHOTOGRAPHIC RECORD

REPRESENTATIVE STREAMS

Client Name:

AEP Ohio Transco

Site Location:

West Bellaire-Glenco 138kV Transmission Line Project

Project No. 60518004

Photo No. 1

Date:

September 20, 2016

Description:

Stream 08

Intermittent

Modified Class 1

Facing downstream



Photo No. 2

Date:

September 21, 2016

Description:

Stream 15

Intermittent

Modified Class 2

Facing downstream





PHOTOGRAPHIC RECORD REPRESENTATIVE STREAMS

Client Name:

AEP Ohio Transco

Site Location:

West Bellaire-Glenco 138kV Transmission Line Project

Project No. 60518004

Photo No. 3

Date:

September 19, 2016

Description:

Stream 05

Intermittent

Modified Class 3

Facing downstream



Photo No. 4

Date:

September 20, 2016

Description:

Stream 09

Perennial

Fair Warmwater

Facing upstream





PHOTOGRAPHIC RECORD **REPRESENTATIVE STREAMS**

Client Name:

AEP Ohio Transco

Site Location:

West Bellaire-Glenco 138kV Transmission Line Project

Project No. 60518004

Photo No. 5

Date:

September 20, 2016 **Description:**

Stream 13

Ephemeral

Class 1

Facing downstream



Photo No. 6

Date:

September 21, 2016

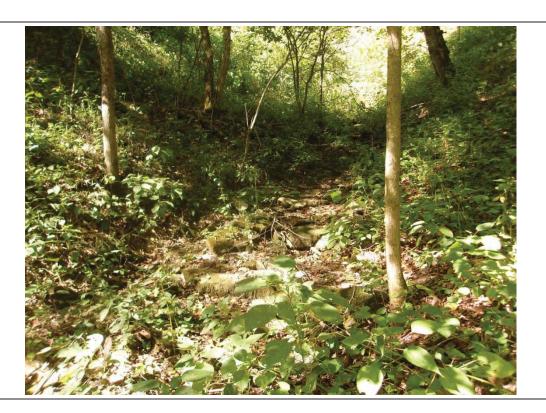
Description:

Stream 19

Ephemeral

Class 2

Facing upstream





PHOTOGRAPHIC RECORD

REPRESENTATIVE STREAMS

Client Name:

AEP Ohio Transco

Site Location:

West Bellaire-Glenco 138kV Transmission Line Project

Project No. 60518004

Photo No. 7

Date:

September 22, 2016

Description:

Stream 24

Intermittent

Class 3

Facing downstream



APPENDIX E CORRESPONDENCE LETTERS FROM USFWS AND ODNR

Ohio Division of Wildlife Raymond W. Petering, Chief 2045 Morse Rd., Bldg. G Columbus, OH 43229-6693 Phone: (614) 265-6300

September 12, 2016

Jake Lubbers AECOM 525 Vine St. Cincinnati, OH 45202

Dear Mr. Lubbers,

After reviewing the Natural Heritage Database, I find the Division of Wildlife has no records of rare or endangered species in the West Bellaire-Glencoe 69 and 138 kV Transmission Lines Rebuild project area, including a one mile radius, in Smith, Richland and Pultney Townships, Belmont County, Ohio. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke Ohio Natural Heritage Database Program

Deppie Worschhe

Geckle, Aaron

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>

Sent: Tuesday, October 18, 2016 7:55 AM

To: Lubbers, Jake

Subject: AEP West Bellaire-Glencoe 69 kV and 138 kV Transmission Lines, Belmont Co.



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2017-TA-0038

Dear Mr. Lubbers,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

Should the proposed site contain trees ≥ 3 inches dbh, we recommend that trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend that

removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is being recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, summer surveys may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer. If a summer survey documents probable absence of Indiana bats, the 4(d) rule for the northern long-eared bat could be applied. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office. Surveyors must have a valid federal permit. Please note that summer surveys may only be conducted between June 1 and August 15.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Dan Everson

Field Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW

Office of Real Estate

Paul R. Baldridge, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6649

Fax: (614) 267-4764

October 20, 2016

Jake Lubbers AECOM 525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Re: 16-672; AEP West Bellaire-Glencoe 69 and 138 kV Transmission Lines Project

Project: AEP is proposing to rebuild its approximately six-mile long West Bellaire-Glencoe 69 kV electric transmission line.

Location: The proposed project is located in Pultney Township, Belmont County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has no records at or within a one mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (Myotis sodalis), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: shagbark hickory (Carya ovata), shellbark hickory (Carya laciniosa), bitternut hickory (Carya cordiformis), black ash (Fraxinus nigra), green ash (Fraxinus pennsylvanica), white ash (Fraxinus americana), shingle oak (Quercus imbricaria), northern red oak (Quercus rubra), slippery elm (Ulmus rubra), American elm (Ulmus americana), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (Quercus stellata), and white oak (Quercus alba). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the butterfly (*Ellipsaria lineolata*), a state endangered mussel, the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel, and the black sandshell (*Ligumia recta*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish, the channel darter (*Percina copelandi*), a state threatened fish, the river darter (*Percina shumardi*), a state threatened fish, the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/water-use-planning/floodplain-management#PUB

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler ODNR Office of Real Estate 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693 John.Kessler@dnr.state.oh.us This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

1/27/2017 12:27:48 PM

in

Case No(s). 16-1557-EL-BTX

Summary: Application electronically filed by Mrs. Erin C Miller on behalf of AEP Ohio Transmission Company