Stream 85 **Modified Class 2** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37282 LONG84.10464 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Former earthwork	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]	Points
BEDROCK [16 pt]  BEDROCK [16 pt]  D'A  D'A  D'A  D'A  D'A  D'A  D'A  D'	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]  O%  ARTIFICIAL [3 pts]	17
Total of Percentages of 5,00% (A) Substrate Percentage 100% (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 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]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	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]	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): 1.50  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): 1.50  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	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): 1.50  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  ↑ NOTE: 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  Moderate 5-10m  V I wind a sign (S) 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): 1.50  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  V V Wide >10m  Moderate 5-10m  V V Urban or Industrial	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]	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]   ✓	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  Moderate 5-10m  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   S   S   S     S   S   S     S   S   S	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 5-10 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  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  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10m  Mature Forest, Wetland  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  ANOTE: River Left (L) and Right (R) as looking downstream And 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  None water (Ephemeral)  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 And Floodplain Quality  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10m  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  Narrow <5m  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)  COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None  1.0  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  1.0  3.0	Width Max=30

OHEI PERFORMED?	ADDITIONAL STREA	AM INFORMATION (This Information	on Must Also be Comp	eted):	
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:  NRCS Soil Map Page:  NRCS Soil Map Stream Order  Township / City  MISCELLANEOUS  Base Flow Conditions? (Y/N):  N Canopy (6 open):  Elevated Tutking? (Y/N):  N Canopy (6 open):  Elevated Tutking? (Y/N):  N Canopy (6 open):  Fleid Measures:  Temp (**C)  Dissolved Oxygen (mg/l)  If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes, Record all observations. Vaucher collections optional. NOTE: all voucher samples must be labeled with it in not primary headwater Habitat Assessment Manual)  Flish Observed? (Y/N):  N Voucher? (Y/N):  N Vouch	QHEI PER	FORMED? - Yes ✓ No QHE	I Score (If \	es, Attach Completed QHE	I Form)
CWH Name:  EVH Name:  Distance from Evaluated Stream USGS Quadrangle Name:  County:  Warren  NRCS Soil Map Page: NRCS Soil Map Stream Order  Township / City:  MISCELLANEOUS Base Flow Conditions? (Y/N):  Date of last precipitation:  12/05/17  Quantity:  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):  It not, please explain:  BIOTIC EVALUATION  Parformed? (Y/N):  N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher amples must be labeled with it  Do number: Include appropriate field data sheets from the Primary Headwater Habilital Assessment Manual)  Fish Observed? (Y/N):  N Outcher? (Y/N):  N Outcher? (Y/N):  N Outcher? (Y/N):  N Outcher? (Y/N):  N Acqualic Macroinverrebrates Observed? (Y/N):  N Outcher? (Y/N):  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of interest WOOded  NOWEd  OWEd		REAM DESIGNATED USE(S)			
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  Township / City:  MISCELLANEOUS  Base Flow Conditions? (V/N): N Canopy (% open): 20%  Were samples collected for water chemistry? (V/N): N Canopy (% open): Is the sampling reach representative of the stream (V/N): Is the sampling reach representative of the stream (V/N):  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with it D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N): N Voucher? (Y/N): N Vouche					
Warren  Township / City:  MISCELLANEOUS  Base Flow Conditions? (Y/N):  N Canopy (% open):  Elevated Tuduidity? (Y/N):  N Canopy (% open):  Elevated Tuduidity? (Y/N):  N Canopy (% open):  Elevated Tuduidity? (Y/N):  Were samples collected for water chemistry? (Y/N):  N (Note lab sample no, or id, and attach results) Lab Number:  Field Measures:  Field Measures:  Field Measures:  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes. Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N):  N Voucher? (Y/N):  N Aquatic Macroinvertebrates Observed? (Y/N):  N Voucher? (Y/N):  N Aquatic Macroinvertebrates Observed? (Y/N):  N Voucher? (Y/N):  N Noucher? (Y/N):					
USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Page:  NRCS Soil Map Stream Order  County:  Warren  Township / City:  MISCELLANEOUS  Base Flow Conditions? (Y/N):  Photograph Information:  Elevated Turbidity? (Y/N):  N	<del></del>		IDINO TUE ENTIDE WAT		
MISCELLANEOUS  Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:  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) If not, please explain:  Additional comments/description of pollution (mpacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations, Voucher collections optional. NOTE: all voucher samples must be labeled with the sample of the stream (Y/N) N (If Yes, Record all observations, Voucher collections optional. NOTE: all voucher samples must be labeled with the sample of the stream (Y/N) N (If Yes, Record all observations, Voucher collections optional. NOTE: all voucher samples must be labeled with the sample of the stream of the sample of the stream of the sample of the stream of the sample					
Base Flow Conditions? (Y/N): N Date of last precipitation: 12/05/17 Quantity:  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) If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations, Voucher collections optional, NOTE: all voucher samples must be labeled with it in 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 (V/N)	USGS Quadrangle N	ame:	NRCS So	il Map Page: NRC	S Soil Map Stream Order
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:  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) If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations, Voucher collections optional. NOTE: all voucher samples must be labeled with the normal properties 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 Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of impress Wooded In an an anarrative description of the stream's location of the stream's locati	County: Warren		Township / City:_		
Photograph Information:  Elevated Turbidity? (Y/N):  N	MISCELLA	NEOUS			
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) If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with it D 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 N Voucher? (Y/N) N Voucher? (Y/N) N N Voucher? (Y/N) N Voucher	Base Flow Conditions	s? (Y/N):_ Y Date of last prec	ipitation: 12/05/1	<b>7</b> Quantity:	
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) If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with it D 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 N Voucher? (Y/N) N Voucher? (Y/N) N N Voucher? (Y/N) N Voucher	Photograph Informati	ion	·		
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:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with it in the primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N): N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Include important landmarks and other features of impress Wooded  In any a harrative description of the stream's location		N	20%		
Were samples collected for water chemistry (Y/N): (Note lab sample no. or id. and attach results). Lab Number:	Elevated Turbidity? (	Y/N): Canopy (% ope	en): <b>20</b> /6		
Is the sampling reach representative of the stream (Y/N)    Variable   Variab	Were samples collec-	ted for water chemistry? (Y/N):	(Note lab sample no	o. or id. and attach results) L	_ab Number:
Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N):  N  (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the Dougher Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N):  N  Voucher? (Y/N):  Voucher? (Y/N):  N  Voucher? (Y/N):  Aquatic Macroinvertebrates Observed? (Y/N):  N  Voucher? (Y/N):  N  Vouche	Field Measures: T	Temp (°C) Dissolved Oxyge	n (mg/l)pH (	S.U.) Conductivit	y (µmhos/cm)
BIOTIC EVALUATION  Performed? (Y/N):  N  (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the lib number. Include appropriate field data sheets from the Primary Headwater Habitual Assessment Manual)  Fish Observed? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Aquatic Macroinvertebrates Observed? (Y/N)  N  Ormments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of interest Woodled  N  N  N  N  N  N  N  N  N  N  N  N  N	Is the sampling reach	n representative of the stream (Y/N)	Y If not, please exp	lain:	
BIOTIC EVALUATION  Performed? (Y/N): N					
BIOTIC EVALUATION  Performed? (Y/N): N					
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the Drimary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (	Additional comments	/description of pollution impacts:			
Include important landmarks and other features of interest wooded n and a harrative description of the stream's location ting T Line wooded hhos mowed owed ow side channel	Frogs or Tadpoles Of	Voucher? (Y/N) N Sabserved? (Y/N) N Voucher? (Y/N)	alamanders Observed? (	Y/N) N Voucher? (Y/N)	N
Include important landmarks and other features of interest wooded n and a harrative description of the stream's location ting T Line wooded hhos mowed owed ow side channel					
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owed OW side channel	DRAW	ING AND NARRATIVE DES	CRIPTION OF STR	EAM REACH (This m	ust be completed):
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Stream 86 **Modified Class 1** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37320 LONG84.10578 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Former earthwork	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]  BOULDER (>256 mm) [16 pts]  0%  SILT [3 pt]  LEAF PACK/WOODY DEBRIS [3 pts]  35%  LEAF PACK/WOODY DEBRIS [3 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]  15%  MUCK [0 pts]  0%  0RTIFICIAL [3 pts]	11
Total of Percentages of 5 00% (A) Substrate Percentage 100% (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):	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): 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): 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]	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 ☆  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)  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  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	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  Moderate 5-10m  V Irban 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  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  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	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  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 weter (Ephemeral)  None   Stream Flowing  Subsurface flow with isolated pools (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  ANOTE: River Left (L) and Right (R) as looking downstream And FLOOPPLAIN QUALITY  RIPARIAN WIDTH  FLOOPPLAIN QUALITY  Wide >10 m  (Feet):  2.00  This information pust also be completed  RIPARIAN WIDTH  FLOOPPLAIN QUALITY  Wide >10 m  Average BankFull Width (Feet):  2.00  This information must also be completed  RIPARIAN WIDTH  FLOOPPLAIN QUALITY  Wide >10 m  Anture Forest, Wetland  Mature Forest, Wetland  Moderate 5-10 m  Residential, Park, New Field  Narrow <5 m  Residential, Park, New Field  None  Fenced Pasture  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 (Intermittential)  Dry channel, no water (Ephemeral)	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]   > 1.5 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
> 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  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]   > 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

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 lowwooded  EVICTOR TO STREAM REACH (This must be completed):  Wooded  Wooded  Novements 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 lowwooded and the stream's		NAL STREAM INFORMA	TION (This Information	Must Also be Completed)	<u>:</u>	
WHY Name:    CWH Name:   Distance from Evaluated Stream		QHEI PERFORMED? -	Yes ✓ No QHEIS	Score (If Yes, A	ttach Completed QHEI	Form)
CWH Name:  EWN Name:  WAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATI USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Page:  NRCS Soil Map Stream Order  County:  Warren  Township / City:  Photograph Information:  Elevated Turbidity? (Y/N):  N Canopy (% open):  50%  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)  Is the sampling reach representative of the stream (Y/N)  If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes, Record all observations, Voucher collections optional, NOTE: all voucher samples must be labeled in pumber. Include appropriate field data sheets from the Primary risedwater Habitat Assessment Manual)  Fish Observed? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Aquatic Macroinvertebrates Observed? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Aquatic Macroinvertebrates Observed? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Noucher? (Y/N):			NATED USE(S)		Distance from For	shorted Otrosov
Distance from Evaluated Stream  MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATI  USGS Quadrangle Name:  NRCS Soil Map Page: NRCS Soil Map Stream Order  County:  Warren  Township / City:  MISCELLANEOUS  Base Flow Conditions? (Y/N):  Photograph Information: Elevated Turbidity? (Y/N):  Were samples collected for water chemistry? (Y/N):  N Canopy (% open):  Field Measures: Temp (*C) Dissolved Oxygen (mg/l)  Is the sampling reach representative of the stream (Y/N)  If not, please explain:  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes, Record all observations, Voucher collections optional. NOTE: all voucher samples must be labeled in Drumber. Include appropriate field data sheets from the Primary Headwaret Habitat Assessment Manual)  Fish Observed? (Y/N):  N Voucher? (Y/N):  N N Voucher? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N N N Voucher? (Y/N):  N N N N N N N N N N N N N N N N N N N						
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATI USGS Quadrangle Name						
USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order  County:  Warren  Township / City:  MISCELLANEOUS  Base Flow Conditions? (Y/N):  Photograph information:  Elevated Turbidity? (Y/N):  N Canopy (% open):  Elevated Turbidity? (Y/N):  N Canopy (% open):  Field Measures:  Temp (*C)  Dissolved Oxygen (mg/l)  Is the sampling reach representative of the stream (Y/N)  Is the sampling reach representative of the stream (Y/N)  MI (Note lab sample no. or id. and attach results) Lab Number:  Field Measures:  Temp (*C)  Dissolved Oxygen (mg/l)  Is the sampling reach representative of the stream (Y/N)  Is the sampling reach representative of the stream (Y/N)  Is the sampling reach representative of the stream (Y/N)  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes, Record all observations, Voucher collections optional, NOTE; all voucher samples must be labeled to number. Include appropriate field data sheets from the Primary Headwater Hubbiat Assessment Manual)  Fish Observed? (Y/N):  N Voucher? (Y/			DIES OF MARS INCLUD	NG THE ENTIDE WATERSH		
MISCELLANEOUS  Base Flow Conditions? (V/N):  Photograph Information:  Elevated Turbidity? (V/N):  N Canopy (% open):  50%  Were samples collected for water chemistry? (V/N):  N (Note lab sample no, or id, and attach results) Lab Number:  Field Measures: Temp (°C) Dissolved Oxygen (mg/l)  Is the sampling reach representative of the stream (V/N)  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (V/N):  N (if Yes. Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled 1D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N):  Voucher? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features or immoved ROW  ROW  Nooded  Nooded  Nooded	USGS O		1 120 01 111/1 0, 1110/2001			Г
MISCELLANEOUS  Base Flow Conditions? (V/N): V Date of last precipitation: 12/05/17 Quantity:  Photograph Information:  Elevated Turbidity? (Y/N): N Canopy (% open): 50%  Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:  Field Measures: Temp (*C) Dissolved Oxygen (mg/t) pH (S.U.) Conductivity (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. Youcher collections optional. NOTE: all youcher samples must be labeled to number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N) N Youcher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Youcher? (Y/N) N Youcher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Youcher? (Y/					rageNCC	3011 Wap Stream Order
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:  Photograph Information:  Elevated Turbidity? (Y/N): N Canopy (% open): 50%  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:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations, Voucher collections optional, NOTE: all voucher samples must be liabeled to number; include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N): N voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N voucher? (Y/N) N N oucher? (Y/N) N N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of mercestry site evaluation and a narrative description of the stream's log existing T Line  FLOW MOODED  Nooded	County.			TOWNSHIP / City		
Photograph Information:  Elevated Turbidity? (Y/N):  N  Canopy (% open):  50%  Were samples collected for water chemistry? (Y/N):  Pield Measures:  Temp (*C)  Dissolved Oxygen (mg/l)  Is the sampling reach representative of the stream (Y/N)  M  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 to number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N):  N  Voucher? (Y/N):  N  Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other feat mass of more states and a narrative description of the stream's loexisting T Line  ROW  N  Nooded  Nooded  Nooded	Basa Ela	V	Date of last precipi	12/05/17	Quantity	
Elevated Turbidity? (Y/N): N Canopy (% open): 50%  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:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled Din 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 Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of increasing site evaluation and a narrative description of the stream's log existing T Line  ROW hhote			Date of last precipi	tation	Quantity	_
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:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled 1D number. Include appropriate field data shests from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of increasing site evaluation and a narrative description of the stream's log moved ROW hhote		N		50%		
Steeld Measures: Temp (°C)   Dissolved Oxygen (mg/l)   pH (S.U.)   Conductivity (µmhos/cm)		Turbidity? (Y/N):		/		
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 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 Aquatic Macroinvertebrates Observed? (Y/N) N voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of the property of the stream's lowed ROW Mooded  PLOW MOODED  NOTE: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must be labeled as sheets from the Primary Headwater Habitat Assessment Manual)  Note: all voucher samples must	Were sa	mples collected for water	chemistry? (Y/N):	_ (Note lab sample no. or id	d. and attach results) La	ab Number:
Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N):  N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N):  N Voucher? (Y/N):  N Voucher? (Y/N):  N Aquatic Macroinvertebrates Observed? (Y/N):  N Voucher? (Y/N): N Voucher? (Y/	Field Me	asures: Temp (°C)		(mg/l) pH (S.U.)	Conductivity	(µmhos/cm)
BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled 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 Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Vouch	Is the sa	mpling reach representati	ve of the stream (Y/N)	If not, please explain:_		
BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled 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 Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Vouch						
BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled 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 Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Vouch						
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 lo mowed ROW  Wooded  Scrubshrub ROW  hh04  hh05	Fish Obs Frogs or	ed? (Y/N): (If ID ID N Vo Tadpoles Observed? (Y/N)	number. Include appropria	ate field data sheets from the manders Observed? (Y/N)	Primary Headwater Habi	tat Assessment Manual) N
rooded wooded hh04 scrub-shrub ROW	Inc				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
hh04 scrub-shrub ROW			mow	/ed	and a nan alive descrip	priori of the stream's loca
hh04 shrub ROW hh05		<b>→</b>				wooded
PHWH Form Page - 2	$\sqrt{}$	hh04	4	shrub		hh05
October 24, 2002 Revision				PHWH Form Page - 2		

Stream 87 **Modified Class 2** 



SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37341 LONG84.10638 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS: Former earthwork in ROW	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]  BOULDER (>256 mm) [16 pts]  O%  SILT [3 pt]  LEAF PACK/WOODY DEBRIS [3 pts]  15%	Points
BEDROCK [16 pt]  D'A  FINE DETRITUS [3 pts]  0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 5%  GRAVE (2-64 mm) [9 pts] 25% MIJCK [0 pts] 0%	Wax = 40
GRAVEL (2-64 mm) [9 pts]  SAND (<2 mm) [6 pts]  15%  MUCK [0 pts]  0%  0%	18
Total of Percentages of 20.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	2
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] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	I
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
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]  > 5.5 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):  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): 2.50  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]   > 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]     > 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] > 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  Moderate 5-10m  S 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]  L R (Feet):  AVERAGE BANKFULL WIDTH  (Feet):  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  Mature Forest, Wetland  Woderate 5-10m  Moderate 5-10m  Urban or Industrial	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  PROOPLAIN QUALITY  NOTE: River Left (L) and Right (R) as looking downstreams  RIPARIAN WIDTH  L R (Per Bank)  V Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  Narrow <5m  P1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 10 pts)  AVERAGE BANKFULL WIDTH  (Feet):  2.50  L R (Woot Predominant per Bank)  L R (Most Predominant per Bank)  I R (Most Predominant per Bank)  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  Residential, Park, New Field	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]     > 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  AVERAGE BANKFULL 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  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  Moist Channel, isolated pools, no flow (Intermitte 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 ANOTE: River Left (L) and Right (R) as looking downstream Mature Forest, Wetland Wide >10 m Mature Forest, Wetland Moderate 5-10 m Mature Forest, Shrub or Old Immature Forest, Shrub or Old Field Narrow <5 m Residential, Park, New Field Open Pasture, Row 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 (Intermitte 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  AVERAGE BANKFULL 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  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  Moist Channel, isolated pools, no flow (Intermitte 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  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Narrow <5 m  None  COMMENTS  Fenced Pasture  Flow REGIME (At Time of Evaluation) (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  NOTE: River Left (L) and Right (R) as looking downstream  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Narrow <5m  None  Residential, Park, New Field  Penced Pasture  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   1.0   Check ONLY one box):   None   1.0   Check ONLY one box):   None   1.0   Check ONLY one box):   None   1.0   Check ONLY one box):   None   1.0   2.0   3.0	Width Max=30  5

DOWNSTREAM DESIGNATED USE	E(S)
¬	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MA	PS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date o	of last precipitation: 12/05/17 Quantity:
Photograph Information:	gainity.
N	(apply /9/, apply): 60%
	N
Were samples collected for water chemistry? (	(Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolv	ved Oxygen (mg/l)pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stre	eam (Y/N) Y If not, please explain:
Additional comments/description of pollution in	npacts:
, ,	all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the
Performed? (Y/N):  N  (If Yes, Record and ID number. Include the I	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Performed? (Y/N): N (If Yes, Record a ID number. Incl Fish Observed? (Y/N) N Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Record a ID number. Incl Fish Observed? (Y/N) N Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Record a ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou Comments Regarding Biology:	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl ID number. Incl Voucher? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other	lude appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Record a ID number. Incl Fish Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Vou Comments Regarding Biology: DRAWING AND NARRATI	VE DESCRIPTION OF STREAM REACH (This must be completed):  r features of interest for site evaluation and a narrative description of the stream's locat of SCrub-
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl ID number. Incl Voucher? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other	Indee appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl ID number. Incl Voucher? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other	VE DESCRIPTION OF STREAM REACH (This must be completed):  r features of interest for site evaluation and a narrative description of the stream's locat of SCrub-
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl ID number. Incl Voucher? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other	Indee appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl  Fish Observed? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI  Include important landmarks and other existing T Line	VE DESCRIPTION OF STREAM REACH (This must be completed):  r features of interest for site evaluation and a narrative description of the stream's location in the stream's l
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl ID number. Incl Voucher? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other	Indee appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl  Fish Observed? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Comments Regarding Biology:  DRAWING AND NARRATI  Include important landmarks and other existing T Line	VE DESCRIPTION OF STREAM REACH (This must be completed):  r features of interest for site evaluation and a narrative description of the stream's location in the stream's l
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl N  Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other existing T Line  FLOW	N Salamanders Observed? (Y/N) N Voucher?
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl N  Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other existing T Line  FLOW	N Salamanders Observed? (Y/N) N Voucher?
Performed? (Y/N):  N  (If Yes, Record a ID number. Incl N  Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Comments Regarding Biology:  DRAWING AND NARRATI Include important landmarks and other existing T Line  FLOW	N Salamanders Observed? (Y/N) N Voucher?

Stream 88

Class 1



17	
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37491 LONG84.11159 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Former earthwork?	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  PERCENT	Metric
□ □ BLDR SLABS [16 pts] □ ✓ SILT [3 pt] 20%	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  O  LEAF PACK/WOODY DEBRIS [3 pts]  O  FINE DETRITUS [3 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 15% CLAY or HARDPAN [0 pt] 10%	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	12
Total of Percentages of (A) Substitute Recognition (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	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]	
> 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):  > 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]	
> 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]	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): 1.50  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): 1.50  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  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]   > 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]   > 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]   > 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] > 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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Narrow <5m  None  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]    1.50    1.50    1.50    1.50    2   3   4   8") [15 pts]    2   1.0 m (<=3' 3") [5 pts]    3   1.0 m (<=3' 3") [5 pts]    4   8") [15 pts]    5   1.0 m (<=3' 3") [5 pts]    6   1.50    7   1.50    8   1.50    9   1.50    9   1.50    1.50	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]  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  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ↑ Most Predominant per Bank)  ↑ Wide > 10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Residential, Park, New Field  Open Pasture, Row Cro  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]	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  Mature Forest, Wetland  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)  None 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	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  Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Immature Forest, Shrub or Old Field Open Pasture, Row Cn  Narrow <5m Residential, Park, New Field Open Pasture, Row Cn  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial)  COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None 1.0 2.0 3.0  3.0  3.0  3.0  3.0  3.0  3.0	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	Width Max=30

	No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED U	USE(S)
WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF I	MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCAT
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Orde
County: Warren	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Dat	te of last precipitation: 12/05/17 Quantity:
	to or last proophation.
Photograph Information:	Canapy (% anap): 100%
Elevated Turbidity? (Y/N): C	variopy (% open).
Were samples collected for water chemistry	y? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Diss	solved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the s	
	The state of the s
Additional comments/description of pollution	n impacts:
, , =	ord all observations. Voucher collections optional. NOTE: all voucher samples must be labeled
Performed? (Y/N): N (If Yes, Reco ID number. If Yesh Observed? (Y/N) N Voucher? (Y/N)	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Performed? (Y/N): N (If Yes, Reco ID number. If Yesh Observed? (Y/N) N Voucher? (Y/N)	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Reco ID number. If Yesh Observed? (Y/N) N Voucher? (YFrogs or Tadpoles Observed? (YFROGS Observed? (	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Reco ID number. If Yesh Observed? (Y/N) N Voucher? (YFrogs or Tadpoles Observed? (YFROGS Observed? (	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  Voucher? (Y/N)
Performed? (Y/N): N (If Yes, Reco ID number. If Yesh Observed? (Y/N) N Voucher? (YFrogs or Tadpoles Observed? (YFROGS Observed? (	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)
Performed? (Y/N):  N (If Yes, Reco ID number. I Fish Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Comments Regarding Biology:	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Vouche
Performed? (Y/N): N (If Yes, Reco ID number. If N Voucher? (YFrogs or Tadpoles Observed? (Y/N) N Voucher? (YFrogs or Tadpoles Observed? (YFrogs or Tadpole	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N): N (If Yes, Recold ID number. In ID number. Include important landmarks and other interests. Include important landmarks and other interests.	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N): N (If Yes, Recold ID number. In ID number. Include important landmarks and other interests. Include important landmarks and other interests.	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N): N (If Yes, Recold ID number. In ID number. Include important landmarks and other interests. Include important landmarks and other interests.	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N): N (If Yes, Recold ID number. In ID number. Include important landmarks and other interests. Include important landmarks and other interests.	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N):  N (If Yes, Recold ID number. If Numb	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N):  N (If Yes, Recold ID number. If Numb	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Y/N)  N  Salamanders Observed? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher?
Performed? (Y/N):  N (If Yes, Recoll ID number. If No Voucher? (Y Frogs or Tadpoles Observed? (Y/N)) Comments Regarding Biology:  DRAWING AND NARRA Include important landmarks and other existing T Line  Op	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)  STREAM REACH (This must be completed): ther feature:  the evaluation and a narrative description of the stream's log scrubshrub
Performed? (Y/N):  N (If Yes, Recoll ID number. If Not	Scrub-shrub  Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Noucher? (Y/N)  Nouc
Performed? (Y/N):  N (If Yes, Recoll ID number. If No Voucher? (Y Frogs or Tadpoles Observed? (Y/N)) Comments Regarding Biology:  DRAWING AND NARRA Include important landmarks and other existing T Line  Op	Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  N Salamanders Observed? (Y/N)  N Voucher? (Y/N)  STREAM REACH (This must be completed): ther feature:  To scrub-  Scrub-  Scrub-  Scrub-  Shrub
Performed? (Y/N):  N (If Yes, Recold ID number. If Numb	Scrub-shrub  Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Noucher? (Y/N)  Nouc

Stream 89

Class 2



## Primary Headwater Habitat Evaluation HHEI Score (si

tion Form	64
um of metrics 1, 2, 3):	<u> </u>

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-07 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37499 LONG84.11182 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Insti	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING POSSIBLY FORMER FOR STREAM CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED POSSIBLY FORMER FORMER FORMER POSSIBLY FORMER FORM	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
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  BEDROCK [16 pt]  LEAF PACK/WOODY DEBRIS [3 pts]  5%  0%  0%	Substrate
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt]	Max = 40
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ SAND (<2 mm) [6 pts] ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	19
Total of Percentages of 45 00% (A) Substrate Percentage 100% (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):	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
MAXIMUM BOOL BERTILL III II O OO	
COMMENTS MAXIMUM POOL DEPTH (Inches): 9.00	
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
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]    1.0 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]	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  ANOTE: River Left (L) and Right (R) as looking downstream ☆  RIPARIAN WIDTH  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  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  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  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 Ba	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  L R (Per Bank)  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  Wide >10m Mature Forest, Wetland  Conservation Tillage	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 ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as	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 FLOODPLAIN QUALITY  L R (Per Bank)  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Residential, Park, New Field  Open Pasture, Row Cr	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements)    A.0 meters (> 13') [30 pts]   > 1.0 m - 1.5 m (> 3' 3" - 4" 8") [15 pts]   > 1.5 m - 3.0 m (> 9' 7" - 13') [25 pts]   > 1.5 m - 3.0 m (> 9' 7" - 4" 8") [20 pts]	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  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  RIPARIAN WIDTH (Feet): 6.00  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet): 6.00  RIPARIAN WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH (Feet):	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* - 43') [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  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10 m (x=3' 3') [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10 m (x=3' 3') [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10 m (x=3' 3') [5 pts]  AVERAGE BANKFULL WIDTH  (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10 m (x=3' 3') [5 pts]  AVERAGE BANKFULL WIDTH  (Feet): 6.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A (Most Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Ri	Width Max=30 20
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  **NOTE: River Left (L) and Right (R) as looking downstream:  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10m  Mature Forest, Wetland  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  Check ONLY one box):  Check ONLY one box):  None  Check ONLY one box):  None  1.0  Check ONLY one box):  None  Check ONLY one box):  None  1.0  Check ONLY one box):  None  1.0  Check ONLY one box):  Check ONLY one box):  None  1.0  Check ONLY one box):  None  1.0  Check ONLY one box):  None	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 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 Narrow <5m Residential, Park, New Field Open Pasture, Row Cr  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 Frozen no flow  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
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  **NOTE: River Left (L) and Right (R) as looking downstream:  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10m  Mature Forest, Wetland  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  Check ONLY one box):  Check ONLY one box):  None  Check ONLY one box):  None  1.0  Check ONLY one box):  None  Check ONLY one box):  None  1.0  Check ONLY one box):  None  1.0  Check ONLY one box):  Check ONLY one box):  None  1.0  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
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):_Y Date of last precipitation:12/05/17 Quantity:
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:
Performed? (Y/N):  N  (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  N  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location  existing T Line   hh06
Solding 1 Zino (interpretation)
eroded-very shrub ROW
FLOW
hh07
wooded scrub- shrub
ROW wooded
PHWH Form Page - 2
October 24, 2002 Revision  Save as pdf  Reset Form

Stream 90 **Modified Class 2** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-08 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37523 LONG84.11351 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOMMODIFICATIONS: Culvert	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] 15% FINE DETRITUS [3 pts] 0%	Substrate
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt] 5%	Max = 40
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	22
Total of Percentages of 40.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	AID
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]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 15.0	
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
> 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]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 6.00	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]  > 1.0 m (<=3' 3") [5 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  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	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  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  FLOODPLAIN QUALITY  L R (Per Bank)  L R (Most Predominant per Bank)  Wide >10m  Moderate 5-10m  Moderate 5-10m  AVERAGE BANKFULL WIDTH  (Feet): 6.00  L R  (Most Predominant per Bank)  L R  Conservation Tillage  Immature Forest, Wetland  Ulrhan 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 (Most Predominant per Bank)  L R (Most Predominant per Bank)  Wide >10m  Mature Forest, Wetland  Conservation Tillage	Width Max=30
> 4.0 meters (> 13') [30 pts]	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 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  □ Residential, Park, New Field  □ Narrow <5m  □ Narrow <5m  □ None □ Fenced Pasture  COMMENTS  AVERAGE BANKFULL WIDTH  FLOODPLAIN QUALITY  □ 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)  None 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  ↓ R (Per Bank)  ↓ R (Most Predominant per Bank)  ↓ R (Most Predominant per Bank)  ↓ Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Residential, Park, New Field  Open Pasture, Row Cro  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  NOTE: River Left (L) and Right (R) as looking downstream  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Narrow <5m  None  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  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 (s 13') [30 pts] > 3.0 m - 4.0 m (s 9' 7" - 13') [25 pts]  > 1.5 m - 3.0 m (s 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  ♣ (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  Narrow <5m  Narrow <5m  Residential, Park, New Field  Open Pasture, Row Cro  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  **Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Moderate 5-10 m  None  COMMENTS   **Percent Pasture  **None   Penced Pasture   Mining or Construction  COMMENTS  **None   Penced Pasture   Mining or Construction  COMMENTS  **Sinuosity (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None   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" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30 20

ADDITIONAL STREAM INFORMA	TION (This Information Must Also I	pe Completed):		_
QHEI PERFORMED? -	Yes No QHEI Score	(If Yes, Attach Comple	eted QHEI Form)	
DOWNSTREAM DESIG	NATED USE(S)			
<b>7</b>			e from Evaluated Stream	
EWH Name:			e from Evaluated Streame from Evaluated Stream	
MAPPING: ATTACH COI	PIES OF MAPS, INCLUDING THE ENT	TRE WATERSHED AREA. C	LEARLY MARK THE SITE LOCATION	
JSGS Quadrangle Name:		NRCS Soil Map Page:	NRCS Soil Map Stream Order	
County: Warren		ip / City:	Titled con map circum crack	1
MISCELLANEOUS		p / Ony	<u> </u>	
V				
sase Flow Conditions? (Y/N):	Date of last precipitation:	Quar	itity:	
Photograph Information:	Canony (% anon): 80%			
Elevated Turbidity? (Y/N):	Carlopy (% open)			
Vere samples collected for water of	hemistry? (Y/N): (Note lab s	sample no. or id. and attach	results) Lab Number:	
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.) C	onductivity (µmhos/cm)	
s the sampling reach representativ	re of the stream (Y/N) Y If not, p	lease explain:		
additional comments/description of	pollution impacts:			
N	number. Include appropriate field data sucher? (Y/N)  Salamanders Ob  N  Voucher? (Y/N)  Aquation		ner? (Y/N) N	
1	Scrub-shrub	_	ive description of the stream's location	eep
	PHWH Fo	orm Page - 2		
October 24, 2002 Revision		Save a	s pdf Reset Form	

Stream 91 **Modified Class 2** 



SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121117-09 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37657 LONG84.11779 RIVER CODE RIVER MILE	
DATE 12/11/17 SCORER jbl, jtt 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 / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Channelized	COVERY
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]  BEDROCK [16 pt]  D'A  D'A  D'A  D'A  D'A  D'A  D'A  D'	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 5% MUCK [0 pts] 0%	Wax = 40
GRAVEL (2-64 mm) [9 pts]  SAND (<2 mm) [6 pts]  15%  ARTIFICIAL [3 pts]  0%  0%	12
Total of Percentages of 5.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Check Score of TWO MOST PREDOMINATE SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	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]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	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]  > 1.0 m (<=3' 3") [5 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  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]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.00  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	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): 1.00  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  ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑  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] > 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 >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  S 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]  S 1.0 m (<=3' 3") [5 pts]  L R (Feet):  1.00  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  I R (Most Predominant per Bank)	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]   > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30  5
> 4.0 meters (> 13') [30 pts]	Width Max=30  5
> 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  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 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  AVERAGE BANKFULL WIDTH (Feet): 1.00  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 5-10 m Immature Forest, Shrub or Old Urban or Industrial Field  Narrow <5 m Residential, Park, New Field Open Pasture, Row C  None COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing 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  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  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):	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	Width Max=30
3.0 m + 4.0 m(s 9' 7' - 13') [25 pts]   3.0 m - 4.0 m (s 9' 7' - 13') [25 pts]   3.0 m + 4.0 m (s 9' 7' - 4' 8") [20 pts]   3.0 m   4.0 m (s 9' 7' - 4' 8") [20 pts]   3.0 m   4.0 m (s 9' 7' - 4' 8") [20 pts]   3.0 m   4.0 m (s 9' 7' - 4' 8") [20 pts]   3.0 m   4.0 m (s 9' 7' - 4' 8") [25 pts]   3.0 m   4.0 m (s 9' 7' - 4' 8") [15 pts]   3.0 m   4.0 m	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
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIR	WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NR	CS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township	City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:12	/05/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	1
Were samples collected for water chemistry? (Y/N): (Note lab sar	nple 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, plea	se explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data she Voucher? (Y/N) N Salamanders Observed?	ections optional. NOTE: all voucher samples must be labeled with the sit ets from the Primary Headwater Habitat Assessment Manual)  ved? (Y/N)  Voucher? (Y/N)  Voucher? (Y/N)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF	STREAM REACH (This must be completed):
Incl@acmportant landmarks and other features of interest for site	· ——
existing T Line	/
	hay field
row crop	wooded
wooded hh09	, medada
PHWH Form	Page - 2
October 24, 2002 Revision	Save as pdf Reset Form

Save as pdf

Stream 92 **Modified Class 2** 



61
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-08 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.37959 LONG84.12921 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECO	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  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]	
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 0%	21
Total of Percentages of 25.00% (A) Substrate Percentage 100% (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]	25
(	
<ol> <li>BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):</li> </ol>	
> 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] > 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]	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): 4.50  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  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  ENDODPLAIN QUALITY  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  ↑ NOTE: 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  Moderate 5-10m  V This information must also be completed  RIPARIAN WIDTH  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  V V Wide >10m  Mature Forest, Wetland  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
3	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  FLOODPLAIN QUALITY  ↓ R (Per Bank)  ↓ 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 ☆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 5-10 m Mature Forest, Shrub or Old Field Open Pasture, Row Cr    Narrow <5m Residential, Park, New Field Open Pasture, Row Cr    None Residential Park   Penced Pasture Mining or Construction   COMMENTS   Conservation (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 Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  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  ANOTE: River Left (L) and Right (R) as looking downstream And FLOODPLAIN QUALITY  L R (Per Bank)  Vide >10 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Vide >10 m (=3' 3") [5 pts]  L R (Most Predominant per Left (L) and Right (R) as looking downstream And The Predominant per Bank)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m (=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH  (Feet):  4.50  COMSETTION (Feet):  ASSUMBLY SETTION (Feet):  ASSUMBLY SETTION (Feet):  AVERAGE BANKFULL WIDTH  FLOOD (Feet):  AVERAGE BANKFULL WIDTH  (Feet):  4.50  COMSETTION (Feet):  ASSUMBLY SETTION (Feet):  AVERAGE BANKFULL WIDTH  (Feet):  4.50  ASSUMBLY SETTION (Feet):	Width Max=30

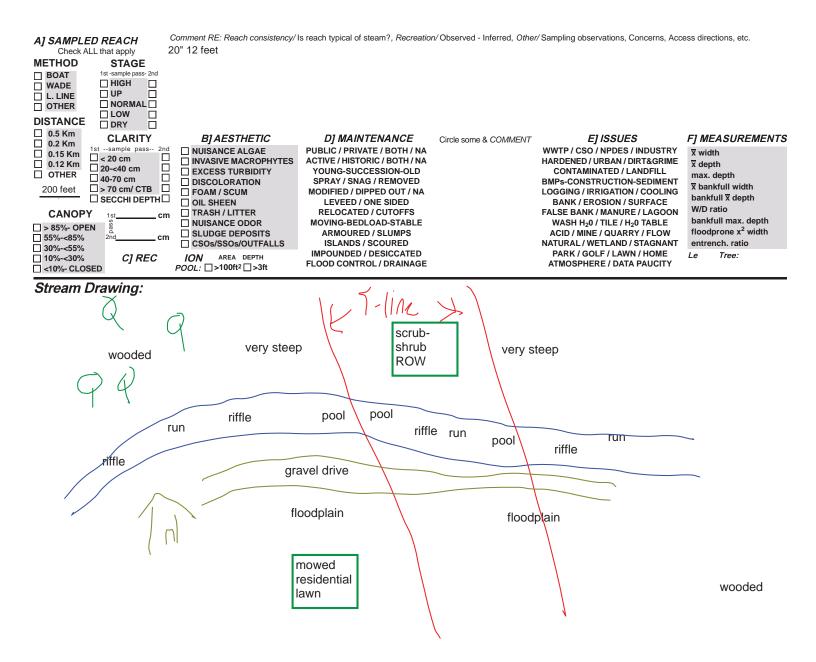
ADDITIONAL STREAM INFORMATION (This Information Must Also be	Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE	
USGS Quadrangle Name: NR	CS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township /	City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:12	<b>/05/17</b> Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 80%	
N	nple no. or id. and attach results) Lab Number:
Y	pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, plea	se explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data she  Voucher? (Y/N) N Salamanders Obser	ections optional. NOTE: all voucher samples must be labeled with the site ets from the Primary Headwater Habitat Assessment Manual)  ved? (Y/N)  Voucher? (Y/N)  Voucher? (Y/N)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF	STREAM REACH (This <u>must</u> be completed):
wooded/ scrub shrub existing T Line	evaluation and a narrative description of the stream's location scrub shrub ROW wooded
FLOW	
hh08 scrub shrub ROW	
PHWH Form	Page - 2
October 24, 2002 Revision	Save as pdf Reset Form



# **Qualitative Habitat Evaluation Index and Use Assessment Field Sheet**

QHEI Score: 58.5

Stream & Location:	QH-jbl-120717-03	RM:	Date:	12/07/2017
halls creek	Scorers Full Name & Affiliation:_	jbl, pjr <i>i</i>	AECOM	
River Code:	<b>-STORET #:Lat./Long.:</b> 39.3811484	4, -84.13	49763	Office verified location
BEST TYPES  BLDR /SLABS [10] BOULDER [9] COBBLE [8] GRAVEL [7] SAND [6] BEDROCK [5]	POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN    HARDPAN [4]	SILT	& average)  QUAL  HEAVY    MODER  NORMA  FREE [1  EXTENS  MODER  NORMA	LITY [-2] ATE [-1] Substrate
quality: 3-Highest quality	EGETATION [1] ROOTWADS [1] AQUATIC MACROPHY	r nignest ; large pools. :RS [1] TES [1]	Check ONE (Compared to the compared to the com	Or 2 & average) E >75% [11] E 25-75% [7]
SINUOSITY  HIGH [4]  MODERATE [3]  LOW [2]	## CHOLOGY Check ONE in each category (0r 2 & average)  ## AVELOPMENT CHANNELIZATION STABILITY  EXCELLENT [7] NONE [6] HIGH [3]  GOOD [5] RECOVERED [4] MODERATE [2]  ## FAIR [3] RECOVERING [3] LOW [1]  POOR [1] RECENT OR NO RECOVERY [1]			Channel Maximum 20
4] BANK EROSION River right looking downstre EROSION NONE / LITTLE [3] MODERATE [2] HEAVY / SEVERE [3]	R   R   R   R   R   R   R   R   R   R	TY	CONSERVATION URBAN OR IN MINING / CONstee predominant I 00m riparian.	STRUCTION [0]
MAXIMUM DEPTH Check ONE (ONLY!)  □ > 1m [6] □ 0.7-<1m [4] □ 0.4-<0.7m [2] □ 0.2-<0.4m [1] □ < 0.2m [0]  Comments 20	Check ONE (Or 2 & average)  POOL WIDTH > RIFFLE WIDTH [2]  POOL WIDTH = RIFFLE WIDTH [1]  POOL WIDTH > RIFFLE WIDTH [0]  POOL WIDTH > RIFFLE WIDTH [0]  MODERATE [1]  Indicate for reach - pools and rif	ΠAL [-1] TENT [-2] ] ffles.	Secondal (circle one and c	Pool / Current Maximum 12
of riffle-obligate RIFFLE DEPTH  □ BEST AREAS > 10cm [* □ BEST AREAS 5-10cm [* □ BEST AREAS < 5cm [metric=t] Comments	RUN DEPTH RIFFLE / RUN SUBSTRATE RIFF  [2] MAXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2]  [3] MAXIMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1]  [4] UNSTABLE (e.g., Fine Gravel, Sand) [0]	·· FLE / RU □ N □ L	IN EMBEDD NONE [2] OW [1] MODERATE [0] EXTENSIVE [-1]	Riffle /
6] GRADIENT ( 40 DRAINAGE AREA	ft/mi) □ VERY LOW - LOW [2-4]	%GLID %RIFFL	=	Gradient 7 Maximum 7



Stream 94 **Modified Class 1** 



21
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-06SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38179 LONG84.13660 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr 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 CUIVERT	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]       0%       ☐       CLAY or HARDPAN [0 pt]       0%         ☐       GRAVEL (2-64 mm) [9 pts]       5%       ☐       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 20%	11
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  6  Check 10070  TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	IVIAX = 30
> 22.5 - 30 cm [30 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
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
> 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]	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 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]  4.50	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.50  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	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	Width 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)  Wide >10m  Moderate 5-10m  Moderate 5-10m  S 1.0 m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 1.50  L R (Feet): 1.50  L R (Most Predominant per Bank)  Moderate 5-10m  Moderate 5-10m  Moderate 5-10m	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m Mature Forest, Wetland  Wide >10m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 1.50   This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  Mature Forest, Wetland  Conservation Tillage	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  None  S 1.0 m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH  (Feet): 1.50   AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE BANKFULL WIDTH  (Feet): 1.50  AVERAGE	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m (Most Predominant per Bank)  Wide >10m Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  Narrow <5m  Narrow <5m  AVERAGE BANKFULL WIDTH (Feet): 1.50   AVERAGE BANKFULL WIDTH (Feet): 1.50  L 1.50  AVERAGE BANKFULL WIDTH (Feet): 1.50  L R (Most Predominant per Bank) L R (Most	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width Max=30
> 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
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Residential, Park, New Field  Open Pasture, Row Cr.  None  COMMENTS  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
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  Most Predominant per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  None  COMMENTS  Fenced Pasture  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  AVERAGE BANKFULL WIDTH  (Feet):  1.50  AVERAGE	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be	e 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
EWH Name: _	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTI	RE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: N	RCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township	/ City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:1	<b>2/05/17</b> Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 40%	
Were samples collected for water chemistry? (Y/N): N (Note lab sa	ample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, ple	ease explain:
prop	
Additional comments/description of pollution impacts:	
Additional commonities description of politicism impacts.	
ID number. Include appropriate field data stress of the control of	ollections optional. NOTE: all voucher samples must be labeled with the situets from the Primary Headwater Habitat Assessment Manual) erved? (Y/N) N Voucher? (
DRAWING AND NARRATIVE DESCRIPTION O	F STREAM REACH (This must be completed):
Include important landmarks and other features of interest residence wooded existing T Line	dential n and a narrative description of the stream's location
FLOW 7	
hh06 shrub ROW	scrub shrub ROW

**Modified Class** Stream 95



50
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-07 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38194 LONG84.13793 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
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.	ı 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]	IVIAX = 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 25.00% (A) Substrate Percentage 95% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	""
	Pool Depth
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 = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 6.00	
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
> 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]  > 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 ☆NOTE: 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  LR (Per Bank)  AVERAGE BANKFULL WIDTH (Feet): 3.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  LR (Most Predominant per Bank)  LR	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 ANOTE: River Left (L) and	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)   Wide >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  AVERAGE BANKFULL WIDTH (Feet): 3.00  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY	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  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 Mature Forest, Wetland  Narrow <5 m Residential, Park, New Field  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]  > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]  > 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]  > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]    Stream Flowing    Moist Channel, isolated pools, no flow (Intermitter)	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 (Most Predominant per Bank)  Wide >10m  Mature Forest, Wetland  Narrow <5m  Narrow <5m  Residential, Park, New Field  None  COMMENTS  Fenced Pasture  Mining or Construction  COMMENTS  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):	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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Immature Forest, Shrub or Old  Field  Narrow <5m  Residential, Park, New Field  Open Pasture, Row 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 (Intermitter Dry channel, no water (Ephemeral)	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]   > 1.5 m - 3.0 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  This information must also be completed  RIPARIAN WIDTH  ENDODPLAIN QUALITY  NOTE: River Left (L) and Right (R) as looking downstream Notes (Per Bank)  RIPARIAN WIDTH  ENDODPLAIN QUALITY  Notes (Most Predominant per Bank)  Notes (10 m)  Nature Forest, Wetland  Nature Forest, Shrub or Old  Nature Forest, Shrub or Old  Nature Forest, Shrub or Old  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):  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 ✓ No QHEI Score (If Yes, Attac	ch 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	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Pa  County: Warren Township / City:	age: NRCS Soil Map Stream Order
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17	Quantity:
Photograph Information:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	nd attach results) Lab Number:  Conductivity (µmhos/cm)
prop	
BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Print Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrate Comments Regarding Biology:	nary Headwater Habitat Assessment Manual)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM R Include important landmarks and other features of interest for site evaluation and existing T Line  scrub shrub ROW ROW	
PHWH Form Page - 2	

Stream 96 **Modified Class 2** 



41
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-11 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38481 LONG84.14941 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr 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 earthwork	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]  DW SILT [3 pt]  LEAF PACK/WOODY DEBRIS [3 pts]  15%	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]	Substrate
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt] 10%  GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]  SAND (<2 mm) [6 pts]  MUCK [0 pts]  ARTIFICIAL [3 pts]  0%	21
Total of Percentages of 35 00% (A) Substrate Percentage 400% (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]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]  > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 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]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 3.00	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  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  FLOODPLAIN QUALITY	Width Max=30
Solution So	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  EL R (Per Bank)  AVERAGE BANKFULL WIDTH (Feet): 3.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  L R	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  L R (Most Predominant per Bank)  Moderate 5-10m  Moderate 5-10m  V ≤ 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 3.00  AVERAGE BANKFULL WIDTH (Feet): 3.00  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  Moderate 5-10m  Moderate 5-10m  V V Wide > 10m  Moderate 5-10m  V V Wide > 10m  Moderate 5-10m  V V Wide > 10m  Moderate 5-10m	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  L R (Per Bank)  V Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  None  S 1.0 m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]  ✓ S 1.0 m	Width 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)  Wide >10m  Moderate 5-10m  Narrow <5m  Narrow <5m  AVERAGE BANKFULL WIDTH (Feet): 3.00   This information must also be completed  AVERAGE BANKFULL WIDTH (Feet): 3.00  L R (Most Predominant per Bank)  Residential, Park, New Field  Open Pasture, Row Cr	Width Max=30
Solution	Width Max=30
S   S   S   S   S   S   S   S   S   S	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  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  Moderate 5-10m  Residential, Park, New Field  Narrow <5m  Residential, Park, New Field  Flow REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  Moderate (Ephemeral)	Width Max=30
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 >10m  Moderate 5-10m  Narrow <5m  Narrow <5m  None  COMMENTS  Fenced Pasture  Residential, Park, New Field  Flood Pasture, Row Cr  None  COMMENTS  Flow REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  AVERAGE BANKFULL WIDTH  (Feet):  3.00  AVERAGE BANKFULL WIDTH  (	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  V V Vide >100  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  None  None  COMMENTS  FLOW REGIME (At Time of Evaluation)  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  L R (200 ft) of channel)  Work of Check ONLY one box):  None  SINUOSITY (Number of bends per 61 m (200 ft) of channel)  V Stream Flowing  SINUOSITY (Number of bends per 61 m (200 ft) of channel)  AVERAGE BANKFULL WIDTH  (Feet):  3.00  AVERAGE BANKFULL WIDTH  (Feet)	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information	Must Also be Completed):
QHEI PERFORMED? - Yes No QHEI S	Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
	NG THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipit	tation: 12/05/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open)	): <b>70%</b>
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:	
Additional comments/description of politicismipacts.	
BIOTIC EVALUATION	
, ,	ns. Voucher collections optional. NOTE: all voucher samples must be labeled with the si
	ate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Sala Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N)	manders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	<u> </u>
DRAWING AND NADRATIVE DECC	DIDTION OF CTDEAM DEACH (This must be completed).
a important/andmarks and other SCrub-	RIPTION OF STREAM REACH (This must be completed):  st for site evaluation and a narrative description of the stream's location
vooded () shrub	St. for site evaluation and a mandative description of the stream stream
ROW	
	steep slope
	1444
FLOW 7	
FLOW Q	
hh11 / )\	
existing	Tline
/ Existing	I LING

Stream 97 **Modified Class 2** 



64		64
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-12 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38587 LONG84.15327 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Stream bank reinforcement	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] 10% SILT [3 pt] 5%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt] 20%	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ ARTIFICIAL [3 pts] ☐ ☐ ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	19
Total of Percentages of Asia Const. (A) Substrate Percentage (B)	A · B
Bldr Slabs, Boulder, Cobble, Bedrock	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 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]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 10.0	
(monos).	
2 DANK FULL WIDTH (Mesoured of the groups of 2.4 mesourements). (Check ONLY one box):	Ponkfull
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] > 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
> 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
> 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] > 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]   > 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 20
> 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 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 ↑  RIPARIAN WIDTH  L R (Per Bank)  Vide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Narrow <5m  None  Residential, Park, New Field  None  COMMENTS  S 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 - 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]    S 1.0 m (<=3' 4" 8") [15 pts]    S 1.0 m (<=3' 4" 8") [15 pts]    S 1.0 m (<=3' 4" 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S 1.0 m (<=3' 3" - 4' 8") [15 pts]    S	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  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  Narrow <5m  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Noist Channel, isolated pools, no flow (Intermittent)	Width Max=30 20
> 4.0 meters (> 13') [30 pts]	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  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m  Mature Forest, Wetland  Moderate 5-10m  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)  None water (Ephemeral)	Width Max=30 20
> 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 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' - 13') [25 pts]	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  PROPER SHAPE  RIPARIAN WIDTH  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  None  COMMENTS  Residential, Park, New Field  Percod Pasture  None  COMMENTS  Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral))  COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel)  None  1.0  Check ONLY one box):  None  1.0  3.0	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
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: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):_Y Date of last precipitation:12/05/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 50%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
prop
Additional comments/description of pollution impacts:
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
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other Scrubshrub ROW
FLOW
hh12 resident existing T Line
PHWH Form Page - 2
October 24, 2002 Revision  hh13  Save as pdf  Reset Form

Stream 98 **Modified Class 2** 



35	
33	

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-13 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38623 LONG84.15363 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS intermittent	
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 Former earthwork	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] 25%	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  BEDROCK [16 pt]  LEAF PACK/WOODY DEBRIS [3 pts]  5%  0%  FINE DETRITUS [3 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 15%	Max = 40
GRAVEL (2-64 mm) [9 pts]  SAND (<2 mm) [6 pts]  MUCK [0 pts]  ARTIFICIAL [3 pts]  0%	15
Total of Percentages of 20.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  9 Check TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	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
(	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Danlebill
> 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] > 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]	
> 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]	Width
> 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	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 2.50	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 2.50  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	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  CHECK  RIPARIAN WIDTH  FLOODPLAIN QUALITY  CHECK  CHECK  CHECK  CHECK  AVERAGE BANKFULL WIDTH  (Feet): 2.50   AVERAGE BANKFULL WIDTH  (Feet): 2.50   This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  CHECK  CHECK  CHECK  AVERAGE BANKFULL WIDTH  (Feet): 2.50   CHECK  CHECK  CHECK  CHECK  CHECK  AVERAGE BANKFULL WIDTH  (Feet): 2.50   CHECK  C	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Wide >10m  Wide >10m  Mature Forest, Wetland  Field  Field  FIGURE 13.0 m (<=3' 3") [5 pts]   Z 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 2.50   AVERAGE BANKFULL WIDTH (Feet): 2.50  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  I Mature Forest, Wetland  I Wide >10m  V V Immature Forest, Shrub or Old  Field  Conservation Tillage  Urban or Industrial  Field	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Wide >10m  Moderate 5-10m  Narrow <5m  Narrow <5m  AVERAGE BANKFULL WIDTH  (Feet): 2.50   AVERAGE BANKFULL WIDTH  (Feet): 2.50   AVERAGE BANKFULL WIDTH  (Feet): 2.50  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  I Mature Forest, Wetland  Open Pasture, Row Cr	Width Max=30  5
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Wide >10m  Wide >10m  Mature Forest, Wetland  Field  Field  FIGURE 13.0 m (<=3' 3") [5 pts]   AVERAGE BANKFULL WIDTH (Feet): 2.50   This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Field  Conservation Flood Urban or Industrial  Field	Width Max=30  5
> 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  Wide >10m  Moderate 5-10m  Residential, Park, New Field  None  COMMENTS  Flow REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
Solution	Width Max=30
Solution   20 of the complete   2.50	Width Max=30
Same   1.0 m (s 9' 7" - 13') [25 pts]   Same   1.5 m - 3.0 m (s 9' 7" - 4' 8") [20 pts]   Same   1.5 m - 3.0 m (s 9' 7" - 4' 8") [20 pts]   Same	Width Max=30
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 >10m  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  Narrow <5m  None  COMMENTS  Fenced Pasture  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  AVERAGE BANKFULL WIDTH  (Feet): 2.50  Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral))	Width Max=30  5
Sinuosity (Number of bends per 61 m (200 ft) of channel, isolated pools, no flow (Intermittent 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):   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):   None	Width Max=30  5

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  Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
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:
prop
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 samples of the sample
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other Scrubshrub ROW
FLOW -
hh12 steep slope existing T Line
PHWH Form Page - 2
October 24, 2002 Revision  hh13  Save as pdf  Reset Form

Stream 99

**Modified Class 1** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-14 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38645 LONG84.15459 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL  □ NONE / NATURAL CHANNEL  □ RECOVERED  □ RECOVERING  □ RECENT OR NO RECOMMODIFICATIONS: Channelized	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.  TYPE  PERCENT  TYPE  PERCENT	HHEI Metric
□ □ BLDR SLABS [16 pts]	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  O%  LEAF PACK/WOODY DEBRIS [3 pts]  O%  FINE DETRITUS [3 pts]  O%	Substrate
☐ ☐ COBBLE (65-256 mm) [12 pts] ☐ ☐ CLAY or HARDPAN [0 pt] ☐ <b>0</b> %	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%  SAND (<2 mm) [6 pts] 10% ARTIFICIAL [3 pts] 0%	11
Onto (Committee)	
Bldr Slabs, Boulder, Cobble, Bedrock Check	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 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]	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]	Max=30
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 1.50	5
(, 333).	
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	
Immeture Forcet Shrub or Old	
T' H' T MODERAIE 5-10M T' H' T	
Field Field Organ Organ Pasture Row Cross	)
Field  Narrow <5m  Residential, Park, New Field  Open Pasture, Row Crop	)
Field Field Organ Organ Pasture Row Cross	)
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS	)
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	)
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)  Subsurface flow with isolated pools (Interstitial)  Dry channel, no water (Ephemeral)	)
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)  Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)  COMMENTS rain vrsterdav  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None 1.0 2.0 3.0	)
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None Fenced Pasture Mining or Construction COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  COMMENTS rain vrsterdav  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None 1.0 2.0 3.0  O.5 3.0 >3	)
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)  Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)  COMMENTS rain vrsterdav  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None 1.0 2.0 3.0	

ADDITIONAL STREAM INFORMATION (This Information	on Must Also be Completed):
QHEI PERFORMED? - Yes ✓ No QHEI	Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUI	DING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precip	pitation: 12/05/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% ope	en): <b>90%</b>
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	n (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	Y If not, please explain:
prop	
Additional comments/description of pollution impacts:	
DIOTIC EVALUATION	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observation	ions. Voucher collections optional. NOTE: all voucher samples must be labeled with the si
	riate field data sheets from the Primary Headwater Habitat Assessment Manual)
	lamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N)	Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESC	CRIPTION OF STREAM REACH (This must be completed):
	of interest for site evaluation and a narrative description of the stream's location
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(pond )	\ \WWW.
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FLOW -	
va sidential	
residential	K
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hh14 ′ shr	rub existing T Line
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	PHWH Form Page - 2
October 24, 2002 Revision	1 HWH FUIII Faye - 2

**Reset Form** 

Save as pdf

Stream 100 **Modified Class 1** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-09 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38712 LONG84.15674 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE MODIFICATIONS: dumping	RY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	IHEI
TYPE PERCENT TYPE PERCENT M	etric
BLDR SLABS [16 pts]	oints
BEDROCK [16 pt]  0%  FINE DETRITUS [3 pts]	bstrate ax = 40
COBBLE (65-256 mm) [12 pts]	
SAND (<2 mm) [6 pts] 10% ARTIFICIAL [3 pts] 0%	10
Total of Percentages of 0.00% (A) Substrate Percentage Check 100% (B)	. + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  6  TOTAL NUMBER OF SUBSTRATE TYPES: 4	
, , , , , , , , , , , , , , , , , , , ,	ol Depth ax = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]	0
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.00	
(	ankfull
	Vidth ax=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00   1	5
-11-11-11-11-11-11-11-11-11-11-11-11-11	5
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	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	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	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 ☆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	5
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old  Field  Onen Pasture Row Crop	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  Moderate 5-10m Field Open Pasture, Row Crop  None Penced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	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: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIPARIAN WIDTH    L R	5
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\frac{1}{2}NOTE\$: River Left (L) and Right (R) as looking downstream \$\frac{1}{2}RIPARIAN WIDTH   FLOODPLAIN QUALITY    L R (Per Bank)	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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Immature Forest, Shrub or Old  Immature Forest, Shrub or Old  Viban or Industrial  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  Tain vrsterday	5

ADDITIONAL STREAM INFORMATION (This Information Must Also be	e Completed):
QHEI PERFORMED? - Yes ✓ No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
EWH Name:	Distance from Evaluated Stream  Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENT	IRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
_	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Townshi	p / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	12/05/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 50%	
Were samples collected for water chemistry? (Y/N): N (Note lab s	ample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Y	
, , , , , , , , , , , , , , , , , , , ,	ease explain:
prop	
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data s Fish Observed? (Y/N) N Salamanders Observed?	collections optional. NOTE: all voucher samples must be labeled with the sheets from the Primary Headwater Habitat Assessment Manual) served? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION O	F STREAM REACH (This <u>must</u> be completed):
,	ite evaluation and a narrative description of the stream's location
residential	
FLOW →	7
exi	sting T Line residential
\	rm Page - 2
October 24, 2002 Revision	Ire Sove so not

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Stream 101 **Modified Class 2** 



34

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-10 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.38968 LONG84.16692 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr 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 REC MODIFICATIONS: earthwork	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  PERCENT  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]	
SAND (<2 mm) [6 pts] 25% ARTIFICIAL [3 pts] 0%	14
Total of Percentages of 10.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9  Check 10076  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]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.00	
(	Bankfull
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Dalikiuli
> 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] > 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
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
> 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
Solution (Signature Forest, Shrub or Old    Solution   Signature Forest, Shrub or Old   Solution   Signature Forest, Shrub or Old   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)  Wide >10m (<=3' 3") [5 pts]  ✓ ≤ 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)  Mature Forest, Wetland  Conservation Tillage	Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Wide >10m  Mature Forest, Wetland  Wide >10m  Moderate 5-10m  Narrow <5m  None  S 1.0 m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]  ✓ ✓ AVERAGE BANKFULL WIDTH  (Feet): 3.00   AVERAGE BANKFULL WIDTH  (Feet): 3.00  ✓ MOTE: River Left (L) and Right (R) as looking downstream to the completed of the complete of th	Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Wide >10m  Moderate 5-10m  Narrow <5m  Narrow <5m  AVERAGE BANKFULL WIDTH  (Feet): 3.00   AVERAGE BANKFULL WIDTH  (Feet): 3.00  AVERAGE BANKFULL WIDTH  (Feet): 3.00  L R (Most Predominant per Bank)  Mature Forest, Wetland  Urban or Industrial  Open Pasture, Row Cro	Max=30
> 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]	<b>5</b>
> 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]	<b>5</b>
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	<b>5</b>
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 >10m  Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  Narrow <5m  None  Residential, Park, New Field  None  COMMENTS  FLOODE Pasture  None  Fenced Pasture  FLOODE Pasture  Mining or Construction  COMMENTS  Moist Channel, isolated pools, no flow (Intermittent)  Dry channel, no water (Ephemeral)  COMMENTS  AVERAGE BANKFULL WIDTH  (Feet):  3.00  AVERAGE BANKFULL WIDTH  (Feet):  3.00	<b>5</b>

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 Distance from Evaluat
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
Wayyay
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 50%
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:
The state of the s
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the single properties of the primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):  Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
scrub shrub ROW hh10
wooded existing T Line woods
shrub ROW
October 24, 2002 Revision  PHWH Form Page - 2  Save as pdf  Reset Form

Stream 102 **Modified Class 1** 



17
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120817-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39103 LONG84.17093 RIVER CODE RIVER MILE	
DATE 12/08/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ons
STREAM CHANNEL  □ NONE / NATURAL CHANNEL  □ RECOVERED  □ RECOVERING  □ RECENT OR NO RECOVE MODIFICATIONS:  culvert	RY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HEI
TYPE PERCENT TYPE PERCENT N	letric
BLDR SLABS [16 pts]	oints
BEDROCK [16 pt]  0%  FINE DETRITUS [3 pts]	ibstrate ax = 40
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0% 0% 0%	
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 30%	12
Total of Percentages of 5.00% (A) Substrate Percentage Check 100%	\ + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  6  TOTAL NUMBER OF SUBSTRATE TYPES:  6	
, , , , , , , , , , , , , , , , , , , ,	ol Depth ax = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	0
COMMENTS MAXIMUM POOL DEPTH (Inches): 0.00	
(**************************************	ankfull
- · · · · · · · · · · · · · · · · · · ·	Width lax=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
	<b>3</b>
(i sosy.	
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	3
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	<u> </u>
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	3
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 River Left (L	3
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) and River Left (L) and Riv	3
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 >10m  Mature Forest, Wetland  Immature Forest, Wetland  Woderate 5-10m  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  Mature Forest, Wetland  Immature Forest, Wetland  Urban or Industrial  Field	3
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 LEFT LEFT LEFT LEFT LEFT LEFT LEFT	3
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: RIPARIAN WIDTH  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Field  Open Pasture, Row Crop  None  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)  Typy channel, isolated pools, no flow (Intermittent)  Dry channel, no water (Ephemeral)	3
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  Moderate 5-10m  Narrow <5m  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  This information must also be completed  **NOTE: River Left (L) and Right (R) as looking downstream ♣  Nariot 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 ♣  Conservation Tillage  Urban or Industrial  Open Pasture, Row Crop  Mining or Construction  Moist Channel, isolated pools, no flow (Intermittent)  Dry channel, no water (Ephemeral)	3
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: RIPARIAN WIDTH  RIPARIAN WIDTH  L R (Per Bank)  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  L R (Onservation Tillage  Immature Forest, Shrub or Old  Field  Open Pasture, Row Crop  None  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)  Typy channel, no water (Ephemeral)	3

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: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
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:
prop
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):  row crop  rtant landmarks and other features of interest for site evaluation and a narrative description of the stream's location existing T Line  old fieldROW
mowed grass ROW hh02
PHWH Form Page - 2 residential
October 24, 2002 Revision  Save as pdf  Reset Form

Save as pdf

Stream 103 **Modified Class 2** 



45

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120817-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39121 LONG84.17325 RIVER CODE RIVER MILE	
DATE 12/08/17 SCORER jbl, pjr 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 Channelized	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  PERCENT  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]	
SAND (<2 mm) [6 pts] 25% ARTIFICIAL [3 pts] 5%	15
Total of Percentages of 5.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9    Check   10076	
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]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 6.00	
	David Gall
<ol> <li>BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):</li> </ol>	
> 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]	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
> 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  AVERAGE BANKFULL WIDTH  (Feet): 3.00  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  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  > 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  ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑	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]   > 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]   > 1.5 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  ANOTE: River Left (L) and Right (R) as looking downstream ↑  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m Mature Forest, Wetland  Wide >10m Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  None  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 ↑  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Moderate 5-10m 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 ↑  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Moderate 5-10m  Field  V Narrow <5m  Residential, Park, New Field  Open Pasture, Row Cre  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 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  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]    5.10 m (<=3' 3") [5 pts]    6.10 m (<=3' 3") [5 pts]    7.10 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Com	pleted):
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 WA	TERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:NRCS S	Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City	<u>.                                     </u>
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:12/05/	17 Quantity:
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:
	H (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please ex	xplain:
prop	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collection	ns optional. NOTE: all voucher samples must be labeled with the site om the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Salamanders Observed?	
Comments Regarding Biology:	, N
TOW OTOP	
DRAWING AND NA TOW CROP CRIPTION OF STI	REAM REACH (This <u>must</u> be completed):
Include important landmarks a example of interest for site evaluation of interest for site evaluation.	luation and a narrative description of the stream's location TLINE
hh01	· \ /
	mowed . / \/
	grass ROW
FLOW	
461	\
residential hb02	16 9
residential / hh02 old	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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PHWH Form Pag	ge - 2
October 24, 2002 Revision	Save as pdf Reset Form

Stream 104 **Modified Class 1** 



21
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SITE NAME/LOCATION AEP Hillsboro-Hutchings		
hh-jbl-120817-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)		
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39152 LONG84.17457 RIVER CODE RIVER MILE		
DATE 12/08/17 SCORER jbl, pjr 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 RECOVERY MODIFICATIONS: impoundment		
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] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40	
COBBLE (65-256 mm) [12 pts]		
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 0%	11	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (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 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): 1.00		
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull	
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]  > 1.0 m - 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] > 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): 1.50	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  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  FLOODPLAIN QUALITY	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]   ≤ 1.0 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  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  Moderate 5-10m  Normation must also be completed  RIPARIAN WIDTH  L R (Most Predominant per Bank)  L R (Conservation Tillage Immature Forest, Shrub or Old  Liphan 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]   > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	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]   > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30  5	
34.0 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] > 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):	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  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Mide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  FROM Residential, Park, New Field  Open Pasture, Row Completed  RIPARIAN WIDTH  Fenced Pasture  Mining or Construction  COMMENTS  Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral)  COMMENTS  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 A RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Mature Forest, Wetland  None  Fenced Pasture  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  None water (Ephemeral)  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	

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: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 30%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
prop
Additional comments/description of pollution impacts:
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):
wooded  FLOW  Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location hh02  residential mowed
old fieldROW existing T Line
PHWH Form Page - 2 October 24, 2002 Revision
Save as pdf Reset Form

Stream 105 **Modified Class 1** 



<b>4</b> 1
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120817-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi	2)
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39214 LONG84.17663 RIVER CODE RIVER MIL	E
DATE 12/08/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for It	nstructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO MODIFICATIONS: driven through	RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxe (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	s I HHEI
TYPE  PERCENT  TYPE  PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt]  0%  FINE DETRITUS [3 pts]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts]  SAND (<2 mm) [6 pts]  MUCK [0 pts]  ARTIFICIAL [3 pts]  0%  0%	11
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Global Score of TWO MOST PREDOMINATE SUBSTRATE TYPES: 6  TOTAL NUMBER OF SUBSTRATE TYPES: 5	
	<u> </u>
<ul> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> </ul>	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	_    5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.0	
	)
	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):	Bankfull
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
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]	Bankfull 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):  1.0  This information must also be completed	Bankfull 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):  1.0  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY	Bankfull 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):  1.0  This information pust also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  L R (Most Predominant per Bank)  L R	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]  > 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):  This information pust also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Urban or Industrial	Bankfull 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  L R (Per Bank)  L R (Most Predominant per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Conservation Tillage of the field o	Bankfull 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 and the strength of the strength	Bankfull Width Max=30 5 Crop
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  L R (Per Bank)  L R (Most Predominant per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Conservation Tillage of the field o	Bankfull Width Max=30 5 Crop
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):  1.0  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstreams  RIPARIAN WIDTH FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Residential, Park, New Field  Open Pasture, Row  None  Mining or Construct  Mining or Construct	Bankfull Width Max=30 5 Crop
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 of the strength	Bankfull Width Max=30 5 Crop
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):  1.0  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream and the standard process of	Bankfull Width Max=30 5 Crop
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 and the standard process. We then the standard process. We then the standard process. We then the standard process. Shrub or Old hardward process.	Bankfull Width Max=30 5 Crop
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 downstreams  RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m   Mature Forest, Wetland   Conservation Tillag Wide >10m   Mature Forest, Shrub or Old   Urban or Industrial Field  None   Residential, Park, New Field   Open Pasture, Row None   Fenced Pasture   Mining or Construct COMMENTS  SITE OF MEGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing   Subsurface flow with isolated pools (Interstitial)   Dry channel, no water (Ephemeral)  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None   1.0   2.0   3.0	Bankfull Width Max=30 5 Crop
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' - 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  L R (Per Bank) L R (Most Predominant per Bank) L R  Wide >10 m Mature Forest, Wetland Conservation Tillage  Moderate 5-10 m Pield Urban or Industrial Field  None Residential, Park, New Field Open Pasture, Row  None Fenced Pasture Mining or Construct  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Bankfull Width Max=30 5 Crop
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 downstreams  RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m   Mature Forest, Wetland   Conservation Tillag Wide >10m   Mature Forest, Shrub or Old   Urban or Industrial Field  Narrow <5m   Residential, Park, New Field   Open Pasture, Row None   Fenced Pasture   Mining or Construct 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	Bankfull Width Max=30  5  Crop tion tent)

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: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):_ Y Date of last precipitation:_ 12/05/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 50%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
prop
Additional comments/description of pollution impacts:
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 intelest for site evaluation and a narrative description of the stream's location  hh04  mowed
wooded atv trail
FLOW
old fieldROW existing T Line
October 24, 2002 Revision  PHWH Form Page - 2  Save as pdf  Reset Form

Stream 106 **Modified Class 2** 



61
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SITE NAME/LOCATION AEP Hillsboro-Hutchings			
hh-jbl-120817-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)			
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE			
DATE 12/08/17 SCORER jbl, pjr COMMENTS perennial			
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 RECOVERY MODIFICATIONS: driven through atv trail			
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes  (May of 20) Add total purples of significant substrate type found (May of 2). Find type of 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  PERCENT	Metric		
BLDR SLABS [16 pts]	Points		
BEDROCK [16 pt]  BEDROCK [16 pt]  D'A  D'A  D'A  D'A  D'A  D'A  D'A  D'	Substrate		
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt] 5%  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%	21		
Total of Percentages of 25.00% (A) Substrate Percentage 100% (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):	Max = 30		
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm - 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	<u>-</u>		
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25		
COMMENTS MAXIMUM POOL DEPTH (Inches): 8.00			
COMMENTS MAXIMUM POOL DEPTH (Inches): 8.00			
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] > 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 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]	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]	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): 4.00	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):  4.00	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):  4.00  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	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):  ### AVERAGE BANKFULL WIDTH (Feet):	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):  ### AVERAGE BANKFULL WIDTH (Feet):	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  L R (Per Bank)	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):  ### AVERAGE BANKFULL WIDTH (Feet):	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): 4.00  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 Conservation Tillage   Mining or Construction	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 \(\frac{1}{2}\) (Most Predominant per Bank)  Wide >10 m  Moderate 5-10m  Moderate 5-10m  Residential, Park, New Field  None  COMMENTS  Floow REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Moist Channel, isolated pools, no flow (Intermitten)	Width Max=30		
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):  > 4.0 meters (s 13') [30 pts] > 3.0 m - 4.0 m (s 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (s 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) 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 Completed  Residential, Park, New Field Open Pasture, Row Completed  Residential, Park, New Field Mining or Construction COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	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 *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{NOTE: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY *\frac{1}{2} \text{RIPARIAN WIDTH} (Feet): 4.00	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 Anture Forest, Wetland  Wide >10 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 And RIPARIAN WIDTH  L R (Per Bank) Wide >10m Moderate 5-10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field  Open Pasture, Row Completed  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) None 0.5  1.0  (Check ONLY one box): 3.0  3.0  3.0  3.0  3.0  3.0  3.0  3.0	Width Max=30		
3. BANK FULL WIDTH (Measured as the 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  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 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  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  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  3.0	Width Max=30  15		

ADDITIONAL STREAM INFORMATION (This Information Must A	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: Warren Tow	nship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	<b>12/05/17</b> Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 7	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:
prop	
Additional comments/description of pollution impacts:	
ID number. Include appropriate field d  Fish Observed? (Y/N) N  Voucher? (Y/N) N  Salamanders	ther collections optional. NOTE: all voucher samples must be labeled with the site lata sheets from the Primary Headwater Habitat Assessment Manual)  S Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)
DRAWING AND NAPPATIVE DESCRIPTIO	N OF STREAM REACH (This must be completed):
	old field ROW  existing T Line
	Form Page - 2
October 24, 2002 Revision	Save as pdf Reset Form

Save as pdf

Stream 107 **Modified Class 2** 



37
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LENGTH OF STREAM REACH (ft) 200 LAT. 39.39300 LONG84.17952 RIVER CODE RIVER MILE	
DATE 12/08/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Former earthwork	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  PERCENT  TYPE	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
☐       COBBLE (65-256 mm) [12 pts]       ☐       CLAY or HARDPAN [0 pt]       0%         ☐       GRAVEL (2-64 mm) [9 pts]       ☐       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts] 20% ARTIFICIAL [3 pts] 0%	17
Total of Percentages of 10.00% (A) Substrate Percentage 100% (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
	13
(	=
<ol> <li>BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):</li> </ol>	
> 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]	
> 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] > 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
> 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	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): 2.50  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  PLOODPLAIN 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  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 2.50  This information must also be completed  ANOTE: River Left (L) and Right (R) as looking downstream ☆	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]     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	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 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	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)	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  ↓ R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Residential, Park, New Field  None  COMMENTS  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
> 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  Moderate 5-10m  Residential, Park, New Field  Open Pasture, Row Crown Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  None Comments  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Open Pasture, Row Crown Moist Channel, isolated pools, no flow (Intermittent)  Dry channel, no water (Ephemeral)	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Com	pleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dista	nce from Evaluated Stream
	nce from Evaluated Stream
EWH Name: Distar	nce 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: _ 12/05/17 _ Qu	antity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 70%	
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. and attack	ch results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
prop	
Additional comments/description of pollution impacts:	
Performed? (Y/N):  N  (If Yes, Record all observations. Voucher collections optional. NOTE ID number. Include appropriate field data sheets from the Primary He Voucher? (Y/N)  Fish Observed? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed:  Comments Regarding Biology:	adwater Habitat Assessment Manual) ucher? (Y/N)
DRAWING AND NADDATIVE DECORPORTION OF STREAM REACH	(This most become letter)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH	
Include important landmarks and other features of intelest for site evaluation and a name	rative description of the stream's location
old field existing T Line	wooded
	""
wooded	
FLOW	
old field	
ROW	
hh06 steep slope	<b>-</b>
steep slope	
PHWH Form Page - 2	
October 24, 2002 Revision Save	as pdf Reset Form

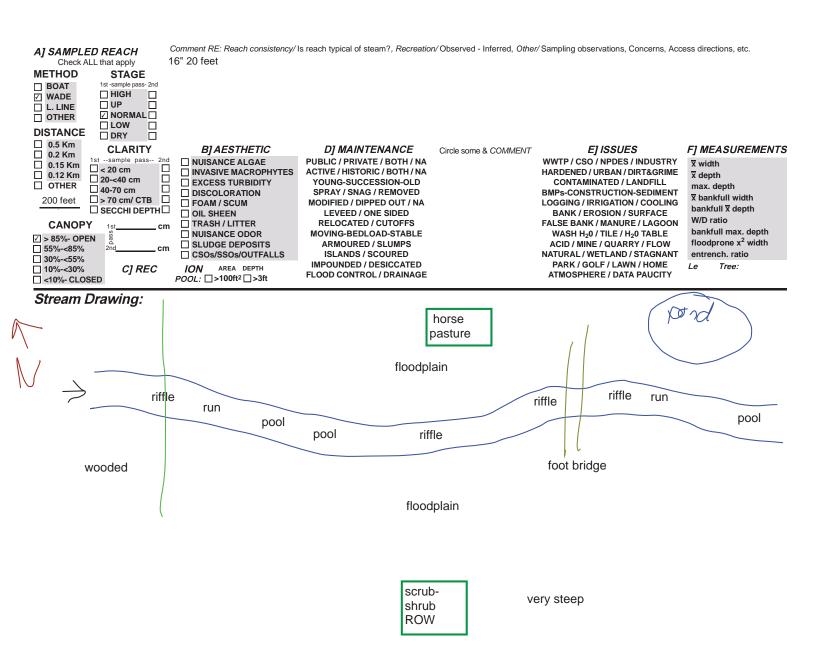
Stream 108 Fair Warmwater



## **Qualitative Habitat Evaluation Index and Use Assessment Field Sheet**

QHEI Score:	52
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Stream & Location: QH-jbl-120817-01	_RM:	Date: '	12/07/2017
Scorers Full Name & Affiliation:	jbl, pjr A	ECOM	
River Code: STORET #: Lat./ Long.: 39.395199	5, -84.188	39741 <u> </u>	Office verified ☐
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present  BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN  BLDR /SLABS [10]	ONE ( <i>Or 2</i> & SILT	average) QUAL HEAVY [ MODERA	-2] ATE [-1] Substrate
GRAVEL [7]  SAND [6]  BEDROCK [5]  SIT [2]  Comments  SIT [2]  ARTIFICIAL [0]  SANDSTONE [0]  SANDSTONE [0]  SANDSTONE [0]  SANDSTONE [0]  SANDSTONE [0]  LACUSTURINE [0]  SHALE [-1]  COAL FINES [-2]	EDDEON!	☐ FREE [1] ☐ EXTENS ☐ MODERA S ☐ NORMAI	1 4 7
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, functiona  1  UNDERCUT BANKS [1]	r, large I pools. [ ERS [1] [ TES [1] [	EXTENSIVE MODERATE SPARSE 5	Or 2 & average) 5 > 75% [11] 5 25-75% [7] 6 25% [3] 6 SENT < 5% [1] Cover
Comments			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 [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1]  NONE [1] POOR [1] RECENT OR NO RECOVERY [1]			Channel 10
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Continued in the continued in the category for EACH BANK (Continued in the category	TY	CONSERVATION	STRUCTION [0] and use(s)
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]  POOL WIDTH > RIFFLE WIDTH [1]  0.2-<0.4m [1]  0.2-<0.4m [1]  1 condicate for reach - pools and response to the control of the contro	TIAL [-1] TENT [-2]	Primary Secondar	Pool/Current Maximum 12
Indicate for functional riffles; Best areas must be large enough to support	a popula	tion	RIFFLE [metric=0]
of riffle-obligate species: Check ONE (Or 2 & average).  RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIF	FLE / RUI	<u>⊔NO</u> N EMBEDD	
<ul> <li>□ BEST AREAS &gt; 10cm [2]</li> <li>□ BEST AREAS 5-10cm [1]</li> <li>□ MAXIMUM &gt; 50cm [2]</li> <li>□ STABLE (e.g., Cobble, Boulder) [2]</li> <li>□ MOD. STABLE (e.g., Large Gravel) [1]</li> <li>□ UNSTABLE (e.g., Fine Gravel, Sand) [0]</li> </ul>	□ No □ Lo □ M	ONE [2] OW [1] ODERATE [0]	Riffle /
[metric=0] Comments	□ E	XTENSIVE [-1]	Maximum 4
6] GRADIENT ( ft/mi)	%GLIDE	=	Gradient 6 Maximum 10



Stream 109 **Modified Class 2** 



41
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EINSTHAM   REACH (m)   200   LAT   39.39536   LAT   39.	SITE NAME/LOCATION AEP Hillsboro-Hutchings	
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: (Lulvort  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 pis]   976.   BLDR SLABS [16 pis]   978.   BLDR SLABS [16 pis]   979.   CLAY or HARDPAN [10 pis]   979.   SAND (*2 mm) [6 p		AREA (mi²)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions  STREAM CHANNEL		RIVER MILE
STREAM CHANNEL ONDE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: Guilvert  1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significent substrate bytes found (Max of 8). Final metric score is sum of boxes A & 8.    PERCENT OF DESCRIPTION   P	DATE 12/08/17 SCORER jbl, pjr COMMENTS intermittent	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONL 7 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. MELE (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. MELE (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. MELE (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. MELE (Max of 14). The score is sum of boxes A & B. M	NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Stream	ns" for Instructions
Max of 32), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.   PERCENT TYPE   BLDR SLABS [16 pts]   0%   0%   0%   0%   0%   0%   0%   0	STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT MODIFICATIONS: culvert	T OR NO RECOVERY
BLDR SLABS [16 pts]		
SOULDER		CENT Metric
BEDROCK   16 pt]		370
COBBLE (65-256 mm)   12 pts   20%		% Substrate
SAND   <2 mm   (6 pts)   15%	COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt]	)%
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock  SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15  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):    > 3.0 centimeters [20 pts]	SIGNALE (2 04 min) [5 pts]	<b>==</b>
Bidr Slabs, Boulder, Cobble, Bedrock  SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  15 TOTAL NUMBER OF SUBSTRATE TYPES:  2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water sipes) (Check ONLY one box):    > 3.0 centimeters [20 pts]	Table (2 min) [6 pto]	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):    > 30 centimeters [20 pts]	Bldr Slabs, Boulder, Cobble, Bedrock Check Check	(B) A + B
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):  3 ocentimeters [20 pts]	SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPE	ES: 6
30 centimeters [20 pts]   > 5 cm - 10 cm [15 pts]   > 5 cm [25 pts]   > 10 - 22.5 cm [25 pts]   NO WATER OR MOIST CHANNEL [0 pts]   NO W		
NO WATER OR MOIST CHANNEL [0 pts]		Wax = 30
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):  3. Om - 4.0 m (s 9' 7' - 13') [25 pts]	> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):  > 4.0 meters (> 13') [30 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]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY *XNOTE: River Left (L) and Right (R) as looking downstream *X RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m Mature Forest, Wetland    Moderate 5-10 m Mature Forest, Wetland   Conservation Tillage Immature Forest, Shrub or Old   Urban or Industrial Field    Narrow <5 m Residential, Park, New Field   Open Pasture, Row Crop    None   Fenced Pasture   Mining or Construction  COMMENTS   Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)    SUNDSITY (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):    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):    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):	> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	15
Stream Gradient Estimate   Stream Gradient Estimate   Stream Gradient   Stream Gra	> 22.5 - 30 cm [30 pts]	
Stream Gradient Estimate    Stream Gradient	> 22.5 - 30 cm [30 pts]	nes): 3.00
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY	> 22.5 - 30 cm [30 pts]	aes): 3.00 Bankfull
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	> 22.5 - 30 cm [30 pts]	Bankfull Width
RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH FLOODPLAIN QUALITY  Most Predominant per Bank)  L R Conservation Tillage  Immature Forest, Shrub or Old Immature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Wetland Immature Forest, Shrub or Old Imma	> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]  COMMENTS  MAXIMUM POOL DEPTH (Inche  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]  > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30
RIPARIAN WIDTH  (Per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Writh or Old  Writh Immature Forest, Shrub	> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]  COMMENTS  MAXIMUM POOL DEPTH (Inche  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]  > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30
Wide >10m	> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]  COMMENTS  MAXIMUM POOL DEPTH (Inche  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 (Fe	Bankfull Width Max=30
Moderate 5-10m    Immature Forest, Shrub or Old	> 22.5 - 30 cm [30 pts]	Bankfull Width Max=30
Field    Open Pasture, Row Crop	> 22.5 - 30 cm [30 pts]	Bankfull Width Max=30  eet): 3.00  5
None	> 22.5 - 30 cm [30 pts]	Bankfull Width Max=30  winstream & ation Tillage
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 0.5  STREAM GRADIENT ESTIMATE	> 22.5 - 30 cm [30 pts]	Bankfull Width Max=30  eet): 3.00 5
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 0.5  STREAM GRADIENT ESTIMATE  Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  CCheck ONLY one box): 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	> 22.5 - 30 cm [30 pts]	Bankfull Width Max=30  eet): 3.00 5  vnstream & ation Tillage Industrial sture, Row Crop
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 0.5  STREAM GRADIENT ESTIMATE  Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  CCheck ONLY one box): 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3		Bankfull Width Max=30  eet): 3.00 5  vnstream & ation Tillage Industrial sture, Row Crop
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 STREAM GRADIENT ESTIMATE	> 22.5 - 30 cm [30 pts]	Bankfull Width Max=30  eet): 3.00 5  vnstream & ation Tillage Industrial sture, Row Crop
None	Second	Bankfull Width Max=30  eet): 3.00  5  what ion Tillage Industrial sture, Row Crop
None	Second	Bankfull Width Max=30  eet): 3.00  5  what ion Tillage Industrial sture, Row Crop
	> 22.5 - 30 cm [30 pts]   > 10 - 22.5 cm [25 pts]   NO WATER OR MOIST CHANNEL [0 pts]	Bankfull Width Max=30  eet): 3.00  5  what ion Tillage Industrial sture, Row Crop
☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)	> 22.5 - 30 cm [30 pts]   > 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]	Bankfull Width Max=30  eet): 3.00  5  what ion Tillage Industrial sture, Row Crop
	> 22.5 - 30 cm [30 pts]   > 10 - 22.5 cm [25 pts]   NO WATER OR MOIST CHANNEL [0 pts]	Bankfull Width Max=30  eet): 3.00  5  vnstream

ADDITIONAL STREAM INFOR	MATION (This Information Must A	Also be Completed):		
QHEI PERFORMED	? - Yes No QHEI Score	(If Yes, Atta	ach Completed QHEI Form)	
DOWNSTREAM DE	SIGNATED USE(S)			
WWH Name:	` '		Distance from Evaluated S	Stream
CWH Name:			Distance from Evaluated S	tream
EWH Name: _			Distance from Evaluated S	tream
MAPPING: ATTACH	COPIES OF MAPS, INCLUDING THE	E ENTIRE WATERSHED	OAREA. CLEARLY MARK TH	E SITE LOCATION
USGS Quadrangle Name:		NRCS Soil Map P	Page: NRCS Soil Ma	p Stream Order
County: Warren	To	wnship / City:		
MISCELLANEOUS				
Base Flow Conditions? (Y/N):_	Y Date of last precipitation:_	12/05/17	Quantity:	_
Photograph Information:				
Elevated Turbidity? (Y/N):	Canopy (% open):	50%		
Were samples collected for wa	ter chemistry? (Y/N): N (Note	e lab sample no. or id. a	and attach results) Lab Numb	er:
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmhos	/cm)
Is the sampling reach represen	tative of the stream (Y/N)	not, please explain:		
prop				
Additional comments/description	n of pollution impacts:			
BIOTIC EVALUATIO	<u>ON</u>			
Performed? (Y/N):N	(If Yes, Record all observations. Vou ID number. Include appropriate field	•	·	
Fish Observed? (Y/N) N Frogs or Tadpoles Observed?	Voucher? (Y/N) N Salamander	s Observed? (Y/N)	Voucher? (Y/N) N	oucher? (Y/N)
Comments Regarding Biology:	N Vodonor: (1717) N		N N	
DPAWING AN	D NARRATIVE DESCRIPTION	ON OF STREAM R	PEACH (This must be	completed):
	narks and other teatures of interes			$\sim$ $\sim$ $\sim$ $\sim$
morude important iqudi	arks and other reactives of interes	· Site evaluation an	ROW	the stream s togatou
	(	existing T L		
wooded				
	(1)			
FLOW	A 1X			
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hh07	mowed			woodod
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	PHW	/H Form Page - 2		
October 24, 2002 Revision		•	Save as pdf	Reset Form

Stream 110 **Modified Class 2** 



42
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39606 LONG84.19263 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL  □ NONE / NATURAL CHANNEL  □ RECOVERED  □ RECOVERING  □ RECENT OR NO RECOVERED  □ RECOVERING  □ RECENT OR NO RECOVERED  □ RECOVERING  □ RECENT OR NO RECOVERED  □ RECOVERING  □ RECOVERING  □ RECENT OR NO RECOVERED  □ RECOVERING  □ RECOVERI	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]	Substrate Max = 40
☐       COBBLE (65-256 mm) [12 pts]       ☐       CLAY or HARDPAN [0 pt]       0%         ☐       GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 30%	12
Total of Percentages of 10.00% (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]	
> 22.5 - 30 cm [30 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 4.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]  ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.50	15
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.50	15
This information must also be completed	15
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆  RIPARIAN WIDTH FLOODPLAIN QUALITY	15
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\frac{1}{2}NOTE: River Left (L) and Right (R) as looking downstream \$\frac{1}{2}\$	15
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ♣NOTE: River Left (L) and Right (R) as looking downstream ♣  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  L R (Most Predominant per Bank)  Wide >10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Urban or Industrial	15
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIPARIAN WIDTH  L R (Per Bank) L R (Most Predominant per Bank) L R  Wide >10m Mature Forest, Wetland Conservation Tillage	
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 Cro  None Fenced Pasture Mining or Construction	
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  Open Pasture, Row Cro	
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 Cro  None Fenced Pasture Mining or Construction	pp
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  Moderate 5-10m Field Open Pasture, Row Cro  None Penced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	pp
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  Moderate 5-10m Field Open Pasture, Row Cro  Narrow <5m ✓ Residential, Park, New Field Open Pasture, Row Cro  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):	pp
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY	pp
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  Moderate 5-10m Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 2 1.0 2.0 3.0	pp

OMETER OF THE PROPERTY OF THE SCORE (IT YES, Astach Completed QHET Form)  DOWNSTREAM DESIGNATED USE(S)  WIND Name:  Distance from Evaluated Stream  Distance f	ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
WAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
Distance from Evaluated Stream	DOWNSTREAM DESIGNATED USE(S)
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	WWH Name: Distance from Evaluated Stream
MAPPINO: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION  USGS Quadrangle Name.  NRCS Soil Map Pages.  NRCS Soil Map Stream Order  Township / City.  MISCELLANEOUS  Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:  Photograph Information:  Elevated Turbidity? (Y/N): N Canopy (% open): 40%  Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:  Field Measures: Temp (*C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)  Is the sampling reach representative of the stream (Y/N) If not, please explain:  prop  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number: Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N): N (Voucher? (Y/N)) N Salamanders Observed? (Y/N)) N (Voucher? (Y/N))	
USGS Quadrangle Name:    NRCS Soil Map Page:   NRCS Soil Map Stream Order	EWH Name: Distance from Evaluated Stream
County: Warren    Miscellaneous   Miscellaneous	MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
MISCELLANEOUS  Base Flow Conditions? (Y/N): V Date of last precipitation: 12/05/17 Quantity:  Photograph Information:  Elevated Turbidity? (Y/N): N Canopy (% open): 40%  Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:  Field Measures: Temp (*C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)  Is the sampling reach representative of the stream (Y/N) If not, please explain:  prop  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site in D 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 Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of integest for site evaluation and a narrative description of the stream's location existing T Line  Wooded  FLOW  Wooded	USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:  Photograph Information:  Elevated Turbidity? (Y/N): N Canopy (% open): 40%  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)  Is the sampling reach representative of the stream (Y/N) H If not, please explain:  prop  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habital Assessment Manual)  Fish Observed? (Y/N): N voucher? (Y/N) Salamanders Observed? (Y/N): N voucher? (Y/N) N Voucher	County: Warren Township / City:
Photograph Information:  Elevated Turbidity? (Y/N): N Canopy (% open): 40%  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 (mgn) pH (S.U.) Conductivity (µmhos/cm)  Is the sampling reach representative of the stream (Y/N) If not, please explain:  prop  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes. Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number: Include appropriate field data sheets from the Primary Headwater Habital Assessment Manual)  Fish Observed? (Y/N) N voucher? (Y/N) N salamanders Observed? (Y/N) N voucher? (Y/N) N Vouc	MISCELLANEOUS
Elevated Turbidity? (Y/N): N Canopy (% open): 40%  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) f If not, please explain:  prop  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE 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 existing T Line  Wooded  FLOW  Wooded	Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:  Field Measures: Temp (*C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)  Is the sampling reach representative of the stream (Y/N) If not, please explain:  prop  Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Comments Regarding Biology:  DRAWING AND NARRATIVE 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 existing T Line mowed  grass  ROW wooded	Photograph Information:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) If not, please explain:    prop	Elevated Turbidity? (Y/N): N Canopy (% open): 40%
Is the sampling reach representative of the stream (Y/N)      Prop	Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. and attach results) Lab Number:
Additional comments/description of pollution impacts:  BIOTIC EVALUATION  Performed? (Y/N): N	Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
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?	Is the sampling reach representative of the stream (Y/N) If not, please explain:
BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site 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	prop
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)  Voucher? (Y/N)  N  Voucher? (Y/N)  N  Aquatic Macroinvertebrates Observed? (Y/N)  N  Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location existing T Line  mowed grass  ROW  Wooded  Wooded	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)  Voucher? (Y/N)  N  Voucher? (Y/N)  N  Aquatic Macroinvertebrates Observed? (Y/N)  N  Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):  Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location existing T Line  mowed grass  ROW  Wooded  Wooded	
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location wooded    Wooded	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)
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location wooded    Wooded	
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location wooded    Wooded	
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location wooded    Wooded	DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
wooded existing T Line mowed grass ROW wooded	
	wooded existing T Line mowed grass ROW
October 24, 2002 Revision  Save as pdf  Reset Form	October 24, 2002 Revision

Reset Form

Save as pdf

Stream 111 **Modified Class 2** 



39
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39655 LONG84.19464 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Former earthwork	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] 5% SILT [3 pt] 15% BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 20%	Points
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
✓       COBBLE (65-256 mm) [12 pts]         GRAVEL (2-64 mm) [9 pts]       5%         MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 0%	19
Total of Percentages of 30.00% (A) Substrate Percentage 100% (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]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
(	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 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]	
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 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]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 3.00  This information must also be completed	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  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  FLOODPLAIN QUALITY	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  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  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  L R	Width 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)  Wide >10m  Moderate 5-10m  Moderate 5-10m  V ≤ 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH (Feet): 3.00  AVERAGE BANKFULL WIDTH (Feet): 3.00  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  Moderate 5-10m  Moderate 5-10m  Urban or Industrial	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  V ≤ 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH  (Feet): 3.00  AVERAGE BANKFULL WIDTH  (Feet): 3.00  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)    Mature Forest, Wetland   Conservation Tillage   Immature Forest, Shrub or Old	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  None  S 1.0 m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]  ✓ ≤ 1.0 m (<=3' 3") [5 pts]   AVERAGE BANKFULL WIDTH  (Feet): 3.00  AVERAGE BANKFULL WIDTH  (Feet): 3.00  AVERAGE BANKFULL WIDTH  (Feet): 3.00  AVERAGE BANK	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m (Yere St.)  L R (Most Predominant per Bank)  Wide >10m Mature Forest, Wetland  Moderate 5-10m  Narrow <5m  Narrow <5m  Narrow <5m  AVERAGE BANKFULL WIDTH (Feet): 3.00   AVERAGE BANKFULL WIDTH (Feet): 3.00  AVERAGE BANKFULL WIDTH (Feet): 3.00  L R (Most Predominant per Bank)  Mature Forest, Wetland  Open Pasture, Row Cr	Width Max=30
> 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
> 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
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH	Width Max=30
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 >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  None  COMMENTS  Flow Regime (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  AVERAGE BANKFULL WIDTH  (Feet): 3.00  A	Width Max=30

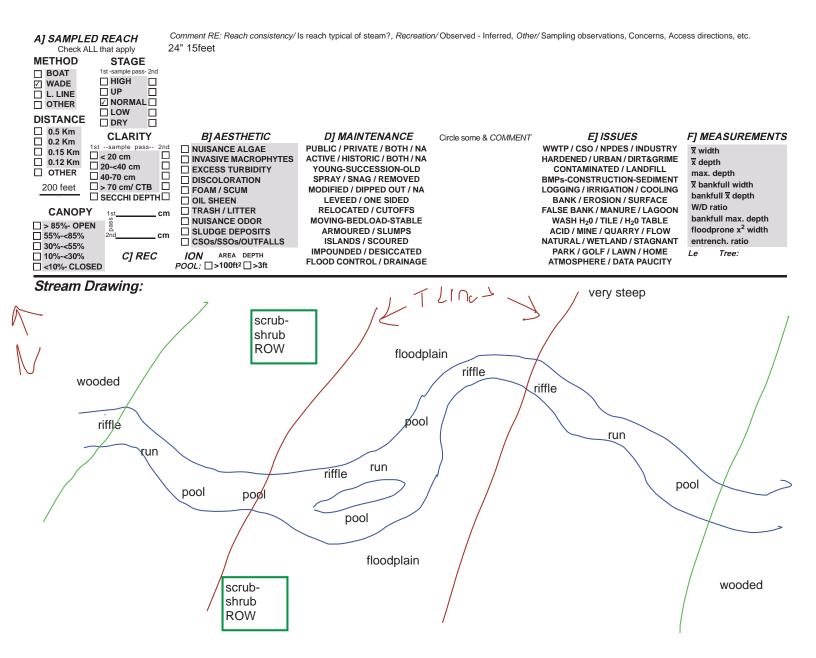
QHEI PERF		_		mpleted):			
	ORMED? - Yes	No QHEIS	Score	(If Yes, Attach	Completed QHE	El Form)	
DOWNSTRE WWH Name:	EAM DESIGNATED				Distance from E	valuated Street	_
CWH Name:					Distance from Ev		
EWH Name:					istance from Ev	aluated Strean	n
MAPPING:	ATTACH COPIES OI	F MAPS, INCLUDI	NG THE <u>ENTIRE</u> V	VATERSHED AF	REA. CLEARLY	MARK THE SI	TE LOCATION
USGS Quadrangle Nar	me:_		NRCS	S Soil Map Page	e: NRC	S Soil Map Str	eam Order
County: Warren			Township / C	ity:			
MISCELLAN	IEOUS						
Base Flow Conditions?	? (Y/N): <b>Y</b> D	ate of last precipi	tation: 12/0	5/17	Quantity:		
Photograph Information					,		
Elevated Turbidity? (Y/	N	Canopy (% open	90%				
		N			- 11 lo 11 - V		
Were samples collecte		, , ,	_ (Note lab samp				
		issolved Oxygen (		pH (S.U.)	Conductivi	ty (µmhos/cm)	
Is the sampling reach r	epresentative of the	e stream (Y/N)	If not, please	explain:			
Additional comments/d	description of polluti	on impacts:					
Additional comments/c	icacription of politic	on impacts					
Fish Observed? (Y/N) Frogs or Tadpoles Obs	N Voucher?		manders Observe  Aquatic Mac	d? (Y/N) <b>N</b>	y Headwater Ha Voucher? (Y/N Observed? (Y/N	) N	nt Manual) er? (Y/N)
Comments Regarding	Biology:						
	NG AND NARR						WOODE
		wod					wooded
hh	mo RO						



## **Qualitative Habitat Evaluation Index**

CIELFA	and Use Assessment Field Sheet	QF	IEI Score	3. (03.5)
Stream & Location:	QH-jbl-120717-02	RM:	Date: 1	12/07/2017
Bee Run	Scorers Full Name & Affiliation:	jbl, pjr A	AECOM	
River Code:	<b>-STORET #:Lat./Long.:</b> 39.397368,	-84.196	3385	Office verified location
BEST TYPES  BLDR /SLABS [10]  BOULDER [9]  COBBLE [8]  GRAVEL [7]  SAND [6]  BEDROCK [5]	CONLYTwo substrate TYPE BOXES; ate % or note every type present  OTHER TYPES  POOL RIFFLE  HARDPAN [4]  DETRITUS [3]  MUCK [2]  SILT [2]  ARTIFICIAL [0]  ARTIFICIAL [0]  SANDSTONE [0]  TYPES: 4 or more [2] sludge from point-sources)  SHALE [-1]  COAL FINES [-2]	SILT	& average)  QUAL  HEAVY [  MODERA  NORMAI  FREE [1]  EXTENS  MODERA  NORMAI	-2] ATE [-1] Substrate - [0]
quality; 3-Highest quality i	GETATION [1] ROOTWADS [1] 1 AQUATIC MACROPHY	r, large pools. ERS [1]	Check ONE (C	or 2 & average) >75% [11] 25-75% [7]
SINUOSITY DEV  ☐ HIGH [4] ☐ E  ☐ MODERATE [3] ☐ G  ☐ LOW [2] ☐ F	### CHOCK ONE in each category (Or 2 & average)  ###################################			Channel 13.4 Maximum 20
River right looking downstrea  EROSION  NONE / LITTLE [3]  MODERATE [2]	AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Ome in	TY	CONSERVATIO URBAN OR INI MINING / CONS te predominant la 00m riparian.	DUSTRIAL [0] STRUCTION [0]
5] POOL / GLIDE AN MAXIMUM DEPTH Check ONE (ONLY!)	CHANNEL WIDTH  Check ONE (Or 2 & average)  POOL WIDTH > RIFFLE WIDTH [2]  POOL WIDTH > RIFFLE WIDTH [1]  POOL WIDTH > RIFFLE WIDTH [1]  POOL WIDTH > RIFFLE WIDTH [1]  MODERATE [1]  Indicate for reach - pools and rise	TIAL [-1] TENT [-2] ]	Primary Secondar (circle one and co	Pool/Current Maximum 12
	RUN DEPTH RIFFLE / RUN SUBSTRATE RIFI  MAXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2]  MAXIMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1]  UNSTABLE (e.g., Fine Gravel, Sand) [0]	FLE / RU	□NO N EMBEDD IONE [2] OW [1] MODERATE [0]	RIFFLE [metric=0] EDNESS  Riffle
Comments			XTENSIVE [-1]	Maximum 8
6] GRADIENT ( 60 DRAINAGE AREA ( 1.05	0/DIM: ( 20 )	%GLIDI %RIFFLI	=	Gradient 7 Maximum 10

62.5





#### **Qualitative Habitat Evaluation Index** and Use Assessment Field Sheet

58.5 QHEI Score: Stream & Location: QH-jbl-120717-01 Date: 12/07/2017 RM: Scorers Full Name & Affiliation: jbl, pjr AECOM Office verified Lat./Long.: 39.3983894, -84.19947486 River Code: STORET #: location 1] SUBSTRATE Check ONLYTwo substrate TYPE BOXES; Check ONE (Or 2 & average) estimate % or note every type present OTHER TYPES POOL RIFFLE **BEST TYPES** ORIGIN **QUALITY POOL RIFFLE** ☐ ☐ HARDPAN [4] ✓ LIMESTONE [1] ☐ **HEAVY** [-2] ☐ ☐ BLDR /SLABS [10] DETRITUS [3] ☐ TILLS [1] ☐ MODERATE [-1] □□ BOULDER [9] Substrate **SILT** ■ WETLANDS [0] ☑ ☐ COBBLE [8] ☐ ☐ MUCK [2] ✓ NORMAL [0] 15 45 ☐ HARDPAN [0] ☐ ☐ GRAVEL [7] 15 ☐ ☐ SILT [2] ☐ FREE [1] 16 MODERAL [0] EXTENSIVE [-2] ☐ SANDSTONE [0] ☐ SAND [6] 5 ☐ ☐ ARTIFICIAL [0] ☐ MODERATE [-1] RIP/RAP [0] □ ☑ BEDROCK [5] 40 10 (Score natural substrates; ignore Maximum NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) ☐ LACUSTURINE [0] 🖺 20 ☐ SHALE [-1] ☐ 3 or less [0] Comments ☐ COAL FINES [-2] 2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest **AMOUNT** quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools. Check ONE (Or 2 & average) **☐ EXTENSIVE >75% [11] UNDERCUT BANKS [1]** OXBOWS, BACKWATERS [1] **MODERATE 25-75% [7]** POOLS > 70cm [2] ✓ **OVERHANGING VEGETATION [1] ROOTWADS**[1] **AQUATIC MACROPHYTES [1]** SPARSE 5-<25% [3] SHALLOWS (IN SLOW WATER) [1] ☐ NEARLY ABSENT <5% [1]
</p> **BOULDERS** [1] LOGS OR WOODY DEBRIS [1] **ROOTMATS [1]** Cover Comments 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]  $\checkmark$ **RECOVERED [4]**  $\overline{}$ **MODERATE** [2] ✓ FAIR [3] ☐ RECOVERING [3] ✓ LOW [2] ☐ LOW [1] ■ NONE [1] ☐ POOR [1] Channel ☐ RECENT OR NO RECOVERY [1] Maximum Comments 4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) River right looking downstream **RIPARIAN WIDTH** FLOOD PLAIN QUALITY **EROSION** ☐ ☐ WIDE > 50m [4] FOREST, SWAMP [3] ☐ ☐ CONSERVATION TILLAGE [1] NONE / LITTLE [3] ☑ SHRUB OR OLD FIELD [2] ☐ ☐ URBAN OR INDUSTRIAL [0] ■ MODERATE 10-50m [3] ✓ ☐ MODERATE [2] ☐ NARROW 5-10m [2] ☐ RESIDENTIAL, PARK, NEW FIELD [1] ☐ ☐ MINING / CONSTRUCTION [0] ☐ ☑ HEAVY / SEVERE [1] ☑ ☑ VERY NARROW < 5m [1] ☐ ☐ FENCED PASTURE [1] Indicate predominant land use(s) □ □ NONE [0] ☐ ☐ OPEN PASTURE. ROWCROP [0] past 100m riparian. Riparian Comments Maximum 5] POOL/GLIDE AND RIFFLE/RUN QUALITY Recreation Potential **MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY** Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply Primary Contact ✓ POOL WIDTH > RIFFLE WIDTH [2] ☐ TORRENTIAL [-1] ☐ SLOW [1] ☐ > 1m [6] Secondary Contact ☐ VERY FAST [1] ☐ POOL WIDTH = RIFFLE WIDTH [1] ☐ INTERSTITIAL [-1] □ 0.7-<1m [4] (circle one and comment on back) ☐ POOL WIDTH > RIFFLE WIDTH [0] ☐ FAST [1] **☑** 0.4-<0.7m [2] ☐ INTERMITTENT [-2] ☑ MODERATE [1] ☐ EDDIES [1] 0.2-<0.4m [1] Pool / ☐ < 0.2m [0] Indicate for reach - pools and riffles. Current Maximum Comments 24 12 Indicate for functional riffles; Best areas must be large enough to support a population ■ NO RIFFLE [metric=0] of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH **RUN DEPTH** RIFFLE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS ☐ MAXIMUM > 50cm [2] ☐ STABLE (e.g., Cobble, Boulder) [2] ☐ BEST AREAS > 10cm [2] ■ NONE [2] ☑ MAXIMUM < 50cm [1] ☑ MOD. STABLE (e.g., Large Gravel) [1]
</p> ☐ BEST AREAS 5-10cm [1] ✓ LOW [1] Riffle ✓ BEST AREAS < 5cm
</p> UNSTABLE (e.g., Fine Gravel, Sand) [0] **■ MODERATE [0]** EXTENSIVE [-1] Maximum 3 **Comments** 6] GRADIENT ( ─ VERY LOW - LOW [2-4] ft/mi) %POOL 20 %GLIDE: 10 Gradient MODERATE [6-10] **DRAINAGE AREA** 

✓ HIGH - VERY HIGH [10-6]

( 0.3

mi<sup>2</sup>)

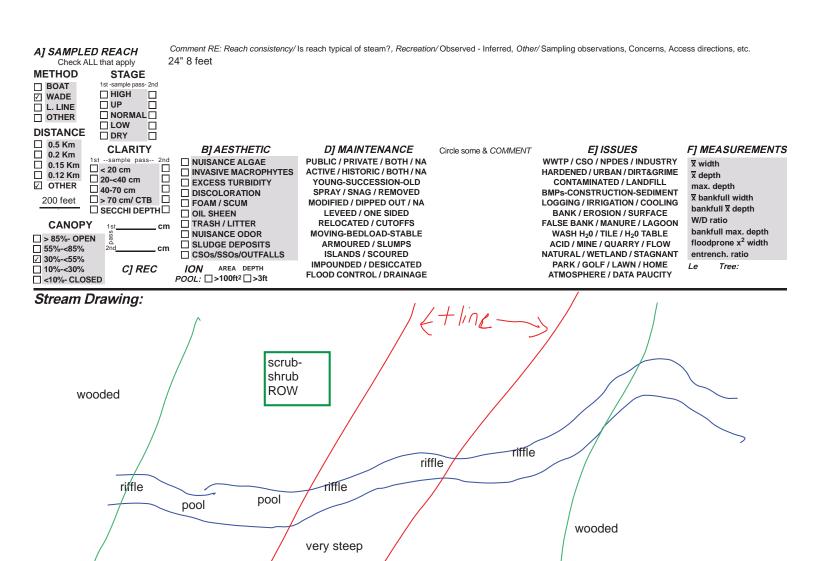
10

Maximum

50

%RIFFLE

%RUN:



Stream 114 **Modified Class 1** 



29

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39869 LONG84.20001 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr 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 FORMER EARTHWORK	COVERY
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] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	
SAND (<2 mm) [6 pts]  O  ARTIFICIAL [3 pts]  O  O  O  O  O  O  O  O  O  O  O  O  O	9
Total of Percentages of 10.00% (A) Substrate Percentage 95% (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):	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]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
` '	
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] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	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] > 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
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]	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): 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	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 ANOTE: RIVER LEFT (L) and Right (R) as looking downstream ANOTE: RIVER LEFT (L) and Right (R) as looking downstream ANOTE: RIVER LEFT (L) RIPARIAN WIDTH  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  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ♣NOTE: River Left (L) and Right (R) as looking downstream ♣  RIPARIAN WIDTH  ELOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Lirban or Industrial	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  L R (Per Bank)  Wide >10 m (<=3' 3") [5 pts]  L R (Most Predominant per Bank)  Wide >10 m Mature Forest, Wetland  Moderate 5-10 m Immature Forest, Shrub or Old  Urban or Industrial Field	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  L R (Per Bank) Wide >10 m	Width Max=30  5
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  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Moderate 5-10 m  Narrow <5 m  Residential, Park, New Field  Open Pasture, Row C	Width Max=30  5
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 *\frac{1}{2} \text{RIPARIAN WIDTH} \text{FLOODPLAIN QUALITY} \text{Note: River Left (L) and Right (R) as looking downstream *\frac{1}{2} \text{RIPARIAN WIDTH} \text{Per Bank} L R (Most Predominant per Bank) L R (Per Bank) Unmature Forest, Wetland Conservation Tillage Immature Forest, New Field Copen Pasture, Row Comments Fenced Pasture Mining or Construction COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30  5
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 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 (Per Bank) Mature Forest, Wetland Conservation Tillage  Wide >10 Mature Forest, Shrub or Old Urban or Industrial Field  Narrow <5m Residential, Park, New Field Open Pasture, Row C Mining or Construction COMMENTS	Width Max=30  5
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 And Floodplain QUALITY    RIPARIAN WIDTH   FLOODPLAIN QUALITY   And Right (R) as looking downstream And Floodplain QUALITY   And Right (R) as looking downstream And Floodplain QUALITY   And Right (R) as looking downstream And Floodplain QUALITY   And Right (R) as looking downstream And Floodplain QUALITY   And Right (R) as looking downstream And Floodplain QUALITY   And Right (R) as looking downstream Right (R) and Right (R) as looking downstream Right (R) as l	Width Max=30  5
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) L R (Most Predominant per Bank) L R  Wide >10 m Mature Forest, Wetland Conservation Tillage  V Moderate 5-10 m V I Immature Forest, Shrub or Old Urban or Industrial  Narrow <5 m 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  5
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 And RIPARIAN WIDTH  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  None  None  COMMENTS  Fenced Pasture  Mining or Construction  COMMENTS  Fenced Pasture  Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral))  COMMENTS  Moist Channel, no water (Ephemeral)	Width Max=30  5
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) L R (Most Predominant per Bank) L R (Wide >10m Mature Forest, Wetland Conservation Tillage  Immature Forest, Shrub or Old Urban or Industrial  Mature Forest, Shrub or Old Urban or Industrial  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):  None (Check ONLY one box):  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None (Check ONLY one box):  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None (Check ONLY one box):  None (Check ONLY one box):  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None (Check ONLY one box):	Width Max=30  5
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	Width Max=30  5

ADDITIONAL STREAM INFORMATION (This Information I	flust Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Sc	ore (If Yes, Atta	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, INCLUDIN		
USGS Quadrangle Name:	NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Warren	Township / City:	
MISCELLANEOUS		
Base Flow Conditions? (Y/N):_Y Date of last precipita	tion:_ 12/05/17	Quantity:
Photograph Information:		
Elevated Turbidity? (Y/N): N Canopy (% open):	90%	
Were samples collected for water chemistry? (Y/N):	(Note lab sample no. or id. a	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (m	pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y	If not, please explain:	
prop		
Additional comments/description of pollution impacts:		
ID number. Include appropriate	e field data sheets from the Pri anders Observed? (Y/N)	I. NOTE: all voucher samples must be labeled with th imary Headwater Habitat Assessment Manual)  Voucher? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION Include important landmarks and other features of existing T Line existing T Line shrub shrub ROW		1
	PHWH Form Page - 2	
October 24, 2002 Revision	i ilwii Follii Fage - 2	Save as pdf Reset Form

Stream 115 **Modified Class 1** 



19
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.39923 LONG84.20214 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOMPONDIFICATIONS: former earthwork	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE  PERCENT  TYPE  PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt]  0%  FINE DETRITUS [3 pts]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	
SAND (<2 mm) [6 pts] 10% ARTIFICIAL [3 pts] 0%	9
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  6  Check TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	IVIAX = 30
> 22.5 - 30 cm [30 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):	David Call
	Banktuli
> 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] > 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 - 1.5 m (> 3' 3" - 4' 8") [5 pts]  ≤ 1.0 m (<=3' 3") [5 pts]	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.50  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	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  CHECK  AVERAGE BANKFULL WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  L R (Most Predominant per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Woderate 5-10m  V 1 Industrial	Width 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 (Conservation Tillage	Width Max=30
S   S   S   S   S   S   S   S   S   S	Width Max=30
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)  Wide >10m  Wide >10m  Mature Forest, Wetland  Narrow <5m  Narrow <5m  Narrow <5m  AVERAGE BANKFULL WIDTH  FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream ☆  Conservation Tillage  Urban or Industrial  Open Pasture, Row Crop	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  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)  Wide >10m  Mature Forest, Wetland  Wide >10m  Moderate 5-10m  Narrow <5m  Residential, Park, New Field  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
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):    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):    SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  RIPARIAN WIDTH	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, At	tach 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 WATERSHE	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map	Page: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_ Y Date of last precipitation:_ 12/05/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 50%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id	. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
prop	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
· ,	al. NOTE: all voucher samples must be labeled with the site
ID number. Include appropriate field data sheets from the P Voucher? (Y/N) N Salamanders Observed? (Y/N) N  Salamanders Observed? (Y/N) N  Salamanders Observed? (Y/N) N	
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebr	rates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation a	and a narrative description of the etreem's legation wooded
scrub-	
ROW	
FLOW	
hh02	
existing T Line	

Stream 116 **Modified Class 1** 



19	
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120717-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40085 LONG84.20620 RIVER CODE RIVER MILE	
DATE 12/07/17 SCORER jbl, pjr 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 RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVE	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] 55%	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] ☐ ☐ MUCK [0 pts] ☐ ☐ ARTIFICIAL [3 pts] ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	9
Total of Percentages of Const. (A) Substitute Percentage	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of 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): 1.00	
COMMENTSMAXIMOM FOOL DEFTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):  > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 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]  > 1.5 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]	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]  > 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): 2.00  This information must also be completed  RIPARIAN ZONE AND 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]   > 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] > 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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Normation must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  Moderate 5-10m  Moderate 5-10m  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  RIPARIAN WIDTH  Wide >10m  Mature Forest, Wetland  L R (Most Predominant per Bank)  Moderate 5-10m  Moderate 5-10m  L R (Most Predominant per Bank)	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  ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH  L R (Per Bank) Wide >10m Mature Forest, Wetland Wide >10m Moderate 5-10m  Narrow <5m None 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 - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]    2.00    4 WICH STANDOWN   10 pts   10	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  ↑ (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  Narrow <5m  Narrow <5m  Residential, Park, New Field  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]  > 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 - 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 - 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 - 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]	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 >10m Mature Forest, Wetland  Wide >10m Moderate 5-10m Field  Narrow <5m Residential, Park, New Field  None  COMMENTS  PLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
Solution	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
> 4.0 meters (> 13') [30 pts]   > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]   > 1.0 m (> 9' 7" - 13') [25 pts]   > 1.5 m - 3.0 m (> 9' 7" - 13') [25 pts]   > 1.5 m - 3.0 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  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, Atta	ach 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
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHEI	
USGS Quadrangle Name: NRCS Soil Map F	
	age. Nixes soli Map Stream Order
County Township / City	
MISCELLANEOUS  Page Flow Conditions? (V/N): Y  Date of last precipitation: 12/05/17	Quantitu
	Quantity:
Photograph Information:  N  Canopy (% open): 25%	
Campy (% open).	and attack regults) Lak Number
	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)  Is the sampling reach representative of the stream (Y/N) If not, please explain:	
prop	
<u> </u>	
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 Programment of Tadpoles Observed? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Voucher? (Y/N)  Voucher? (Y/N)  N  Aquatic Macroinvertebra Comments Regarding Biology:	imary Headwater Habitat Assessment Manual)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM F	REACH (This <u>must</u> be completed):
existing T Line  scrub- shrub ROW	wooded
FLOW	
row crop	tai-V.
PHWH Form Page - 2	
October 24, 2002 Revision	Save as pdf Reset Form

Stream 117

Modified Class 1



20
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-08 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40409 LONG84.21660 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr 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 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  Bell Slabs, Boulder, Cobble, Bedrock  MOCK [0 pts]  ARTIFICIAL [3 pts]  Substrate Percentage  Check  (B)	HHEI Metric Points Substrate Max = 40
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):  > 30 centimeters [20 pts]  > 22.5 - 30 cm [30 pts]  > 10 - 22.5 cm [25 pts]  NO WATER OR MOIST CHANNEL [0 pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check 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): 2.00	5
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old  Immature Forest, Shrub or Old  Field  Viban or Industrial  Park, New Field  Open Pasture, Row Cro  None  Fenced Pasture  Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None  1.0  2.0  3.0  >3.0  —3.0	
STREAM GRADIENT ESTIMATE	

	Yes ✓ No QHEI Sco	ore (If Yes, Att	ach Completed QH	El Form)	
DOWNSTREAM DES	IGNATED USE(S)		7		
014/1141				valuated Stream	
CWH Name:EWH Name:			7	valuated Stream valuated Stream	
MAPPING: ATTACH (	COPIES OF MAPS, INCLUDING	G THE <u>ENTIRE</u> WATERSHE	D AREA. CLEARLY	MARK THE SITE LOCA	TION
USGS Quadrangle Name:		NRCS Soil Map	Page: NR0	CS Soil Map Stream Ord	der
County: Warren		Township / City:			
MISCELLANEOUS					
Base Flow Conditions? (Y/N):_	Y Date of last precipitat	tion:12/05/17	Quantity:		
Photograph Information:					
Elevated Turbidity? (Y/N):	Canopy (% open):	50%			
	N				
Were samples collected for water	er chemistry? (Y/N):	(Note lab sample no. or id.		Lab Number:	
Field Measures: Temp (°C)	Dissolved Oxygen (m		Conductiv	ity (µmhos/cm)	
Is the sampling reach represent	ative of the stream (Y/N)	If not, please explain:			
prop					
A -   -	a of a allution insurante.				
Additional comments/description	1 or pollution impacts:				
N	ID number. Include appropriate  Voucher? (Y/N)  N  Salam  Y/N)  N  Voucher? (Y/N)  N	anders Observed? (Y/N)	Voucher? (Y/N	N N	N
			254211/511		
	D NARRATIVE DESCRI				,
hh08	arks and other features of in	terest for site evaluation a	nd a narrative desc	ription of the stream's	location
	scrub-				
	chruh ald				, , ,
	shrub old			,	/ / /
	shrub old field ROW				////
4					
FLOW →					
FLOW					
FLOW →				wooded	
FLOW →				wooded	

Stream 118 **Modified Class 2** 



44

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40491 LONG84.21813 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr 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 CHANNEL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED CHANNEL CHANNEL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED 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] 0% SILT [3 pt] 15%	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  0%  LEAF PACK/WOODY DEBRIS [3 pts]  15%  0%  FINE DETRITUS [3 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 15% CLAY or HARDPAN [0 pt] 0%	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ 30% ☐ ☐ 30% ☐ ☐ ☐ ARTIFICIAL [3 pts] ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	14
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
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 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]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 5.00	
(1101103).	Doubtell
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):  > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information <u>must</u> also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\frac{1}{2}\text{NOTE} \text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{NOTE} \text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{left}(\begin{center}{c} \) and Right (R) as looking downstream \$\frac{1}{2}\text{River} \  \ext{River} \  \ex	
RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\frac{1}{2}\text{NOTE: River Left (L) and Right (R) as looking downstream \$\frac{1}{2}\text{RIPARIAN WIDTH} \frac{1}{2}\text{FLOODPLAIN QUALITY}	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆  RIPARIAN WIDTH  LR (Per Bank)  LR (Most Predominant per Bank)  LR	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Moderate 5-10m  L R (Most Predominant per Bank)  Immature Forest, Wetland  Urban or Industrial	
RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Immature Forest, Shrub or Old  Field  Conservation Tillage  Immature Forest, Shrub or Old  Field  Onen Pasture Row Cr	ор
RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Moderate 5-10m  Narrow <5m  Residential, Park, New Field  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  River Left (L) and Right (R) as looking downstream A  FloodPLAIN QUALITY  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  L R (United State Stat	
RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Moderate 5-10m  Narrow <5m  Residential, Park, New Field  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  River Left (L) and River	
RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  (Per Bank)  Wide >10m  Moderate 5-10m  Residential, Park, New Field  Fenced Pasture  FLOW REGIME (At Time of Evaluation)  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  L R (Most Predominant per Bank)  L R (Conservation Tillage  Immature Forest, Wetland  Immature Forest, Shrub or Old  Field  Open Pasture, Row Cree  Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	<u> </u>
RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Moderate 5-10m  Narrow <5m  Narrow <5m  Nore  Residential, Park, New Field  Fenced Pasture  Comments  ANOTE: River Left (L) and Right (R) as looking downstream Another Left (L) and Right (R) and Right (R) and Right	<u> </u>
RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old	<u> </u>
RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  (Per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Residential, Park, New Field  Fenced Pasture  Flow REGIME (At Time of Evaluation)  Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NOTE: River Left (L) and Right (R) as looking downstream A  NoTE: River Left (L) and Right (R) as looking downstream A  NoTE: River Left (L) and Right (R) as looking downstream A  NoTE: River Left (L) and Right (R) as looking downstream A  Note: A repart A	<u> </u>

ADDITIONAL STREAM INFORMATION (This Information Must Als	o 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 E	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Town	ship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	<b>12/05/17</b> Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 80	%
Were samples collected for water chemistry? (Y/N): N (Note la	b sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	, please explain:
is the sampling reach representative of the stream (1/14)	, piease explain
Additional comments/description of pollution impacts:	
ID number. Include appropriate field dat Fish Observed? (Y/N)  N  Voucher? (Y/N)  N  Salamanders O	er collections optional. NOTE: all voucher samples must be labeled with the sit 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 DE SCRUB-	F STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other feature field	te evaluation and a narrative description of the stream's location
lield	
(	
FLOW →	pand
hh01	
residential	/
	existing T Line

Stream 119 Modified Class 1



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hh-jbl-120617-02 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²) LENGTH OF STREAM REACH (ft) 200 LAT. 39.40655 LONG84.22405 RIVER CODE RIVER MILE	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40655 LONG84.22405 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS ephemeral	
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: Channelized	ECOVERY
<ol> <li>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 &amp; B.</li> </ol>	HHEI Metric
TYPE         PERCENT         TYPE         PERCENT           □ □ □ BLDR SLABS [16 pts]         0% □ □ SILT [3 pt]         15%	Points
BOULDER (>256 mm) [16 pts]	Substrate
□       □       BEDROCK [16 pt]       0%       □       FINE DETRITUS [3 pts]       0%         □       COBBLE (65-256 mm) [12 pts]       15%       □       CLAY or HARDPAN [0 pt]       0%	Max = 40
GRAVEL (2-64 mm) [9 pts]  O%  MUCK [0 pts]  O%  ARTIFICIAL [3 pts]  30%	14
Ortho (42 mm) [o pto]	
Total of Percentages of 15.00% (A) Substrate Percentage Check (B)	A + B
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 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
(6.33).	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):  > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
21.0 III 0.0 III (20 pts)	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.50	5
This information must also be completed	
(1 33).	
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	
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)  L R (Most Predominant per Bank)  Mature Forest, Wetland  Conservation Tillage	
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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  L R  Mature Forest, Wetland  Urban or Industrial  Field	
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) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field  Open Pasture, Row	Сгор
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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Most Predominant per Bank)  L R  Mature Forest, Wetland  Urban or Industrial  Field	Сгор
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  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) (Check ONLY one box):	Crop
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) Description of the conservation Tillage of the conser	Crop
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  Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial  Moderate 5-10m Residential, Park, New Field Open Pasture, Row  None Residential, Park, New Field Open Pasture, Row  Flow Regime (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial)  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream And Right (R) as looking d	Crop
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Residentian to rest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Field  Virban or Industrial  Field  Open Pasture, Row  None  COMMENTS  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  Tain vrsterday	Crop
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Immature Forest, Shrub or Old  Wide >10m  Residential, Park, New Field  V Narrow <5m  Residential, Park, New Field  V 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  3.5  STREAM GRADIENT ESTIMATE	Crop
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old  Immature Forest, Shrub or Old  Wide >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):  None  1.0  2.0  3.0  >3.0	Crop on ent)

ADDITIONAL STREAM INFORMATION (This Information	Must Also be Completed):
QHEI PERFORMED? - Yes ✓ No QHEI So	ore (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, INCLUDIN	IG THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipita	ation: 12/05/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open):	75%
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 (n	ng/l)pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
Additional comments/description of poliditon impacts.	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations	s. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit
	e field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salam	nanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N	Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
	IPTION OF STREAM REACH (This <u>must</u> be completed):
Include important and other fe SCrub-	for site evaluation and a narrative description of the stream's location
shrub/c	old
field	
	debris pile
FLOW 7	
hh02 residenti	al
	/
	existing T Line
	PHIMH Form Page - 2

Stream 120 **Modified Class 2** 



64
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AED Hillohore Hu	Title 30010 (Suin	1 of metries 1, 2, 3/1
SITE NAME/LOCATION AEP HIllsboro-Hu hh-jbl-120617-03		DDAINIAGE ADEA (m:2)
SITE NUMBER	RIVER BASIN LAT. 39.40712 LONG84.22584 RIVER C	DRAINAGE AREA (mi²)
DATE 12/06/17 SCORER jbl, pjr	COMMENTS perennial	ODERIVER MILE
		20 DUMIL Ctrooms" for Instructions
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Ohio	S FHWH Streams for instructions
STREAM CHANNEL NONE / NAT MODIFICATIONS: stream bank reinforcer	JRAL CHANNEL ☐ RECOVERED ☑ RECOVEI nent	RING RECENT OR NO RECOVERY
	y type of substrate present. Check ONLY two predont substrate types found (Max of 8). Final metric score	
, , ,	RCENT TYPE	PERCENT Metri
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]	10% SILT [3 pt] 0% LEAF PACK/WOODY DEE	5% Point 5%
BEDROCK [16 pt]	0% FINE DETRITUS [3 pts]	0% Substra
COBBLE (65-256 mm) [12 pts]	CLAY or HARDPAN [0 pt]	
Ortivez (2 or min) to pio	20% MUCK [0 pts]	0% 19
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	0%
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	5.00% (A) Substrate Percentage Check 100%	(B) A + B
SCORE OF TWO MOST PREDOMINATE SUBST	RATE TYPES: 12 TOTAL NUMBER OF	SUBSTRATE TYPES: 7
	ximum pool depth within the 61 meter (200 ft) eva	
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	culverts or storm water pipes) (Check ONLY one b	oox): Max = 3
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST O	CHANNEL [0 pts] 25
COMMENTS	MAXIMUM POOL I	DEPTH (Inches): 10.04
BANK FULL WIDTH (Measured as the	verage of 3-4 measurements) (Check ON	LY one box): Bankfu
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4	7 - 1 -
> 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	AVED AGE DANKE	300 300 300 300 300 300 300 300 300 300
COMMENTS	AVERAGE BANKF	FULL WIDTH (Feet): 8.00 20
	This information must also be completed	
RIPARIAN ZONE AND FLOODPI	_	t (R) as looking downstream☆
RIPARIAN WIDTH	FLOODPLAIN QUALITY	, n
L R (Per Bank)  Wide >10m	L R (Most Predominant per Bank) I Mature Forest, Wetland	Conservation Tillage
Moderate 5-10m	Immature Forest, Shrub or Old	Urban or Industrial
Norrow sEm	Field  Pagidoptial Park New Field	Open Pasture, Row Crop
□□ Narrow <5m □□ None	Residential, Park, New Field Fenced Pasture	
COMMENTS	i enceu rasture	Mining or Construction
FLOW REGIME (At Time of Eval	vation) (Check ONI Vone hov)	
Stream Flowing	Moist Channel, iso	plated pools, no flow (Intermittent)
Subsurface flow with isolated pool COMMENTS rain vrsterday	s (Interstitial) Dry channel, no v	vater (Ephemeral)
SINUOSITY (Number of bends per None	er 61 m (200 ft) of channel) (Check <i>ONLY</i> one box): 1.0 2.0	3.0
0.5	1.5	>3
STREAM GRADIENT ESTIMATE		
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate	Moderate (2 ft/100 ft) Moderate to Sev	vere 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: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
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) If not, please explain:
ргор
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 ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  Fish Observed? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  N  Voucher? (Y/N)  Aquatic Macroinvertebrates Observed? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher? (Y/N)  Voucher? (Y/N)  N  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
esidential vooded e important landmarks and other shrub ROW steep slope
hh03
existing T Line
PHWH Form Page - 2
October 24, 2002 Revision  Save as pdf  Reset Form

Stream 121 **Modified Class 2** 



SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40889 LONG84.23149 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr 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 Former t line impacts	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  PERCENT  TYPE  PERCENT	HHEI   Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 35%	Points
BOULDER (>256 mm) [16 pts]	Substrate
BEDROCK [16 pt]	Max = 40
GRAVEL (2-64 mm) [9 pts] 15% MUCK [0 pts] 0%	12
Table (Burning) [o pio]	
Bldr Slabs, Boulder, Cobble, Bedrock	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]	
> 22.5 - 30 cm [30 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 4.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 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]	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]  > 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] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 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  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  AVERAGE BANKFULL WIDTH (Feet): 3.00  This information must also be completed	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)  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)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Normation must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Moderate 5-10m  L R (Most Predominant per Bank)  Mature Forest, Wetland  Urban or Industrial	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]     > 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  ♣ NOTE: River Left (L) and Right (R) as looking downstream ♣  RIPARIAN WIDTH  L R (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  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  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Moderate 5-10 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)  Moderate (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 And FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Vide >10 m  Narrow <5m  Narrow <5m  Narrow <5m  Residential, Park, New Field  Flow REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  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  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  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Moderate 5-10 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)  Moderate (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 And RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >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  ANOTE: River Left (L) and Right (R) as looking downstream Another Floodplain Quality  RIPARIAN WIDTH  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Wetland  Narrow <5 m  None  COMMENTS  Residential, Park, New Field  Perced Pasture  Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral))  COMMENTS rain vrsterday  SINUOSITY (Number of bends per 61 m (200 ft) of channel)  None  1.0  Check ONLY one box):  None  1.0  3.00  AVERAGE BANKFULL WIDTH  (Feet):  3.00  AVERAGE	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be C	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:NRC	CS Soil Map Page: NRCS Soil Map Stream Order
County: Warren Township / 0	City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/	<b>05/17</b> Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 50%	
Were samples collected for water chemistry? (Y/N): N (Note lab same	ple no. or id. and attach results) Lab Number:
	pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, pleas	e explain:
prop	
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data shee  Fish Observed? (Y/N)  N  Salamanders Observ	ctions optional. NOTE: all voucher samples must be labeled with the site ts from the Primary Headwater Habitat Assessment Manual) ed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
DRAWING AND NARRATIVE DESCRIPTION OF Standard of the features of interest for site of the features of the feat	STREAM REACH (This <u>must</u> be completed): evaluation and a narrative description of the stream's location
hh03 row crop	existing T Line
October 24, 2002 Revision	Save as pdf Reset Form

Stream122 **Modified Class 2** 



52
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40978 LONG84.23353 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ictions
STREAM CHANNEL  □ NONE / NATURAL CHANNEL  □ RECOVERED  □ RECOVERING  □ RECENT OR NO RECOMMODIFICATIONS:   former earthwork	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]	Substrate
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 20%	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	12
SAND (<2 mm) [6 pts]	
Total of Percentages of S.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):  > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	0.5
> 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
> 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] > 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]	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): 3.50  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): 3.50	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]  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)  L R (Most Predominant per Bank)  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 And RIPARIAN WIDTH  L R (Per Bank) Wide >10m Mature Forest, Wetland  Wide >10m Moderate 5-10m  Moderate 5-10m  Place At 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]  > 1.0 m (<=3' 3") [5 pts]    S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S   1.0 m (<=3' 3") [5 pts]   S	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 And RIPARIAN WIDTH  L R (Per Bank) Wide >10m Mature Forest, Wetland  Wide >10m Moderate 5-10m  Moderate 5-10m  PLOODPLAIN QUALITY Moderate Solution Moderate Solution Moderate Solution  AVERAGE BANKFULL WIDTH (Feet):  3.50  L R (Most Predominant per Bank) L R (Most Predominant per Bank) Urban or Industrial Field  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  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  ↑ (Per Bank)  Wide >10 m  Mature Forest, Wetland  Mature Forest, Wetland  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	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  ↑ Moderate 5-10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Mature Forest, Shrub or Old  Narrow <5m  Narrow <5m  Residential, Park, New Field  Open Pasture, Row Crop  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  L R (Per Bank) Wide >10m Mature Forest, Wetland Wide >10m Moderate 5-10m  Residential, Park, New Field  Narrow <5m 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  ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  Narrow <5m  Narrow <5m  Residential, Park, New Field  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  Rain vrsterday	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) Wide >10m Wature Forest, Wetland Wide >10m Wature Forest, Wetland Wide >10m Wature Forest, Shrub or Old Immature Forest, Shrub or Old Field  Narrow <5m 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    Check ONLY one box):   Open Pasture (Ephemeral)   Open Pa	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  RIPARIAN WIDTH  L R (Most Predominant per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old  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 rain vrsterday  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 ☆ NOTE: River Left (L) and Right (R) as looking downstream ☆  RIPARIAN WIDTH FLOODPLAIN QUALITY  L R (Per Bank) Wide >10m Wature Forest, Wetland Wide >10m Wature Forest, Wetland Wide >10m Wature Forest, Shrub or Old Immature Forest, Shrub or Old Field  Narrow <5m 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    Check ONLY one box):   Open Pasture (Ephemeral)   Open Pa	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)	
	Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name: C	bistance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AF	REA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page	e: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 85%	
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:	
prop	
Additional comments/description of pollution impacts:	
Additional comments, description of politicism impacts.	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. N ID number. Include appropriate field data sheets from the Primar Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Comments Regarding Biology:	y Headwater Habitat Assessment Manual)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REA	
scrub-shrub ROW	
FLOW	
scrub-shrub ROW	
existing T Line	hh06 mowed
PHWH Form Page - 2 October 24, 2002 Revision	

**Reset Form** 

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Stream 123 **Modified Class 1** 



22
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40978 LONG84.23391 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL	VERY
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] 25%	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  BEDROCK [16 pt]  D' LEAF PACK/WOODY DEBRIS [3 pts]  5%  0%  FINE DETRITUS [3 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 15% CLAY or HARDPAN [0 pt]	Max = 40
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	12
Total of Percentages of AF 000/ (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	ATB
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> </ol>	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
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): 1.00	5
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R  Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Field — Open Pasture Row Cror	)
Narrow <5m Residential, Park, New Field 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)	
COMMENTS_rain vrsterday	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None	
□ 0.5 ▼ 1.5 □ 2.5 >3	
	) 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)	
	Distance from Evaluated Stream
	Distance from Evaluated Stream
EWH Name: C	bistance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AF	REA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page	e: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 85%	
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:	
prop	
Additional comments/description of pollution impacts:	
Additional comments, description of politicism impacts.	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. N ID number. Include appropriate field data sheets from the Primar Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Comments Regarding Biology:	y Headwater Habitat Assessment Manual)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REA	
scrub-shrub ROW	
FLOW	
scrub-shrub ROW	
existing T Line	hh06 mowed
PHWH Form Page - 2 October 24, 2002 Revision	

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Stream 124 **Modified Class 1** 



21
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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120617-07 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.40967 LONG84.23439 RIVER CODE RIVER MILE	
DATE 12/06/17 SCORER jbl, pjr COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS: Former t line impacts	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]  BEDROCK [16 pt]  O%  FINE DETRITUS [3 pts]  O%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	Wax = 40
GRAVEL (2-64 mm) [9 pts]	11
Total of Percentages of 15.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (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):  > 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 ONL Y one box):  > 4.0 meters (> 13') [30 pts]  > 3.0 m - 4.0 m (> 9' 7" - 13') [25 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
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]  (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): 1.50  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): 1.50	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):  1.50  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY ♣ NOTE: River Left (L) and Right (R) as looking downstream ♣ RIPARIAN WIDTH  RIPARIAN WIDTH  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  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  NOTE: River Left (L) and Right (R) as looking downstream  (R) ARIAN WIDTH  RIPARIAN WIDTH  L R (Per Bank)	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 RIPARIAN WIDTH  RIPARIAN WIDTH  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Moderate 5-10 m  Moderate 5-10 m  Conservation Tillage  Immature Forest, Shrub or Old  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  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH  ELOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH  ELOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH  ELOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH  ELOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH  ELOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH  ELOODPLAIN QUALITY  AVERAGE BANKFULL WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDTH (Feet): 1.50  This information must also be completed  RIPARIAN WIDT	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 RIPARIAN WIDTH  RIPARIAN WIDTH  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Moderate 5-10 m  Moderate 5-10 m  Conservation Tillage  Immature Forest, Shrub or Old  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]	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 \(\frac{1}{2}\) RIPARIAN WIDTH  L R (Per Bank) Wide >10m Wide >10m Mature Forest, Wetland Wide >10m 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 (Intermitten)  Moist Channel, isolated pools, no flow (Intermitten)	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 >10m  Mature Forest, Wetland  Wide >10m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  None  COMMENTS  Residential, Park, New Field  V V Open Pasture, Row C  Mining or Construction  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Moist Channel, isolated pools, no flow (Intermitten)	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 *\frac{1}{2} \text{RIPARIAN WIDTH} FLOODPLAIN QUALITY  \[ \text{L R (Most Predominant per Bank) L R (Onservation Tillage Mature Forest, Wetland Drawn or Industrial Field  \[ \text{Normation Must also be completed} \]  RIPARIAN WIDTH  \[ \text{L R (Most Predominant per Bank) L R (Onservation Tillage Mature Forest, Wetland Drawn or Industrial Field  \[ \text{Normation Must also be completed} \]  RIPARIAN WIDTH  \[ \text{L R (Most Predominant per Bank) L R (Onservation Tillage Mature Forest, Wetland Drawn or Industrial Field  \[ \text{None Predominant Per Bank} \]  \[ \text{L R (Most Predominant per Bank) Drawn or Industrial Mature Forest, Shrub or Old Drawn or Industrial Field  \[ \text{Normation Must also be completed} \]  None \[ \text{RIPARIAN WIDTH (Value) Per Bank} \]  \[ \text{Normation Must Predominant per Bank} \]  \[ \text{L R (Most Predominant per Bank} \]  \[ L R (Onservation Tillage Drawn or Industrial Draw	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  **NOTE: River Left (L) and Right (R) as looking downstream **  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10 m Mature Forest, Wetland    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 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 5-10 m  Moderate 5-10 m  None  Residential, Park, New Field  Vidential, Park, New Field  Open Pasture, Row C  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS rain vrsterdav  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None  1.0  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None  1.0  3.0	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
	CWH Name: Distance from Evaluated Stream
İ	EWH Name: Distance from Evaluated Stream
	MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
	USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
	County: Warren Township / City:
	MISCELLANEOUS
	Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
	Photograph Information:
	Elevated Turbidity? (Y/N): N Canopy (% open): 25%
	Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
	Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
	Is the sampling reach representative of the stream (Y/N)  If not, please explain:
	prop
	Additional comments/description of pollution impacts:
	Additional commence accomption of pendion impacts.
	BIOTIC EVALUATION  Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with
	ID number. Include appropriate field data sheets from the Primary Headwater 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:
	Commonito Regarding Biology.
	DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
exist	Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's loca
	wooded
	scrub-
	shrub
	FIROW V
	/ / hh06
red	

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Stream 126 **Modified Class 2** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121517-06 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ff) 200 LAT. 39.41306 LONG84.24647 RIVER CODE RIVER MILE	
DATE 12/05/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS: Culvert	RY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
TYPE PERCENT TYPE PERCENT ME	etric
BLDR SLABS [16 pts] 0% SILT [3 pt] 30%	oints
LILI BEDROCK 116 of U% LILI FINE DETRITUS 13 of S	ostrate
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt]	x = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ MUCK [0 pts] ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	20
Total of Percentages of 25 00% (A) Substrate Percentage 100% (B)	+ B
Bldr Slabs, Boulder, Cobble, Bedrock  SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15  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	l Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):  30 centimeters [20 pts]  Ma:  > 5 cm - 10 cm [15 pts]	x = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 3.00	
	nkfull
> 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]  Ma	nkfull /idth ax=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]  WMa	/idth ax=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]  WMa	/idth
> 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	/idth ax=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	/idth ax=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  (Most Predominant per Bank)  L R	/idth ax=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 m (<=3' 3") [5 pts]   ≤ 1.0 m (<=3' 3") [5 pts]   ✓   ≤ 1.0 m (<=3' 3") [5 p	/idth ax=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  Wide >10m  Moderate 5-10m  Pasture Row Crop	/idth ax=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  FLOODPLAIN QUALITY  RIPARIAN WIDTH  L R (Per Bank) Wide >10m Mature Forest, Wetland Wide >10m Moderate 5-10m  Mature Forest, Shrub or Old Field  Narrow <5m  Narrow <5m  Narrow <5m  PLOOD Plain Pasture, Row Crop	/idth ax=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  Wide >10m  Moderate 5-10m  Pasture Row Crop	/idth ax=30
> 4.0 meters (> 13') [30 pts]	/idth ax=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  FLOODPLAIN QUALITY  NOTE: River Left (L) and Right (R) as looking downstream  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  Field  Narrow <5 m  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Moist Channel, isolated pools, no flow (Intermittent)	/idth ax=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  Wide >10 m  Moderate 5-10m  Moderate 5-10m  Narrow <5m  Narrow <5m  Narrow <5m  None  Fenced Pasture  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	/idth ax=30
> 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]	/idth ax=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 RIPARIAN WIDTH  L R (Per Bank)  Wide >10m	/idth ax=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 Another Legal Riparian Riparia	/idth ax=30
A 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  A NOTE: 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 Mature Forest, Shrub or Old  Field  Narrow <5 m Proceed Pasture  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  2.0  3.0  3.0  3.0  3.0  3.0  3.0  3	/idth ax=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: Warren Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 25%
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:
DIOTIO EVALUATION
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIP
scrub-snrub/old field —— **********************************
Include important landmarks and other features of inte
FLOW mowed
In RA
hh06
$\mathcal{U}^{q} \mathcal{V}^{q}$ hh06
residential
PHWH Form Page - 2 October 24, 2002 Revision

Reset Form

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Stream 127



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

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**Modified Class 1** 

SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-121517-05 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.41412 LONG84.25190 RIVER CODE RIVER MILE	
DATE 12/05/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOMMODIFICATIONS: 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  PERCENT  TYPE  PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 70%	Points
BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  O%  LEAF PACK/WOODY DEBRIS [3 pts]  O%  FINE DETRITUS [3 pts]  O%	Substrate
☐ ☐ COBBLE (65-256 mm) [12 pts] ☐ ☐ CLAY or HARDPAN [0 pt] ☐ <b>0</b> %	Max = 40
GRAVEL (2-64 mm) [9 pts]	9
Orace (committee)	
Total of Percentages of 0.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):  > 30 centimeters [20 pts]  > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 4.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):  > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
200	_
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	
<u>L R</u> (Per Bank) <u>L R</u> (Most Predominant per Bank) <u>L R</u>	
Wide >10m	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial  Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	o
Moderate 5-10m Immature Forest, Shrub or Old Immature Forest, Shru	)
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial  Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS	0
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial  Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	)
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial  Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial)  Moderate 5-10m Urban or Industrial  Open Pasture, Row Crop  Mining or Construction  Moist Channel, isolated pools, no flow (Intermittent)  Dry channel, no water (Ephemeral)	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial  Narrow <5m Residential, Park, New Field Open Pasture, Row Crop  None Fenced Pasture Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial)  COMMENTS Tain this morning	)
Moderate 5-10m	
Moderate 5-10m	
Moderate 5-10m	

ADDITIONAL STREAM INFORMATION (This Information Must Ale	so be Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
EWH Name:	Distance from Evaluated Stream  Distance from Evaluated Stream
_	ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	
County: Warren Tow	nship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	<b>12/05/17</b> Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 10	0%
Were samples collected for water chemistry? (Y/N):	ab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
V	ot, please explain:
is the sampling reach representative of the stream (1714)	n, picase explain.
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucl	ner collections optional. NOTE: all voucher samples must be labeled with the sit
ID number. Include appropriate field da	ata sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders	Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aqu	atic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Sommonia regularing Biology.	
DRAWING AND NARRATIVE DESCRIPTION	N OF STREAM REACH (This <u>must</u> be completed):
·	for site evaluation and a narrative description of the stream's location
existing T Line row crop	<i>u.</i> 0
	with
FLOW →	
PLOW	\ <u> </u>
	scrub-shrub/old field
gno1 × \	-
hh05	1
pasture	
	_

Stream 128 Modified Class 2



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120517-04 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.41791 LONG84.27398 RIVER CODE RIVER MILE	
DATE 12/05/17 SCORER jbl, pjr COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING CHANNEL CHANNEL CHANNEL RECOVERED 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 RECOVERIN	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: 15  TOTAL NUMBER OF SUBSTRATE TYPES: 6	HHEI Metric Points Substrate Max = 40 21
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]	
> 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 14.00	
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): 3.50	15
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old  Immature Forest, Shrub or Old  Narrow <5m  Narrow <5m  Residential, Park, New Field  Open Pasture, Row Cro  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  STREAM GRADIENT ESTIMATE	

ADDITIONAL STREAM INFORMATION (This Information Mus	st 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
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Warren	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation	12/05/17 Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open):	90%
Were samples collected for water chemistry? (Y/N): N (N	lote 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)	
Additional comments/description of pollution impacts.	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. \	oucher collections optional. NOTE: all voucher samples must be labeled with the sit
	eld data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamani Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N	ders Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	N Voucier (1714)
	TION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of inter	est for site evaluation of the stream's location
existing T Line	
$\varphi()$	1/9
FLOW	
	scrub-shrub/old field
1171	
hh04	
row cro	) (
	HWH Form Page - 2

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October 24, 2002 Revision

Stream 129 **Modified Class 1** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchings	
hh-jbl-120517-01 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. 39.41949 LONG84.28112 RIVER CODE RIVER MILE	
DATE 12/05/17 SCORER jbl, pjr 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 Channelized	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]	Points
BEDROCK [16 pt]  BEDROCK [16 pt]  D'A  D'A  D'A  D'A  D'A  D'A  D'A  D'	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	Wax = 40
GRAVEL (2-64 mm) [9 pts]	8
Total of Percentages of 0.00% (A) Substrate Percentage 100% (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):	Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm - 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
	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]	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 ♣NOTE: 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 ☆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  ↑NOTE: 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  Noderate 5-10m  V 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  L R  Wide >10 m	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 ANOTE RIPARIAN WIDTH  L R (Per Bank) Wide >10m Mature Forest, Wetland  Wide >10m Mature Forest, Shrub or Old Field  Onen Pasture Row Circles	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 ANOTE RIPARIAN WIDTH  L R (Per Bank) Wide >10m Mature Forest, Wetland  Wide >10m Mature Forest, Shrub or Old Field  Onen Pasture Row Circles	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  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Moderate 5-10 m  Moderate 5-10 m  Residential, Park, New Field  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
A.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 m (	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 Mature Forest, Shrub or Old  Narrow <5 m Residential, Park, New Field  Narrow <5 m Residential, Park, New Field  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]    1.0 m (<=3' 3") [5 pts]    2.1 m (<=3' 3") [5 pts]    3.00    3.00    4.0 m (<=3' 3") [5 pts]    5 nt	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  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  Residential, Park, New Field  Vide None  COMMENTS  Fenced Pasture  Flood 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
> 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  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  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  AVERAGE BANKFULL WIDTH  (Feet):  3.00  AVERAGE BANKFULL WIDTH  (Feet):  3.00  AVERAGE BANKFULL WIDTH  (Feet):  3.00  Moist Channel, isolated pools, no flow (Intermitten 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 And Floodplain Quality  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10m  Mature Forest, Wetland  Wide > 10m  Mature Forest, Wetland  Narrow < 5m  None  Residential, Park, New Field  Fenced Pasture  Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None  1.0  Check ONLY one box):  None	Width Max=30  15

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complete	ted):
QHEI PERFORMED? - Yes V No QHEI Score (If Ye	es, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATER	RSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil	Map Page: NRCS Soil Map Stream Order
County: Warren Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 12/05/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no.	or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S	
Is the sampling reach representative of the stream (Y/N)	
is the sampling reach representative of the stream (17/10) in not, please expla	un.
Additional comments/description of pollution impacts:	
Additional commence accomplish of policinon impacts.	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections of	optional. NOTE: all voucher samples must be labeled with the si
ID number. Include appropriate field data sheets from	
Fish Observed? (Y/N) N Salamanders Observed? (Y/N) Salamanders Observed? (Y/N)	(N) N Voucher? (Y/N) N
rogs of Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinve	rtebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
<u>I</u>	
DRAWING AND NARRATIVE DESCRIPTION OF STRE	AM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluate	tion and a narrative description of the stream's location
existing T Line pasture	
	()
FLOW	
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pasto	ure
PHWH Form Page - October 24, 2002 Revision	2

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Stream 130 **Modified Class 2** 



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SITE NAME/LOCATION AEP Hillsboro-Hutchi	inge			
hh-jbl-120517-012 SITE NUMBER	RIVER BASIN DRAINAGE AREA (mi²)			
	39.41926 LONG84.28139 RIVER CODE RIVER MILE			
DATE 12/05/17 SCORER jbl, pjr	COMMENTS Intermittent			
	efer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ione		
STREAM CHANNEL NONE / NATURA MODIFICATIONS:	ALCHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE	ERY		
	pe of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI		
(Max of 32). Add total number of significant su  TYPE  PERCE	ENT TYPE PERCENT N	<b>Netric</b>		
BLDR SLABS [16 pts] 0%	SILT [3 pt] 70%	oints		
BOULDER (>256 mm) [16 pts] 0% BEDROCK [16 pt] 0%		ubstrate		
BEDROCK [16 pt] 0% COBBLE (65-256 mm) [12 pts] 0%	I INC DETRITOO [5 pts]	Max = 40		
GRAVEL (2-64 mm) [9 pts] 0%				
SAND (<2 mm) [6 pts] 0%	ARTIFICIAL [3 pts]	8		
Total of Percentages of 0.00%	% (A) Substrate Percentage 100% (B)	A + B		
Bldr Slabs, Boulder, Cobble, Bedrock  SCORE OF TWO MOST PREDOMINATE SUBSTRAT	Cneck			
SCORE OF TWO MOST PREDOMINATE SUBSTRAT	TOTAL NUMBER OF SUBSTRATE TIPES: 2			
Maximum Pool Depth (Measure the maxime evaluation. Avoid plunge pools from road culvers)		ool Dept		
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	nax = 30		
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	20		
> 10 - 22.5 cm [25 pts]		20		
COMMENTS	MAXIMUM POOL DEPTH (Inches): 15.04			
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bankfu				
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		Width Max=30		
> 3.0 m - 4.0 m (> 9 7 - 13 ) [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	✓ ≤ 1.0 m (<=3' 3") [5 pts]	viax=30		
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 3.00	5		
COMMENTS	AVERAGE BANKFOLE WIDTH (Feet): 0.00			
	This information must also be completed			
RIPARIAN ZONE AND FLOODPLAIN	· · · · · · · · · · · · · · · · · · ·			
RIPARIAN WIDTH FL L R (Per Bank) L	LOODPLAIN QUALITY . R (Most Predominant per Bank) L R			
L IX (I CI Dalik)	Mature Forest, Wetland Conservation Tillage			
Wide >10m	iviature i diest, wetiand Conservation i mage			
	Immature Forest, Shrub or Old			
Wide >10m  Moderate 5-10m	Immature Forest, Shrub or Old Field Urban or Industrial Onen Pasture Row Crop			
Wide >10m  Moderate 5-10m  Narrow <5m	Immature Forest, Shrub or Old Field Urban or Industrial  Residential, Park, New Field Open Pasture, Row Crop			
Wide >10m  Moderate 5-10m	Immature Forest, Shrub or Old Field Urban or Industrial Onen Pasture Row Crop			
Wide >10m  Moderate 5-10m  Narrow <5m  None  COMMENTS	Immature Forest, Shrub or Old Field Urban or Industrial  Residential, Park, New Field Open Pasture, Row Crop  Fenced Pasture Mining or Construction			
Wide >10m  Moderate 5-10m  Narrow <5m  None COMMENTS  FLOW REGIME (At Time of Evaluation Stream Flowing	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Open Pasture, Row Crop Fenced Pasture Mining or Construction  on) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent)			
Wide >10m  Moderate 5-10m  Narrow <5m  None  COMMENTS  FLOW REGIME (At Time of Evaluation  Stream Flowing Subsurface flow with isolated pools (Interpretation)	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Open Pasture, Row Crop Fenced Pasture Mining or Construction  on) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent)			
Wide >10m  Moderate 5-10m  Narrow <5m  None COMMENTS  FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools (Interest Comments) COMMENTS rain this morning	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Open Pasture, Row Crop Fenced Pasture Mining or Construction  On) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)			
Wide >10m  Moderate 5-10m  Narrow <5m  None COMMENTS  FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools (Interest Comments) COMMENTS rain this morning  SINUOSITY (Number of bends per 61)	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Open Pasture, Row Crop Mining or Construction  On) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  Im (200 ft) of channel) (Check ONLY one box):			
Wide >10m  Moderate 5-10m  Narrow <5m  None COMMENTS  FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools (Intercomment) COMMENTS rain this morning	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Mining or Construction  On) (Check ONLY one box):  Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  Im (200 ft) of channel) (Check ONLY one box):  2.0 3.0			
Wide >10m  Moderate 5-10m  Narrow <5m  None COMMENTS  FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools (Interpretation of the complete of	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Mining or Construction  On) (Check ONLY one box):  Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  Im (200 ft) of channel) (Check ONLY one box):  2.0 3.0			
Wide >10m  Moderate 5-10m  Narrow <5m  None COMMENTS  FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools (Interpretation of the comment	Immature Forest, Shrub or Old Field Urban or Industrial Open Pasture, Row Crop Residential, Park, New Field Mining or Construction  On) (Check ONLY one box):  Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)  Im (200 ft) of channel) (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				
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				
MISCELLANEOUS  Page Flow Conditions 2 (V/N): Y  Date of last precipitation: 12/05/17  Ougantity:				
Base Flow Conditions: (17N) Bate of last precipitation Quantity				
Photograph Information: N 100%				
Elevated Turbidity? (Y/N): Canopy (% open):				
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:				
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (μmhos/cm)				
Is the sampling reach representative of the stream (Y/N) If not, please explain:				
Additional comments/description of pollution impacts:				
Performed? (Y/N):  (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the soll 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 <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 existing T Line  pasture				
FLOW				
hh02 pasture				
October 24, 2002 Revision  PHWH Form Page - 2  Save as pdf  Reset Form				

Stream 131 **Modified Class 2** 



39
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SITE NAME/LOCATION AEP Hillsboro-Hutchings					
hh-jbl-120517-03 SITE NUMBER RIVER BASIN DRAINAGE AREA (mi²)					
LENGTH OF STREAM REACH (ft) 200 LAT. 39.42070 LONG84.28998 RIVER CODE RIVER MILE					
DATE 12/05/17 SCORER jbl, pjr COMMENTS intermittent					
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions					
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOMMODIFICATIONS: Channelized	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]					
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40				
COBBLE (65-256 mm) [12 pts]					
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 0%	9				
Total of Percentages of 15.00% (A) Substrate Percentage 100% (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]	25				
	25				
COMMENTS MAXIMUM POOL DEPTH (Inches): 5.00					
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] > 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]   ≤ 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  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]	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  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  P1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]  AVERAGE BANKFULL WIDTH  (Feet): 3.00  L R  Moderate 5-10m  Conservation Tillage  Immature Forest, Shrub or Old  Urban or Industrial	Width Max=30				
3.00 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]     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  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 >10m Mature Forest, Wetland Conservation Tillage  Immature Forest, Shrub or Old Urban or Industrial Field  Conservation FloodPlain Pow Creen  Conservation Field	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  ♣ 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  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Wide >10m  Mature Forest, Wetland  Immature Forest, Shrub or Old  Immature Forest, Shrub or Old  Field  Narrow <5m  Narrow <5m  Residential, Park, New Field  Open Pasture, Row Crop  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 And RIPARIAN WIDTH  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  Flood Residential, Park, New Field  Flood Residential  Narrow <5 m  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  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  Mide >10 m  Mature Forest, Wetland  Mature Forest, Shrub or Old  Field  Narrow <5m  Residential, Park, New Field  None  COMMENTS  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):	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  L R (Per Bank)  Wide >10 m  Mature Forest, Wetland  Wide >10 m  Mature Forest, Shrub or Old  Immature Forest, Shrub or Old  Narrow <5m  Narrow <5m  Narrow <5m  Residential, Park, New Field  Open Pasture, Row Crog  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  Tain this morning	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 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: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_ Y Date of last precipitation: 12/05/17	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 80%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id.	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Performed? (Y/N):  (If Yes, Record all observations. Voucher collections options ID number. Include appropriate field data sheets from the P  Fish Observed? (Y/N)  N  Voucher? (Y/N)  N  Salamanders Observed? (Y/N)  Frogs or Tadpoles Observed? (Y/N)  Voucher? (Y/N)  N  Aquatic Macroinvertebra  Comments Regarding Biology:	rimary Headwater Habitat Assessment Manual)  Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This must be completed):
Include important landmarks and other features of interest for site evaluation a	
existing T Line	scrub- shrub/old field
FLOW →	J. 6
hh03 scrub-shrub/old	
field From Form Page - 2	
October 24, 2002 Revision	Save as pdf Reset Form



## APPENDIX D

**DELINEATED FEATURES PHOTOGRAPHS** 



**D1- DELINEATED WETLANDS** 



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project

60556975

#### Date:

December 6, 2017

#### **Description:**

Wetland 01

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

AEP Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

#### Date:

December 6, 2017

#### **Description:**

Wetland 02

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

AEP

December 7, 2017

**Description:** 

Wetland 03

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

Date:

December 7, 2017

**Description:** 

Wetland 04

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

AEP

December 7, 2017

**Description:** 

Wetland 05

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

Date:

December 7, 2017

#### **Description:**

Wetland 06

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

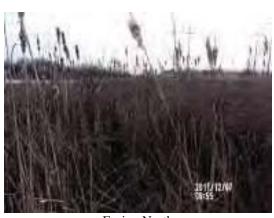
Date:

December 7, 2017

**Description:** 

Wetland 07

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



60556975

Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project

Date:

December 12, 2017

**Description:** 

Wetland 08

PEM



Facing North



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

Date:

December 12, 2017

**Description:** 

Wetland 09

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

AEP Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

December 13, 2017

**Description:** 

Wetland 10

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP

Hillsboro-Hutchings 138kV Rebuild Project

60556975

#### Date:

December 13, 2017

#### **Description:**

Wetland 11

PEM



Facing North





Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

Date:

December 13, 2017

**Description:** 

Wetland 12

PEM



Facing North



Facing South





Facing West



Soil Pit



Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

AEP

December 13, 2017

#### **Description:**

Wetland 13

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

AEP Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

#### Date:

December 13, 2017

#### **Description:**

Wetland 14

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

### Date:

December 14, 2017

### **Description:**

Wetland 15

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Site Location:

Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

AEP

December 14, 2017

Client Name:

### **Description:**

Wetland 16

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

### Date:

December 13, 2017

### **Description:**

Wetland 17

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location: AEP

Hillsboro-Hutchings 138kV Rebuild Project

60556975

### Date:

December 13, 2017

### **Description:**

Wetland 18

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

### Date:

December 13, 2017

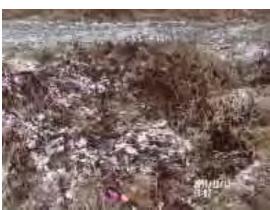
### **Description:**

Wetland 19

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

### Date:

December 12, 2017

### **Description:**

Wetland 20

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



60556975

Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP

Date:

December 11, 2017

### **Description:**

Wetland 21

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

### Date:

December 12, 2017

### **Description:**

Wetland 22

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

### Date:

December 11, 2017

### **Description:**

Wetland 23a

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

Date:

December 11, 2017

**Description:** 

Wetland 23b

PFO



Facing North



Facing South



Facing East



Facing West



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

### Date:

December 11, 2017

### **Description:**

Wetland 24

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP

Project No. 60556975

### Date:

December 11, 2017

### **Description:**

Wetland 25

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

### Date:

December 7, 2017

### **Description:**

Wetland 26

PEM





Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location: Project No.

AEP Hillsboro-Hutchings 138kV Rebuild Project 60556975

### Date:

December 6, 2017

### **Description:**

Wetland 27

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

AEP Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

### Date:

December 6, 2017

### **Description:**

Wetland 28

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

### Date:

December 6, 2017

### **Description:**

Wetland 29

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

AEP

December 5, 2017

### **Description:**

Wetland 30

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project

Project No. 60556975

Date:

AEP

December 5, 2017

### **Description:**

Wetland 31

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



Project No. Client Name: Site Location:

Hillsboro-Hutchings 138kV Rebuild Project AEP 60556975

### Date:

December 5, 2017

### **Description:**

Wetland 32

PEM



Facing North



Facing South



Facing East



Facing West



Soil Pit



**D2 - DELINEATED STREAMS** 



STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

### Date:

December 6, 2017

### **Description:**

Stream 01

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

**Client Name:** 

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 02

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

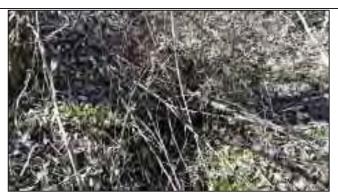
## **Description:**

Stream 03

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

**Client Name:** 

### **Description:**

Stream 04

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 05

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 06

Intermittent



Facing Upstream



Facing Downstream



Substrate



Client Name:

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 07

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

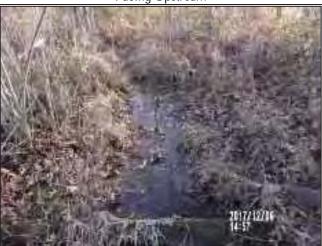
### **Description:**

Stream 08

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

## **Description:**

Stream 09

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 10

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 11

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 12

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

## PHOTOGRAPHIC RECORD STREA S

Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

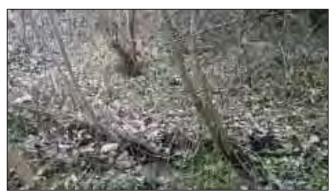
### **Description:**

Stream 13

Intermittent



Facing Upstream



Facing Downstream



Substrate



STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 14

Ephemeral



Facing Upstream



Facing Downstream



Substrate



STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 15

Ephemeral



Facing Upstream



Facing Downstream



Substrate



STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 16

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

## **Description:**

Stream 17

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 18 (Dodson Creek)

Perennial

Fair Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

## **Description:**

Stream 19

Perennial

Fair Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 20

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

## **Description:**

Stream 21

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 22

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 23

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 24

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 25

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 26 (East Fork Little Miami River)

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

## **Description:**

Stream 27

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 28

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

## **Description:**

Stream 29

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

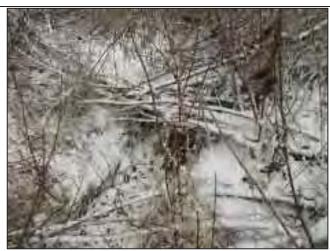
#### Date:

December 12, 2017

### **Description:**

Stream 30

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 31

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

**Client Name:** 

### **Description:**

Stream 32

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 33

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

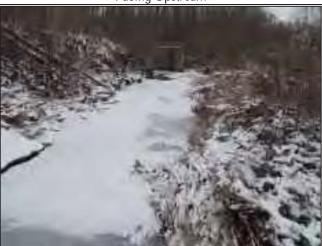
Stream 34

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 35

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

## **Description:**

Stream 36

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 37

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

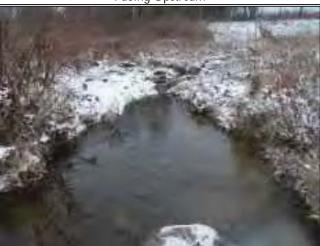
Stream 38

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

**Client Name:** 

### **Description:**

Stream 39

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

## **Description:**

Stream 40

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

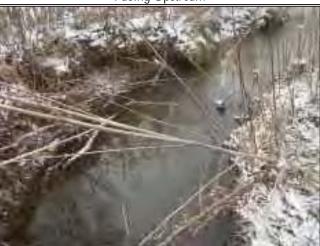
Stream 41

Perennial

Fair Warmwater



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

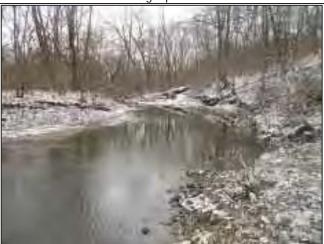
Stream 42

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 43

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 44

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

**Client Name:** 

### **Description:**

Stream 45

Perennial

Fair Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

## **Description:**

Stream 46

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 47 (Whitakers Run)

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

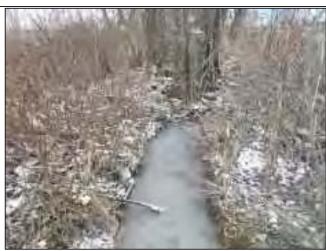
#### Date:

December 13, 2017

## **Description:**

Stream 48

Intermittent



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 18, 2017

## **Description:**

Stream 49

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 18, 2017

## **Description:**

Stream 50

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 51 (Second Creek)

Perennial

Warm Water Habitat



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 18, 2017

## **Description:**

Stream 52

Perennial

Very Poor Warmwater



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 53

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 54

Intermittent



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 55

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 56

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 57

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

## **Description:**

Stream 58

Perennial



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

## **Description:**

Stream 59

Ephemeral



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

## **Description:**

Stream 60

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

## **Description:**

Stream 61

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 62

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

### **Description:**

Stream 63

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 14, 2017

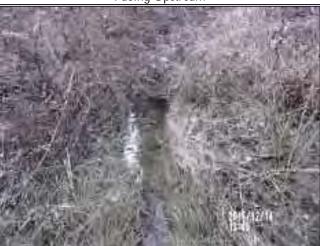
## **Description:**

Stream 64

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 65

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 66

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 67

Intermittent



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

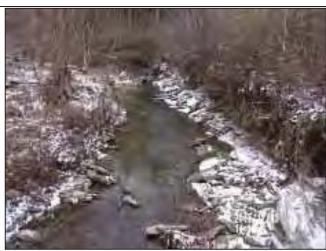
December 13, 2017

**Client Name:** 

## **Description:**

Stream 68

Perennial



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

## **Description:**

Stream 69

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

## **Description:**

Stream 70

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

### **Description:**

Stream 71

Ephemeral

Class 2



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 13, 2017

## **Description:**

Stream 72

Intermittent

Class 2



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

## **Description:**

Stream 73

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 74 (Todd Fork)

Perennial

Warmwater Habitat



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 75

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

**Client Name:** 

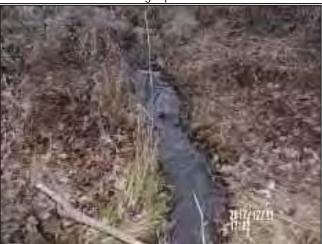
### **Description:**

Stream 76

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 77

Ephemeral



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

## **Description:**

Stream 78

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 79

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 80

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 12, 2017

### **Description:**

Stream 81

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 82 (Little Miami River)

Perennial

Exceptional Warmwater Habitat



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

### **Description:**

Stream 83

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 84

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

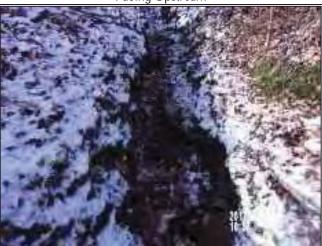
### **Description:**

Stream 85

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

### **Description:**

Stream 86

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

### **Description:**

Stream 87

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

### **Description:**

Stream 88

Ephemeral

Class 1



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 89

Intermittent

Class 2



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 90

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 11, 2017

## **Description:**

Stream 91

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

## **Description:**

Stream 92

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

## **Description:**

Stream 93

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 94

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

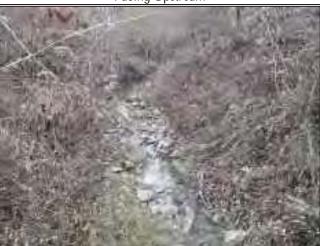
## **Description:**

Stream 95

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

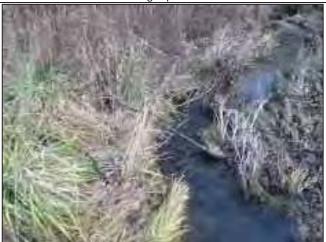
## **Description:**

Stream 96

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

## **Description:**

Stream 97

Perennial



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

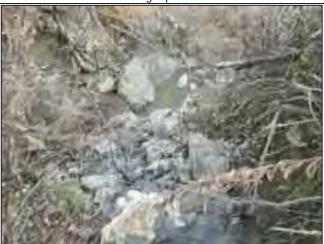
### **Description:**

Stream 98

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

## **Description:**

Stream 99

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

## **Description:**

Stream 100

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 101

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

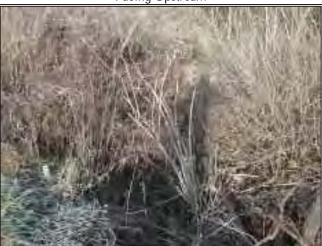
## **Description:**

Stream 102

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

### **Description:**

Stream 103

Intermittent



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

## **Description:**

Stream 104

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

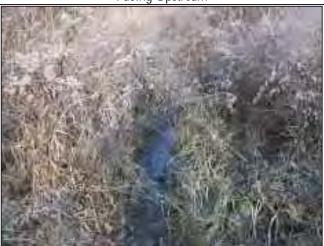
## **Description:**

Stream 105

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

## **Description:**

Stream 106

Perennial



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

### **Description:**

Stream 107

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

## **Description:**

Stream 108 (Dry Run)

Perennial

Fair Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 8, 2017

## **Description:**

Stream 109

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

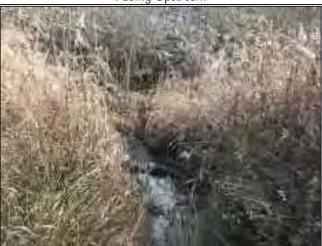
### **Description:**

Stream 110

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

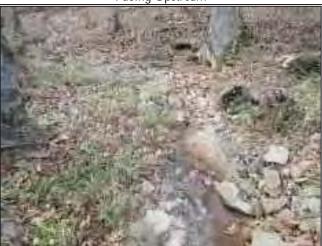
### **Description:**

Stream 111

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Client Name:

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

## **Description:**

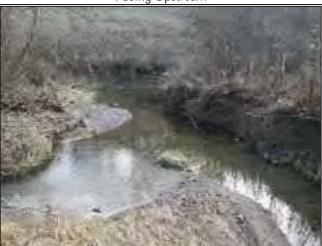
Stream 112 (Bee Run)

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 113

Perennial

Good Warmwater



Facing Upstream



Facing Downstream



Substrate



## PHOTOGRAPHIC RECORD

STREA S

**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

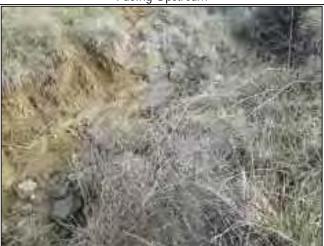
## **Description:**

Stream 114

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

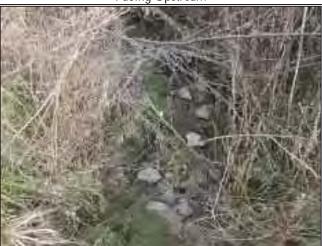
### **Description:**

Stream 115

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 7, 2017

### **Description:**

Stream 116

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Client Name:

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

## **Description:**

Stream 117

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 118

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 119

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

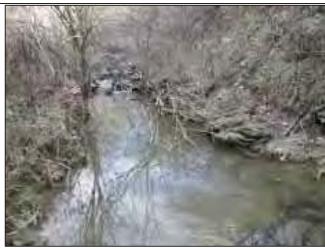
#### Date:

December 6, 2017

## **Description:**

Stream 120

Perennial



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

### **Description:**

Stream 121

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

## **Description:**

Stream 122

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

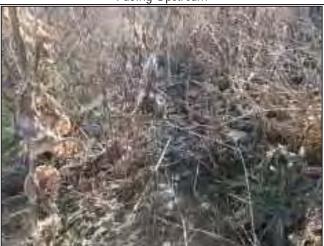
### **Description:**

Stream 123

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 6, 2017

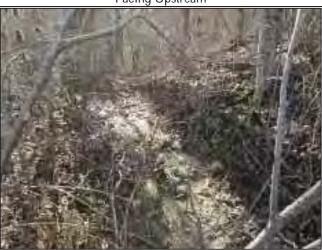
### **Description:**

Stream 124

Ephemeral



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

#### **Description:**

Stream 125 (Turtle Creek)

Perennial

Warmwater Habitat



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

#### **Description:**

Stream 126

Intermittent



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

**Client Name:** 

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

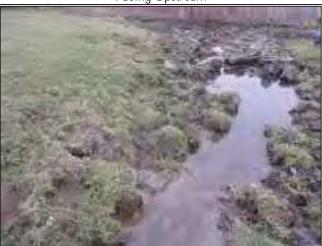
#### **Description:**

Stream 127

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

#### **Description:**

Stream 128

Intermittent



Facing Upstream



Facing Downstream



Substrate



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

#### **Description:**

Stream 129

Ephemeral



Facing Upstream



Facing Downstream



Substrate



Client Name:

AEP

Site Location:

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

#### **Description:**

Stream 130

Intermittent



Facing Upstream



Facing Downstream



Substrate



Site Location:

AEP

**Client Name:** 

Hillsboro-Hutchings 138kV r ns ission ine Project

Project No. 60556975

#### Date:

December 5, 2017

#### **Description:**

Stream 131

Intermittent



Facing Upstream



Facing Downstream



Substrate



**D3 - DELINEATED PONDS** 



**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 1

Date:

December 6, 2017

Description:

Pond 01

Facing South



Photo No 2

Date:

December 7, 2017

Description:

Pond 02

Facing orthwest





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 3

Date:

December 7, 2017

Description:

Pond 03

Facing orthwest



Photo No 4

Date:

December 7, 2017

Description:

Pond 04

Facing orth





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 5

Date:

December 7, 2017

Description:

Pond 05

Facing orth



Photo No 6

Date:

December 12, 2017

Description:

Pond 06

Facing South





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

Project No. 60556975

Photo No 7

Date:

December 12, 2017
Description:

Pond 07

Facing Southwest



Photo No 8

Date:

December 12, 2017

Description:

Pond 08

Facing South





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 9

Date:

December 12, 2017

Description:

Pond 09

Facing Southeast



Photo No 10

Date:

December 13, 2017

Description:

Pond 10

Facing East





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 11

Date:

December 13, 2017

Description:

Pond 11

Facing Southeast



Photo No 12

Date:

December 13, 2017

Description:

Pond 12

Facing West





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 13

Date:

December 14, 2017

Description:

Pond 13

Facing West



Photo No 14

Date:

December 13, 2017

Description:

Pond 14

Facing West





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No. 15

Date:

December 12, 2017

Description:

Pond 15

Facing orthwest



Photo No 16

Date:

December 12, 2017

Description:

Pond 16

Facing Southeast





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 17

Date:

December 11, 2017

Description:

Pond 17

Facing orthwest



Photo No 18

Date:

December 7, 2017

Description:

Pond 18

Facing East





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 19

Date:

December 7, 2017

Description:

Pond 19

Facing West



Photo No 20

Date:

December 6, 2017

Description:

Pond 20

Facing orthwest





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 21

Date:

December 6, 2017

Description:

Pond 21

Facing ortheast



Photo No 22

Date:

December 6, 2017

Description:

Pond 22

Facing West





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 23

Date:

December 6, 2017

Description:

Pond 23

Facing East



Photo No 24

Date:

December 6, 2017

Description:

Pond 24

Facing West





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 25

Date:

December 8, 2017

Description:

Pond 25

Facing orthwest



Photo No 26

Date:

December 8, 2017

Description:

Pond 26

Facing East





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 27

Date:

December 7, 2017

Description:

Pond 27

Facing East



Photo No 28

Date:

December 6, 2017

Description:

Pond 28

Facing East





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

**Project No.** 60556975

Photo No 29

Date:

December 5, 2017

Description:

Pond 29

Facing South



Photo No 30

Date:

December 5, 2017

Description:

Pond 30

Facing Southeast





**Client Name:** 

AEP

Site Location:

Hillsboro-Hutchings 138 kV r ns ission ine Rebuild Project

Project No.

60556975

Photo No 31

Date:

December 5, 2017
Description:

Pond 31

Facing West





#### APPENDI E

CORRESPONDENCE LETTERS RO S WS AND ODNR



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

January 4, 2018

Jeff Brown AECOM 525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Re: 17-798; Hillsboro- Hutchings 138 kV Project

**Project:** The proposed project involves rebuilding approximately 36 miles of 138 kV line between Duke Energy's Clinton Station and Dayton Power and Light's Middleboro Station.

**Location:** The proposed project is located in Highland, Clinton, and Warren Counties, 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 the following records at or within a one-mile radius of the project area:

Screw-stem (Bartonia paniculata), T
Running buffalo clover (Trifolium stoloniferum), E, FE
Beech sugar maple forest plant community
Oak maple forest plant community
Elktoe (Alasmidonta marginata), SC, FSC
Fawnsfoot (Truncilla donaciformis), T
Indiana bat (Myotis sodalis), E, FE
Upland sandpiper (Bartramia longicauda), E
Loggerhead shrike (Lanius ludovicianus), E, FSC
Mussel bed
Little Miami State Scenic River
Halls Creek Woods State Nature Preserve – ODNR Division of Natural Areas & Preserves
Halls Creek State Canoe Access – ODNR Division of Parks & Watercraft
Little Miami Scenic State Park – ODNR Division of Parks & Watercraft
Oldaker Wildlife Area – ODNR Division of Wildlife

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. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

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.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; A = species recently added to state inventory, status not yet determined; X = presumed extirpated in Ohio; FE = federal endangered, FT = federal threatened, FSC = federal species of concern, FC = federal candidate species.

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

The DOW recommends that impacts to streams, 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 portion of the project route from Mullen Hill Road in Clinton County to the eastern terminus of the project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Presence of the Indiana bat has been established in this area, and therefore additional summer surveys would not constitute presence/absence in the area. If suitable habitat occurs within this 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.

The remainder of the project route is within the range of the Indiana bat (Myotis sodalis). The following species of trees have relatively high value as potential Indiana bat roost trees to include: 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 (Ouercus 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 club shell (*Pleurobema clava*), a state endangered and federally endangered mussel, the rayed bean (Villosa fabalis), a state endangered and federally endangered mussel, the snuffbox (Epioblasma triquetra), a state endangered and federally endangered mussel, the washboard (Megalonaias nervosa), a state endangered mussel, the threehorn wartyback (Obliquaria reflexa), a state threatened mussel, the black sandshell (Ligumia recta), a state threatened mussel, and the fawnsfoot (Truncilla donaciformis), a state threatened mussel. This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2016), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 10 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2016) can be found at:

 $\frac{http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses\%20\&\%20permits/OH\%20Mussel\%20Survey\%20Protocol.pdf}{}$ 

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the goldeye (*Hiodon alosoides*), a state endangered fish, the mountain brook lamprey (*Ichthyomyzon greeleyi*), a state endangered fish, the bigeye shiner (*Notropis boops*) a state threatened fish, the American eel (*Anguilla rostrata*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. The DOW recommends no in-water work in perennial streams at least April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact these or other aquatic species.

The project is within the range of the eastern massasauga (*Sistrurus catenatus*), a state endangered and federally threatened snake species. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat. Due to the location, the type of habitat present along the project route and within the vicinity of the project area, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but is also known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat present along the project route and within the vicinity of the project area, this project is not likely to impact this species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat present along the project route and within the vicinity of the project area, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, this project is not likely to impact this species.

The DOW has multiple records along the project route for the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the Sloan's crayfish (*Orconectes sloanii*), a state threatened species. The DOW recommends that any in-stream portions of the project be conducted during base or slightly above flow to allow the Sloan's crayfish to relocate out of the area as in-water work begins. If below base flow periods have created pools potentially confining the Sloan's crayfish, the DOW recommends that any pools proposed to be impacted be cleared of the Sloan's crayfish using a sweep seine technique. Any captured Sloan's crayfish should be relocated upstream and outside of the project area.

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/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List 8 16.pdf

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

**Sent:** Tuesday, January 09, 2018 11:02 AM

To: Brown, Jeff

**Cc:** nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us

Subject: AEP Hillsboro-Hutchings Proposed Project, Highland, Clinton and Warren Co., OH



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



TAILS# 03E15000-2018-TA-0452

Dear Mr. Brown,

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 nonforested 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.

The proposed project is in the vicinity of one or more confirmed records of Indiana bats. Therefore, we recommend that trees ≥3 inches dbh be saved wherever possible. Because the project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat presence in the vicinity of the project has been confirmed, clearing of trees ≥3 inches dbh during the summer roosting season may result in direct take of individuals. 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 tree removal is unavoidable, we recommend that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. Please note that, because Indiana bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.

The proposed project lies within the range of the **rayed bean** (*Villosa fabalis*), a federally listed endangered species. The rayed bean is generally known from smaller, headwater creeks, but records exist in larger rivers such as the Little Miami River in Warren County. They are usually found in or near shoal or riffle areas, and in the shallow, wave-washed areas of lakes. Substrates typically include gravel and sand, and they are often associated with, and buried under the roots of, vegetation, including water willow (*Justicia americana*) and water milfoil (*Myriophyllum sp.*). Should the proposed project directly or indirectly impact any of the habitat types described above, we recommend that a survey be conducted to determine the presence or probable absence of rayed bean mussels in the vicinity of the proposed site. Any survey should be designed and

conducted in coordination with the Endangered Species Coordinator for this office. Surveyors must have valid Federal and State permits to survey for federally listed mussels in Ohio.

The project lies within the range of the **eastern massasauga** (*Sistrurus catenatus*), a small, docile rattlesnake that is federally listed as threatened. Several factors have contributed to the decline of the species including habitat loss and fragmentation, indiscriminate killing, collection, gene pool contamination and incompatible land use practices.

Eastern massasaugas use both upland and wetland habitat and these habitats differ by season. During the winter, massasaugas hibernate in low wet areas, primarily in crayfish burrows, but may use other structures. Presence of a water table near the surface is important for a suitable hibernaculum. In the summer, massasaugas use drier, open areas that contain a mix of grasses and forbs such as goldenrods and other prairie plants that may be intermixed with trees or shrubs. Adjoining lowland and upland habitat with variable elevations between are critical for the species to travel back and forth seasonally. Should the proposed project area contain any of the habitat types or features described above, we recommend that a habitat assessment be conducted to determine if suitable habitat for the species exists within the vicinity of the proposed site. Please note that habitat assessments should only be conducted by a herpetologist permitted by the Ohio Division of Wildlife to conduct eastern massasauga surveys (list attached) due to variable habitat types and the cryptic nature of the species. Any habitat assessments or surveys should be coordinated with this office.

The proposed project lies within the range of **running buffalo clover** (*Trifolium stoloniferum*), a federally listed endangered species. From the information provided it appears that the site does receive filtered sunlight and limited disturbance occurs due to the presence of the utility right of way. The disturbance of the existing right-of-ways may damage or destroy any existing plants. Since the existing utility easements provides suitable sunlight as well as some limited disturbance indicating suitable habitat the Service recommends completing the work between August 1 and March 30 after the perennial plant has died back for the season and foliage will not be damaged or destroyed. If work is to be completed outside if that time window, the service requests a survey for running buffalo clover be completed in the sections of line running through Salem and Washington Township in Warren County. Based on the results of the survey the Service will evaluate potential impacts to running buffalo clover from the proposed project. The survey must be coordinated with this office, and may only be completed between May and June when the plant is in flower.

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 ce: Nathan Reardon, ODNR-DOW Kate Parsons, ODNR-DOW



AECOM 525 Vine Street Cincinnati, OH 45202 aecom.com

Project name:

Hillsboro-Hutchings 138 kV Transmission Line Rebuild Project

Project ref: 60556975

From: Jeff Brown

**Date:** May 14, 2018

To: File

CC:

Jake Lubbers

#### Memo

Spoke with Jennifer Finfera from USFWS Ohio Ecological Services Field Office regarding January 9, 2018 technical assistance letter (TAILS#03E15000-2018-TA-0452). Technical Assistance indicated that running buffalo clover may occur within the utility ROW especially near the periphery. I explained that the ROW is maintained 200 foot wide and that due to the width it received full sun throughout the length in Salem and Washington Townships. I indicated that if an access road was needed to be developed or additional ROW through expansion then we would conduct a survey during the appropriate time period or work between August 1 and March 30 to avoid adverse effects. Ms. Finfera indicated that based on our discussion that she did not believe the project would impact this species.

# APPENDIX D OHIO HISTORY CONNECTION COORDINATION



In reply, refer to 2018-MLT-42674

August 30, 2018

Mr. Ryan J. Weller Weller & Associates, Inc. 1395 West Fifth Avenue Columbus, Ohio 43212

RE: Hillsboro-Hutchings Tap 138kV Rebuild Project, Highland, Clinton, Warren, and Butler County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on July 31, 2018 and August 13, 2018 regarding the proposed Hillsboro-Hutchings Tap 138kV Rebuild Project, Highland, Clinton, Warren, and Butler County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the Hillsboro-Hutchings Tap 138kV Rebuild Project in Highland, Clinton, Warren, and Butler County, Ohio* by Weller & Associates, Inc. (2018).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavation was completed as part of the investigations. One (1) previously identified archaeological site is located within the project area. Ohio Archaeological Inventory (OAI) site #33WA0017, Harper's Site, was recorded in 1940 and 1976 as a Fort Ancient village site. The southern portion of the site runs through the current project area. It was believed at the time of recording in 1976 this was the same site documented by James Griffin in the 1940's and Warren Moorehead in 1892. Close internal surface collection took place within the project area where this site is located. No artifacts or cultural features were identified. While the National Register of Historic Places (NRHP) eligibility of the larger site remains unknown, no further investigations are recommended at OAI#33WA0017. Seven (7) new archaeological site was identified during the survey. OAI#33CN0471, 33CN0472, 33WA0989, 33WA0990, 33WA0991, and 33WA0993 are prehistoric isolated finds. OAI#33WA0992 is a prehistoric lithic scatter consisting of two (2) primary thinning flakes. The sites are recommended not eligible for listing in the NRHP. Our office agrees with your determination and no further archaeological work is necessary.

The following comments pertain to the History/Architecture Investigations for the Hillsboro-Hutchings Tap 138kV Rebuild Project in Highland, Clinton, Warren, and Butler County, Ohio by Weller & Associates, Inc. (2018).

The history/architecture field survey included a systematic approach to identifying all properties fifty years of age or older within 1,000' of the project's centerline that may have a potential view of the project. Two previously recorded Ohio Historic Inventory (OHI) properties were identified within the Area of Potential Effects (WAR0046912 and WAR0047012). Additionally, one hundred sixteen (116) individual resources fifty years of age or older were identified during field investigations. Out of the

RPR Serial No: 1075022, 1075175

Mr. Ryan J. Weller Page 2 August 30, 2018

one hundred eighteen total resources identified, nine properties, including the two previously recorded OHIs, were advanced to detailed study for eligibility and effects assessment: CLI0028511, WAR0147409, WAR0147509, WAR0147609, WAR0147705, WAR0147805, WAR0147905, WAR0148005, and WAR0148105.

Weller recommends CLI0028511, WAR0147409, WAR0147805, WAR0147905, and WAR0148005 as eligible for listing in the NRHP under Criterion C. Additionally, WAR0046912, WAR0047012, and WAR0148105 are recommended as eligible for NRHP-listing under Criteria A and C. Our office agrees with Weller's recommendations of eligibility.

Based on the information provided, the transmission line rebuild may be slightly more visible than the existing transmission line. A slight increase in visibility of the transmission line from the above-referenced historic properties should not diminish the significance and integrity that contribute to these properties' NRHP eligibility. Therefore, we agree that the project as proposed will have no adverse effect on historic properties.

Based on the information provided, our office has determined the project will have no adverse effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted.

If you have any questions, please contact me at (614) 298-2022, or by e-mail at <a href="mailto:khorrocks@ohiohistory.org">khorrocks@ohiohistory.org</a>, or Joy Williams at <a href="mailto:jwilliams@ohiohistory.org">jwilliams@ohiohistory.org</a>. Thank you for your cooperation.

Sincerely,

Krista Horrocks, Project Reviews Manager

Resource Protection and Review

cc: Ron Howard, AEP (rmhoward@aep.com)

This foregoing document was electronically filed with the Public Utilities

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in

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

Summary: Letter of Notification Letter of Notification for the Clinton County (Duke)- Hillsboro 138 kV Line Project- SET 3 electronically filed by Tanner Wolffram on behalf of AEP Ohio Transmission Company, Inc.