SITE NAME/LOCATION Apex Republic Win		
IDO!		4
SITE NUMBER DO		1
	AT. 41.19213 LONG82.96490 RIVER CODE RIVER MILE	
NOTE: Complete All Items On This Form -	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruc	tions
STREAM CHANNEL NONE / NATURE MODIFICATIONS:	IRAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	/ERY
	type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
. ,		Metric
BLDR SLABS [16 pts]	0% SILT [3 pt] 100%	Points
	D%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           D%         FINE DETRITUS [3 pts]         0%	Substrate
		Max = 40
	0% MUCK [0 pts] 0%	7
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%	1
Total of Percentages of <b>0.0</b>	00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	Check	
		De el De et
		Pool Dept Max = 30
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
□ > 22.5 - 30 cm [30 pts] □ > 10 - 22.5 cm [25 pts]	✓       < 5 cm [5 pts]	5
OMMENTS		
	MAXIMUM POOL DEPTH (centimeters): 5	
3. BANK FULL WIDTH (Measured as the av	verage of 3-4 measurements) (Check ONLY one box):	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	$\leq 1.0 \text{ m} (<=3' 3") [5 \text{ pts}]$	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.20	
		15
		15
	This information must also be completed	15
RIPARIAN ZONE AND FLOODPLA		15
RIPARIAN ZONE AND FLOODPLA <u>RIPARIAN WIDTH</u> L_R_ (Per Bank)	AIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ <u>FLOODPLAIN QUALITY</u> L R (Most Predominant per Bank) L R	15
RIPARIAN ZONE AND FLOODPLA <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         Mature Forest, Wetland       L         Image Ima	15
RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH LR (Per Bank)	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)         L R       Mature Forest, Wetland         Immature Forest, Shrub or Old       Urban or Industrial         Field       Image	15
RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH L R (Per Bank) Wide >10m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)         L R       Mature Forest, Wetland         Immature Forest, Shrub or Old       Urban or Industrial	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture Row Crop	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY       L         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         R       Mature Forest, Wetland         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         R       Mature Forest, Wetland         Immature Forest, Wetland       Immature Forest, Shrub or Old         Immature Forest, Shrub or Old       Urban or Industrial         Residential, Park, New Field       ✓         Fenced Pasture       Mining or Construction	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         R       Mature Forest, Wetland         Immature Forest, Wetland       Immature Forest, Shrub or Old         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         ation)       (Check ONLY one box):         Moist Channel, isolated pools, no flow (Intermittent)	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         R       Mature Forest, Wetland         Immature Forest, Wetland       Immature Forest, Shrub or Old         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         ation)       (Check ONLY one box):         Moist Channel, isolated pools, no flow (Intermittent)	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY       L       R         L       R       (Most Predominant per Bank)       L       R         Mature Forest, Wetland       Immature Forest, Shrub or Old       Immature Forest, Shrub or Old       Urban or Industrial         Immature Forest, Shrub or Old       Immature Forest, Shrub or Old       Immature, Row Crop       Open Pasture, Row Crop         Immature Forest Pasture       Immature, New Field       Immature, Row Crop       Mining or Construction         Immature Forest Pasture       Immature, New Field       Immature, Row Crop       Immature, Row Crop         Immature Forest Pasture       Immature, New Field       Immature, Row Crop       Immature, Row Crop         Immature Forest Pasture       Immature, Now Field       Immature, Row Crop       Immature, Row Crop         Immature Forest Pasture       Immature, Now Field       Immature, Row Crop       Immature, Row Crop         Immature Forest Pasture       Immature, Now Field       Immature, Row Crop       Immature, Row Crop         Immature Forest Pasture       Immature, Now Field       Immature, Row Crop       Immature, Row Crop         Immature Forest Pasture       Immature Forest Pasture       Immature, Row Crop       Immature, Row Crop         Immature Forest P	15
RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         Narrow <5m	AIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Residential, Park, New Field ✓ Open Pasture, Row Crop Residential, Park, New Field ✓ Mining or Construction ation) (Check ONLY one box): (Interstitial) ✓ Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	15

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):_ Y Date of last precipitation:_ 04/20/17 Quantity: 0.21
Photograph Information:Representative overview photos taken
Elevated Turbidity? (Y/N): Canopy (% open):100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

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



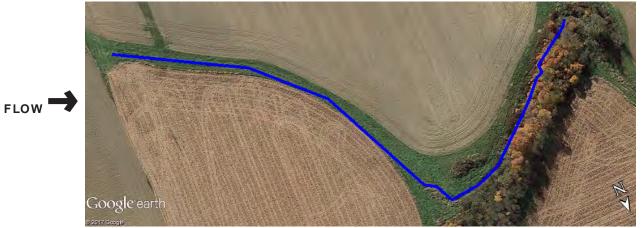


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Apox Popublic W	
SITE NAME/LOCATION Apex Republic W	OH-214     RIVER BASIN     Beaver Creek     DRAINAGE AREA (mi²)     0.12
	LAT. 41.17307 LONG82.92563 RIVER CODE RIVER MILE
DATE 04/27/17 SCORER BH	
-	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NAT MODIFICATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes ant substrate types found (Max of 8). Final metric score is sum of boxes A & B.
BLDR SLABS [16 pts]	0% SILT [3 pt] 90% Points
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           0%         FINE DETRITUS [3 pts]         0%
COBBLE (65-256 mm) [12 pts]	0% □ □ CLAY or HARDPAN [0 pt] 0%
GRAVEL (2-64 mm) [9 pts]	10% MUCK [0 pts] 0% 14
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%
Total of Percentages of <b>0</b>	.00% (A) Substrate Percentage 100% (B) A + B
Bldr Slabs, Boulder, Cobble, Bedrock	
A Marilum Dayl Dayth (Massau (har	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Dep
	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of culverts or storm water pipes)Pool Dep Max = 30Max = 30
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]
> 22.5         - 30 cm [30 pts]           > 10         - 22.5 cm [25 pts]	✓       ✓       5 cm [5 pts]         ✓       ✓       NO WATER OR MOIST CHANNEL [0 pts]    5
OMMIENTS	MAXIMUM POOL DEPTH (centimeters): 5
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONLY one box): Bankful > 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] Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 0.50 5
RIPARIAN ZONE AND FLOODP	This information <u>must</u> also be completed LAIN 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 Moderate 5-10m	Mature Forest, Wetland Conservation Tillage
	Field Open Pasture, Row Crop
Narrow <5m	
COMMENTS	Fenced Pasture
·	
FLOW REGIME (At Time of Eval	uation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent)
Subsurface flow with isolated pool	
COMMENTS	
	er 61 m (200 ft) of channel) (Check ONLY one box):
SINUOSITY (Number of bends per None 0.5	1.0       2.0       3.0         1.5       2.5       >3
None 🗌	1.0 2.0 3.0

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Pa	age: NRCS Soil Map Stream Order
County: Senca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/27/17	Quantity: 0.07
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. a	nd attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	
Additional comments/description of pollution impacts:	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Prin	
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrate	Voucher? (Y/N) N Sobserved? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

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





PHWH Form Page - 2

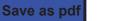


Anay Danublia V	Vind Form	HHEI SCOLE (sum		
SITE NAME/LOCATION Apex Republic V SITE NUMBER		ASIN Beaver Creek	DRAINAGE AREA (mi²)	0 00
ENGTH OF STREAM REACH (ft) <b>60</b>		NG82.92374 RIVER CC		
ATE 05/10/17 SCORER BH				•
NOTE: Complete All Items On This For	m - Refer to "Field Eva	luation Manual for Ohio's	PHWH Streams" for Ins	tructions
TREAM CHANNEL	TURAL CHANNEL	ECOVERED RECOVER	NG 🔲 RECENT OR NO RE	COVERY
SUBSTRATE (Estimate percent of ev		·		
(Max of 32). Add total number of signific TYPE	cant substrate types found PERCENT TYPE	(Max of 8). Final metric score	is sum of boxes A & B. PERCENT	HH   Met
BLDR SLABS [16 pts]	0%	SILT [3 pt]	75%	Poir
BOULDER (>256 mm) [16 pts]	<u>_0%</u> √	LEAF PACK/WOODY DEBF FINE DETRITUS [3 pts]	IS [3 pts] <u>25%</u> 0%	Subst
COBBLE (65-256 mm) [12 pts]	0%	CLAY or HARDPAN [0 pt]	0%	Max =
GRAVEL (2-64 mm) [9 pts]	<u> </u>	MUCK [0 pts]	0%	8
SAND (<2 mm) [6 pts]		ARTIFICIAL [3 pts]	<u></u>	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock _	0.00% <sup>(A)</sup>	Substrate Percentage Check 100%	(B)	A + I
CORE OF TWO MOST PREDOMINATE SUB	STRATE TYPES: 6	TOTAL NUMBER OF S	UBSTRATE TYPES: 2	
Maximum Pool Depth (Measure the r				Pool D
<ul> <li>evaluation. Avoid plunge pools from roa</li> <li>&gt; 30 centimeters [20 pts]</li> </ul>	ad culverts or storm water	bipes) (Check ONLY one bo > 5 cm - 10 cm [15	,	Max =
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	1	<ul> <li>&lt; 5 cm [5 pts]</li> <li>NO WATER OR MO</li> </ul>	DIST CHANNEL [0 pts]	5
				5
OMMENTS		MAXIMUM POOL DI	EPTH (centimeters): 3	
BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	e average of 3-4 measure	ments) (Check ONL) > 1.0 m - 1.5 m (> 3' 3" - 4' 3		Bank
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		≤ 1.0 m (<=3' 3") [5 pts]	, [10 p.0]	Max=
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]				
COMMENTS	······································	AVERAGE BANKFU	LL WIDTH (meters): 1.50	15
	This informatio	n munt also ha assurated		
RIPARIAN ZONE AND FLOOD	PLAIN QUALITY 🔂 🖓 N	<b>n <u>must</u> also be completed</b> OTE: River Left (L) and Right (	R) as looking downstream☆	
<u>RIPARIAN WIDTH</u> L R (Per Bank)	FLOODPLAIN QUALI L R (Most Predo		R	
Vide >10m	Mature Fore	st, Wetland	Conservation Tillage	
Moderate 5-10m	Field	orest, Shrub or Old	Urban or Industrial	
Narrow <5m		Park, New Field	Open Pasture, Row 0	Crop
None None	Fenced Pas	ture	Mining or Constructio	n
COMMENTS				
FLOW REGIME (At Time of Even Stream Flowing	aluation) (Check ONLY of		ated pools, no flow (Intermitte	at)
Subsurface flow with isolated po	ols (Interstitial)	Dry channel, no wa		)
COMMENTS				
SINUOSITY (Number of bends None	per 61 m (200 ft) of chann 1.0	el) (Check $ONLY$ one box): $\square$ 2.0	3.0	
	1.5	2.5	>3	
STREAM GRADIENT ESTIMATE		_	_	
Flat (0.5 ft/100 ft)	Moderate (2 ft/100 ft)	Moderate to Seve	re Severe (10 f	t/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/05/17 Quantity: 0.99
Photograph Information: Representative overview photos taken
Elevated Turbidity? (Y/N): Canopy (% open):100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

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





**Reset Form** 

Apox Popublic W		
SITE NAME/LOCATION Apex Republic W	OH-216 RIVER BASIN Beaver Creek DRAINAGE AREA (mi <sup>2</sup> )	0 15
LENGTH OF STREAM REACH (ft) 394	LAT. 41.15418 LONG82.92425 RIVER CODE RIVER MILE	5.10
DATE 05/10/17 SCORER BH		
	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
·		
STREAM CHANNEL INONE / NAT MODIFICATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	COVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	I HHE
	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B. ERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	0% SILT [3 pt] 100%	Point
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           0%         FINE DETRITUS [3 pts]         0%	Substra
COBBLE (65-256 mm) [12 pts]	0% CLAY or HARDPAN [0 pt] 0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	0% MUCK [0 pts] 0%	7
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%	
Total of Percentages of <b>D</b> Bldr Slabs, Boulder, Cobble, Bedrock	.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBS		
2. Maximum Pool Depth (Measure the m	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road	d culverts or storm water pipes) (Check ONLY one box):	Max = 3
> 30 centimeters [20 pts]	S cm - 10 cm [15 pts] □ < 5 cm [5 pts]	
□ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	30
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 25	
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	≤ 1.0 m (<=3' 3") [5 pts]	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 3.00	20
RIPARIAN ZONE AND FLOODP	This information must also be completed           LAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH	FLOODPLAIN QUALITY	
L R (Per Bank) Wide >10m	L R (Most Predominant per Bank) L R Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Urban or Industrial	
		'n
Narrow <5m		
COMMENTS	Fenced Pasture Mining or Construction	1
		_
FLOW REGIME (At Time of Eval	luation) (Check ONLY one box):	t)
Subsurface flow with isolated poo COMMENTS_	Is (Interstitial) Dry channel, no water (Ephemeral)	7
		<u> </u>
SINUOSITY (Number of bends p	er 61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.0 3.0	
	1.5     2.5     3.0	
STREAM GRADIENT ESTIMATE		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/05/17 Quantity: 0.99
Photograph Information: Representative overview photos taken
Elevated Turbidity? (Y/N): Canopy (% open):100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

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





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Anax Danublia Win	
SITE NAME/LOCATION Apex Republic Win SITE NUMBER DO	H-217 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²) 0.01
LENGTH OF STREAM REACH (ft) 1,440 L DATE 05/10/17 SCORER BH	
NOTE: Complete All Items On This Form -	Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATU MODIFICATIONS:	RAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
	type of substrate present. Check ONLY two predominant substrate TYPE boxes t substrate types found (Max of 8). Final metric score is sum of boxes A & B.
	CENT TYPE Metric
BLDR SLABS [16 pts]	% ✓ ✓ SILT [3 pt] 100% POINts
	%     LEAF PACK/WOODY DEBRIS [3 pts]     0%       %     FINE DETRITUS [3 pts]     0%
	$\frac{1}{6}$
	% MUCK [0 pts] 0% 7
SAND (<2 mm) [6 pts]	% ARTIFICIAL [3 pts]
Total of Percentages of <b>0.0</b>	0% (A) Substrate Percentage 100% (B) A + B
Bldr Slabs, Boulder, Cobble, Bedrock	Ulleux
	<i>imum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of ulverts or storm water pipes) (Check <i>ONLY</i> one box): Max = 30
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]
<ul> <li>22.5 - 30 cm [30 pts]</li> <li>✓ □ &gt; 10 - 22.5 cm [25 pts]</li> </ul>	
	MAXIMUM POOL DEPTH (centimeters): 15
3. BANK FULL WIDTH (Measured as the av	
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width $\leq$ 1.0 m (<=3' 3") [5 pts] Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.00 5
	This information must also be completed
RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH	AIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A FLOODPLAIN QUALITY
<u>L</u> R (Per Bank)	<u>L R</u> (Most Predominant per Bank) <u>L R</u>
Wide >10m	Mature Forest, Wetland Conservation Tillage
Moderate 5-10m	Immature Forest, Shrub or Old Irban or Industrial
Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop
V None	Fenced Pasture Mining or Construction
COMMENTS	
FLOW REGIME (At Time of Evaluation	
Stream Flowing Subsurface flow with isolated pools	(Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)
COMMENTS_	
SINUOSITY (Number of bends per	61 m (200 ft) of channel) (Check ONLY one box):
None 🗋	1.0 2.0 3.0

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/05/17 Quantity: 0.99
Photograph Information: Representative overview photos taken
Elevated Turbidity? (Y/N): Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

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





SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER DOH-218 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (r	mi²) <b>0.07</b>
LENGTH OF STREAM REACH (ft) 951 LAT. 41.15446 LONG82.93611 RIVER CODE RIVER M	
DATE 05/10/17 SCORER BH COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for	r Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO MODIFICATIONS:	O RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE bo	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         50%           BOULDER (>256 mm) [16 pts]         0%         E         LEAF PACK/WOODY DEBRIS [3 pts]         0%	Points
$ \boxed{\begin{array}{c} \hline \\ \hline $	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 30%	Max - 40
GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	7
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	
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]	20
OMMENTS MAXIMUM POOL DEPTH (centimeters):	50
	50
3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	Bankfull Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS</li></ul>	Bankfull Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	Bankfull Width Max=30
$ \begin{array}{ c c c c c c c } \hline > 4.0 \text{ meters } (> 13') [30 \text{ pts}] \\ \hline > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ \hline > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ \hline & \\ \hline \hline & \\ \hline & \\ \hline & \\ \hline \hline & \\ \hline \hline & \\ \hline \hline \\ \hline & \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \hline \\ \hline \\ \hline \hline$	Bankfull Width Max=30
$ \begin{array}{ c c c c c } \hline & > 4.0 \text{ meters } (> 13') [30 \text{ pts}] \\ \hline > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ \hline > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ \hline & \leq 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ \hline & \leq 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ \hline & & & & & & & & & & & & & & & & & &$	Bankfull Width Max=30
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Bankfull 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]	Bankfull Width Max=30 20 n☆
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30 20 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]	Bankfull Width Max=30 20 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]	Bankfull Width Max=30 20 20 m☆ age al tow Crop uction
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30 20 20 m☆ age al tow Crop uction
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30 
→ 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30 
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30 

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/05/17 Quantity: 0.99
Photograph Information: Representative overview photos taken
Elevated Turbidity? (Y/N): _ N Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

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



PHWH Form Page - 2



Save as pdf

SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER DOH-219 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi²)	2.47
LENGTH OF STREAM REACH (ft) 2,019 LAT. 41.14825 LONG. 82.94136 RIVER CODE RIVER MILE	
DATE 05/11/17 SCORER BH COMMENTS	
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 R MODIFICATIONS:	ECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	S
(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] 100%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
□         COBBLE (65-256 mm) [12 pts]           □%         □           □         CLAY or HARDPAN [0 pt]	Max = 40
GRAVEL (2-64 mm) [9 pts] 0% MUCK [0 pts] 0%	7
SAND (<2 mm) [6 pts]         0%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
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]	20
OMMIENTS MAXIMUM POOL DEPTH (centimeters): 40	
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]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\leq$ 1.0 m (<=3' 3") [5 pts]	Width Max=30
$ \begin{array}{ c c c c c } &> 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ \hline &\checkmark > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \end{array} $	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 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 Max=30
$ \begin{array}{c} \begin{array}{c} > 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7'' - 4' 8'') [20 \text{ pts}] \end{array} \end{array} $	Width Max=30
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	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 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 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]	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]	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]	Width Max=30 20 Crop
> 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 20 Crop
> 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 20 Crop
> 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 20 Crop
→ 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 20 Crop

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/11/17 Quantity: 0.75
Photograph Information: Representative overview photos taken
Elevated Turbidity? (Y/N): N Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

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



PHWH Form Page - 2



Save as pdf

SITE NAME/LOCATION Apex Republic Wi	ind Farm
	DH-220 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi <sup>2</sup> ) 0.79
LENGTH OF STREAM REACH (ft) 960	LAT. 41.14807 LONG82.93937 RIVER CODE RIVER MILE
DATE 05/11/17 SCORER BH	COMMENTS
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
	y type of substrate present. Check ONLY two predominant substrate TYPE boxes
	nt substrate types found (Max of 8). Final metric score is sum of boxes A & B. RCENT TYPE PERCENT HHE
BLDR SLABS [16 pts]	0% SILT [3 pt] 100% POIN
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           0%         FINE DETRITUS [3 pts]         0%
	0% □ □ CLAY or HARDPAN [0 pt] □%
GRAVEL (2-64 mm) [9 pts]	0% MUCK [0 pts] 0%
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%
Total of Percentages of <b>0.</b>	00% (A) Substrate Percentage 100% (B) A + B
Bldr Slabs, Boulder, Cobble, Bedrock	
	DescriptionDescriptio
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]
✓         > 22.5 - 30 cm [30 pts]           □         > 10 - 22.5 cm [25 pts]	<ul> <li>&lt; 5 cm [5 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> <li>30</li> </ul>
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 30
3. BANK FULL WIDTH (Measured as the a > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONL Y one box): Bankfit > 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] Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 2.00 20
RIPARIAN ZONE AND FLOODPI	This information <u>must</u> also be completed LAIN 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 Mature Forest, Wetland Conservation Tillage
Moderate 5-10m	Immature Forest, Shrub or Old Urban or Industrial
	Field Open Pasture Row Crop
Narrow <5m	
COMMENTS	Fenced Pasture Mining or Construction
FLOW REGIME (At Time of Evalue) Stream Flowing	(Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent)
Subsurface flow with isolated pool	
COMMENTS	
	er 61 m (200 ft) of channel) (Check ONLY one box):
SINUOSITY (Number of bends per None 0.5	1.0       2.0       3.0         1.5       2.5       >3
None 🗹	1.0 2.0 3.0

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Senca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/11/17 Quantity: 0.75
Photograph Information: Representative overview photos taken
Elevated Turbidity? (Y/N): Canopy (% open):100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher?
Comments Regarding Biology:
Frogs or Ladpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates 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



PHWH Form Page - 2

Save as pdf Reset Form

	Vind Farm	
SITE NAME/LOCATION Apex Republic W	SOH-001 RIVER BASIN Spicer Creek DRAINAGE AREA (mi²) 0.	04
LENGTH OF STREAM REACH (ft) 1,486	LAT. 41.21175 LONG83.12513 RIVER CODE RIVER MILE	
DATE 09/28/16 SCORER BJS		
NOTE: Complete All Items On This Form	m - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
MODIFICATIONS:	ATURAL CHANNEL 🔽 RECOVERED 🔲 RECOVERING 🔲 RECENT OR NO RECO	JVERT
SUBSTRATE (Estimate percent of eve	rery type of substrate present. Check ONLY two predominant substrate TYPE boxes	
· ·	cant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	ННІ
TYPE PI	PERCENT         TYPE         PERCENT           0%         Image: Silt [3 pt]         60%	Meti Poir
BOULDER (>256 mm) [16 pts]	0%         Image: Start [3 bt]         0%           0%         Image: Start [3 bt]         0%	
BEDROCK [16 pt]	0%         FINE DETRITUS [3 pts]         0%           5%         CLAY or HARDPAN [0 pt]         0%	Substi Max =
COBBLE (65-256 mm) [12 pts]	5%         CLAY or HARDPAN [0 pt]         0%           5%         MUCK [0 pts]         0%	
SAND (<2 mm) [6 pts]	<b>30%</b> ARTIFICIAL [3 pts] <b>0%</b>	13
Total of Percentages of	5.00% (A)	A + E
Bldr Slabs, Boulder, Cobble, Bedrock	Check Check	
	<i>maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of ad culverts or storm water pipes) (Check <i>ONLY</i> one box):	Pool D Max =
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
□ > 22.5 - 30 cm [30 pts] □ > 10 - 22.5 cm [25 pts]	S cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts]	15
	pest at tile disrcharge point. MAXIMUM POOL DEPTH (centimeters): 6	
BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	e average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bank Widt
> 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=
	AVERAGE BANKFULL WIDTH (meters): 0.90	5
RIPARIAN ZONE AND FLOODP	This information must also be completed           PLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH	PLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream	
	PLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream	
<u>RIPARIAN WIDTH</u> LR (Per Bank)	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial	
RIPARIAN WIDTH         L       R       (Per Bank)         ✓       ✓       Wide >10m         Moderate 5-10m       ✓	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture Row Crop	p
RIPARIAN WIDTH         L       R       (Per Bank)         ✓       ✓       Wide >10m         Moderate 5-10m       Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY       L         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Cro	р
RIPARIAN WIDTH         L       R       (Per Bank)         Image: Constraint of the state in the sta	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture Row Crop	p
R       (Per Bank)         Y       Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY       L         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Cro         Fenced Pasture       Mining or Construction	p
RIPARIAN WIDTH         L       R       (Per Bank)         ✓       Wide > 10m         ✓       Moderate 5-10m         ✓       Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)       L R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         tapers moving south: ends at field tile discharge/crop area         aluation)       (Check ONLY one box):	р
R       (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)       L R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         * tapers moving south: ends at field tile discharge/crop area         aluation)       (Check ONLY one box):	p
RIPARIAN WIDTH         L       R       (Per Bank)         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)       L R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         tapers moving south: ends at field tile discharge/crop area         aluation)       (Check ONLY one box):	p
RIPARIAN WIDTH         L       R       (Per Bank)         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)       L R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Cro         Residential, Park, New Field       Open Pasture, Row Cro         Fenced Pasture       Mining or Construction         tabers moving south: ends at field tile discharge/crop area         aluation)       (Check ONLY one box):         moist Channel, isolated pools, no flow (Intermittent)         Dry channel, no water (Ephemeral)	p
RIPARIAN WIDTH         L R       (Per Bank)         ✓       ✓         Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L R       (Most Predominant per Bank)       L R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Pield       Open Pasture, Row Cro         Residential, Park, New Field       Open Pasture, Row Cro         Fenced Pasture       Mining or Construction         tapers moving south: ends at field tile discharge/crop area         aluation)       (Check ONLY one box):         Moist Channel, isolated pools, no flow (Intermittent)         Dry channel, no water (Ephemeral)	ρ

ADDITIONAL STREAM INFORMATION (This Information Must Also	<u>&gt; be Completed):</u>
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 EI	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Tiffin North	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Towns	ship / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	09/26/16 Quantity: 0.43
Photograph Information: 3 Photos taken, 1 upstream, 1 downstrea	m, and 1 looking field tile discharge location
Elevated Turbidity? (Y/N): N Canopy (% open): 100	%
Were samples collected for water chemistry? (Y/N): N (Note la	b sample no. or id. and attach results) Lab Number:
	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not	, please explain:
Additional comments/description of pollution impacts:	
Located near active crop areas, receives flow from field tile.	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Vouche	er collections optional. NOTE: all voucher samples must be labeled with the site
	a sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders C Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aqua	N     Voucher? (Y/N)     N       tic Macroinvertebrates Observed? (Y/N)     N     Voucher? (Y/N)
Comments Regarding Biology:	

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



Save as pdf Reset Form

74

	Farm	
SITE NAME/LOCATION Apex Republic Wind F		8.76
	41.22812 LONG83.05467 RIVER CODE RIVER MILE	
DATE 09/29/16 SCORER BJS	_ COMMENTS	
NOTE: Complete All Items On This Form - Re	efer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ictions
STREAM CHANNEL INONE / NATURAL MODIFICATIONS:	CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	OVERY
1. SUBSTRATE (Estimate percent of every typ	e of substrate present. Check ONLY two predominant substrate TYPE boxes	
	bstrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE Metri
TYPE         PERCEI                □             □	NT         TYPE         PERCENT           SILT [3 pt]         10%	Poin
BOULDER (>256 mm) [16 pts] 10%	LEAF PACK/WOODY DEBRIS [3 pts] 5%	Substra
BEDROCK [16 pt] 0% COBBLE (65-256 mm) [12 pts] 40%	FINE DETRITUS [3 pts]         0%           CLAY or HARDPAN [0 pt]         0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts]	24
SAND (<2 mm) [6 pts] 20%	ARTIFICIAL [3 pts]	24
Total of Percentages of <b>50.00</b>	% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRAT		
2. Maximum Pool Depth (Measure the maximu	um pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool De
evaluation. Avoid plunge pools from road culve		Max = 3
<ul> <li>✓ &gt; 30 centimeters [20 pts]</li> <li>□ &gt; 22.5 - 30 cm [30 pts]</li> </ul>	> 5 cm - 10 cm [15 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	20
OMMIENTS	MAXIMUM POOL DEPTH (centimeters): 40	
3 BANK FULL WIDTH (Measured as the avera	oge of 3-4 measurements) (Check ONLY one box):	Bankfu
3. BANK FULL WIDTH (Measured as the avera > 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>		Bankfu Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 5.40	Width Max=30
<pre></pre>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
Y       > 4.0 meters (> 13') [30 pts]         > 3.0 m       - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m       - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODP LAIN         RIPARIAN WIDTH       FLOODP	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<pre></pre>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul> COMMENTS                 RIPARIAN ZONE AND FLOODP LAIN                 RIPARIAN WIDTH             L R             (Per Bank)             L	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul> COMMENTS                 RIPARIAN ZONE AND FLOODPLAIN <ul> <li>RIPARIAN WIDTH</li> <li>FLO</li> <li>Wide &gt;10m</li> <li>U</li> </ul>	> 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         RIPARIAN ZONE AND FLOODP LAIN         RIPARIAN WIDTH       FLO         L       R       (Per Bank)       L         ✓       Moderate 5-10m       □	> 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         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FLO         L R       (Per Bank)       L         Wide >10m       □         ✓       Moderate 5-10m       □         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul> COMMENTS                 RIPARIAN ZONE AND FLOODPLAIN             RIPARIAN WIDTH             FLOW             Rel Pank)             L             R	> 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         RIPARIAN ZONE AND FLOODP LAIN         RIPARIAN WIDTH       FLOU         L R       (Per Bank)       L         Wide >10m       □         ✓       Moderate 5-10m       □         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul> COMMENTS                 RIPARIAN ZONE AND FLOODPLAIN             RIPARIAN WIDTH             FLOW             Rel Pank)             L             R	> 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         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FLOU         L R       (Per Bank)       L         Wide >10m       □         ✓       Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FLO         L R       (Per Bank)       L         Wide >10m       □         ✓       Moderate 5-10m       □         ✓       Moderate 5-10m       □         None       □       None       □         ✓       Moderate 5-10m       □         Stream Flowing       Subsurface flow with isolated pools (Inter COMMENTS         SUBSURFACE flow with isolated pools (Inter COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
✓       4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FLCO         L       R         (Per Bank)       L         Wide >10m       L         ✓       Moderate 5-10m         ✓       Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/28/16 Quantity: 0.42
Photograph Information:6 Photos taken, 3 upstream, 3 downstream
Elevated Turbidity? (Y/N): Y 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:
Additional comments/description of pollution impacts:
Located near active crop areas and has a road overpass.
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the si ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher?
Comments Regarding Biology:

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





<b>Chie</b> E	
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Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

<b>ChieEPA</b>	•	at Evaluation Inde ment Field Sheet		<b>Score:</b> 60
Stream & Location: SOH-002				<i>Date:</i> 9/29/16
Apex Republic Wind Farm	Scorer	s Full Name & Affiliation	n: Brian Smith (Cardr	סו)
<i>River Code:</i>	_STORET #:	Lat./ Long.: 41.2281	2 /-83.054	67 Office verified location □
1] SUBSTRATE Check ONLY Two sestimate % or note	substrate TYPE BOXES;		ONE (Or 2 & average	
BEST TYPES       POOL RIFFL         BLDR /SLABS [10]       10         BOULDER [9]       10         COBBLE [8]       40         GRAVEL [7]       15         SAND [6]       15         BEDROCK [5]       10	OTHER TYPES         POO	ORIGIN       Image: Linestone [1]       Image: Linestone [1]		QUALITY IEAVY [-2] IODERATE [-1] Substrate
2] INSTREAM COVER Indicate pr quality; 2-h quality; 3-Highest quality in moderate o diameter log that is stable, well develop 1 UNDERCUT BANKS [1] 2 OVERHANGING VEGETATION [ 2 SHALLOWS (IN SLOW WATER) 1 ROOTMATS [1] Comments	Adderate amounts, but not of h r greater amounts (e.g., very la ed rootwad in deep / fast wate POOLS > 70cm [2 ROOTWADS [1]	Ighest quality or in small amour rge boulders in deep or fast wa r, or deep, well-defined, functior	ter, large Check hal pools. Check TERS [1] MOI IYTES [1] SPA	AMOUNT ONE (Or 2 & average) ENSIVE >75% [11] DERATE 25-75% [7] RSE 5-<25% [3] RLY ABSENT <5% [1] Cover Maximum 20
3] CHANNEL MORPHOLOGY C SINUOSITY DEVELOPMEN HIGH [4] EXCELLENT [ MODERATE [3] GOOD [5] LOW [2] FAIR [3] NONE [1] POOR [1] Comments	T CHANNELIZATI	ON STABILITY ☐ HIGH [3] ☑ MODERATE [ ☐ LOW [1]	2]	Channel Maximum 20
	ARIAN WIDTH         E > 50m [4]       Image: Brain the second	FLOOD PLAIN QUA OREST, SWAMP [3] HRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIEL		RVATION TILLAGE [1] I OR INDUSTRIAL [0] I CONSTRUCTION [0] minant land use(s)
Check ONE (ONLY!)         Check           □ > 1m [6]         □ POOL WI           □ 0.7-<1m [4]	ANNEL WIDTH ONE (Or 2 & average) DTH > RIFFLE WIDTH [2] DTH = RIFFLE WIDTH [1] DTH > RIFFLE WIDTH [0] DTH > RIFFLE WIDTH [0]	CURRENT VELOCIT Check ALL that apply TORRENTIAL [-1] SLOW [ VERY FAST [1] INTERS FAST [1] INTERM MODERATE [1] EDDIES Indicate for reach - pools and	1] TITIAL [-1] ITTENT [-2] [1]	reation Potential timary Contact condary Contact one and comment on back Pool / Current Maximum 12
BEST AREAS > 10cm [2] MAXIN	Check ONE <b>I DEPTH</b> IUM > 50cm [2] STABLE ( IUM < 50cm [1] MOD. STA	(Or 2 & average). / RUN SUBSTRATE RI e.g., Cobble, Boulder) [2]	FFLE / RUN EMI DNONE [2 LOW [1] MODER/	
	VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]	% <b>POOL</b> : 40 % <b>RUN</b> : 10	)%GLIDE:() %RIFFLE:(5)	

FI MEASUREMENTS bankfull max. depth loodprone x<sup>2</sup> width bankfull x depth x bankfull width entrench. ratio Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc. Legacy Tree: max. depth W/D ratio x depth x width HARDENED / URBAN / DIRT&GRIME LOGGING / IRRIGATION / COOLING BMPs-CONSTRUCTION-SEDIMENT FALSE BANK / MANURE / LAGOON WWTP / CSO / NPDES / INDUSTRY NATURAL / WETLAND / STAGNANT **ATMOSPHERE / DATA PAUCITY** WASH H<sub>2</sub>0 / TILE / H<sub>2</sub>0 TABLE ACID / MINE / QUARRY / FLOW PARK / GOLF / LAWN / HOME **BANK / EROSION / SURFACE CONTAMINATED / LANDFILL** E] ISSUES Circle some & COMMENT **FLOOD CONTROL / DRAINAGE** PUBLIC / PRIVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA MODIFIED / DIPPED OUT / NA MOVING-BEDLOAD-STABLE IMPOUNDED / DESICCATED YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED **RELOCATED / CUTOFFS** D] MAINTENANCE **ARMOURED / SLUMPS** LEVEED / ONE SIDED **ISLANDS / SCOURED** INVASIVE MACROPHYTES **B**] **AESTHETICS**  EXCESS TURBIDITY
 DISCOLORATION
 FOAM / SCUM
 OIL SHEEN **NUISANCE ALGAE** *POOL:* □ >100ft<sup>2</sup> □ >3ft AREA DEPTH NUISANCE ODOR TRASH / LITTER **CJ RECREATION** □ 40-70 cm □ □ > 70 cm/ CTB □ □ SECCHI DEPTH□ ຮູ E 1st --sample pass-- 2nd HIGH UP NORMAL LOW DRY 1st -sample pass- 2nd **CLARITY** STAGE □ 20-<40 cm AJ SAMPLED REACH Check ALL that apply □ < 20 cm Jud bass 1st <10%- CLOSED □ > 85%- OPEN □ 55%-<85% □ 30%-<55% CANOPY DISTANCE 10%-<30% 0.5 Km 0.2 Km 0.15 Km 0.12 Km METHOD OTHER L. LINE OTHER meters □ BOAT WADE 

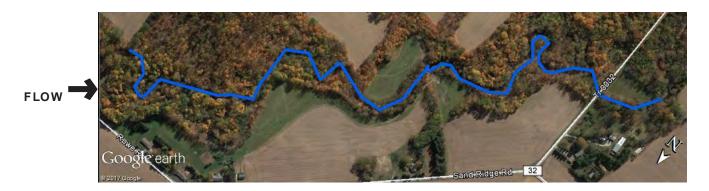
Stream Drawing:



SITE NAME/LOCATION Apex Republic Wi	ind Farm	
SITE NAME/LOCATIONSITE NUMBERSI	OH-003 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²) 44	.89
LENGTH OF STREAM REACH (ft) <b>5,500</b>	LAT. 41.22840 LONG83.04504 RIVER CODE RIVER MILE	
DATE 09/29/16 SCORER BJS		
NOTE: Complete All Items On This Form	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NAT	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
1. SUBSTRATE (Estimate percent of ever	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE Metr
TYPE PE BLDR SLABS [16 pts]	ERCENT         TYPE         PERCENT           0%         Image: SILT [3 pt]         15%	Poin
BOULDER (>256 mm) [16 pts]	0%     LEAF PACK/WOODY DEBRIS [3 pts]     5%       0%     EINE DETRITUS [3 pts]     0%	Substra
BEDROCK [16 pt]	0%         □         FINE DETRITUS [3 pts]         0%           45%         □         CLAY or HARDPAN [0 pt]         0%	Max =
	20% MUCK [0 pts] 0%	26
SAND (<2 mm) [6 pts]	15% ARTIFICIAL [3 pts] 0%	20
Total of Percentages of 4	5.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
2. Maximum Pool Depth (Measure the ma	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool De
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	d culverts or storm water pipes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]	Max =
> 22.5 - 30 cm [30 pts]	🔲 🗍 < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	20
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 60	
3 BANK FULL WIDTH (Measured as the	average of 3-4 measurements) (Check ONLY one box):	Bankf
<ul> <li>✓ &gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 7.60	30
RIPARIAN ZONE AND FLOODP	This information must also be completed LAIN 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 Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Immature Forest, Shrub or Old	
	Field Onen Pasture Row Cron	)
Narrow <5m		
COMMENTS Buffer between s	Fenced Pasture         Mining or Construction           stream and crop area varies. but never less than 20 meters.	
FLOW REGIME (At Time of Eval	(Check ONI Y one box)	
Stream Flowing	Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pool COMMENTS	ls (Interstitial) Dry channel, no water (Ephemeral)	
SINUCSITY (Number of bonds of	er 61 m (200 ft) of channel) (Check ON! V one box):	
None	er 61 m (200 ft) of channel) (Check <i>ONLY</i> one box): 1.0 2.0 3.0	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Ves No QHEI Score (If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Pa	age: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/28/16	Quantity: <b>0.42</b>
Photograph Information: 3 Photos taken, 2 upstream, 1 downstream	
Elevated Turbidity? (Y/N): Y Canopy (% open): 10%	
Were samples collected for water chemistry? (Y/N): _N (Note lab sample no. or id. a	nd attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop areas and has a road overpass.	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Prin	·
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrate	Voucher? (Y/N) N es Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

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



PHWH Form Page - 2



<b>Chie</b> E	
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Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

<b>ChieEPA</b>	Qualitative Habita and Use Assessi	at Evaluation Inde ment Field Sheet	X QHEI	<b>Score:</b> 70
Stream & Location: SOH-003				Date:
Apex Republic Wind Farm	Scorers	Full Name & Affiliation		dno)
River Code:		Lat./ Long.: 41.2284	/-83.045	54 Office verified location
1] SUBSTRATE Check ONLY Two sestimate % or note	substrate TYPE BOXES;		ONE (Or 2 & avera	
BEST TYPES         POOL RIFFL           BLDR /SLABS [10]	OTHER TYPES         POOL               HARDPAN [4]                         DETRITUS [3]         5               MUCK [2]                         SILT [2]         15               ARTIFICIAL [0]	RIFFLE       ORIGIN         □       LIMESTONE [1]         □       TILLS [1]         □       WETLANDS [0]         5       HARDPAN [0]         □       SANDSTONE [0]         es: ignore       RIP/RAP [0]		QUALITY HEAVY [-2] MODERATE [-1] Substrate NORMAL [0]
2] INSTREAM COVER Indicate pr quality; 2-1 quality; 3-Highest quality in moderate o diameter log that is stable, well develop 1 UNDERCUT BANKS [1] 2 OVERHANGING VEGETATION [ 2 SHALLOWS (IN SLOW WATER) 1 ROOTMATS [1] Comments	Adderate amounts, but not of hig r greater amounts (e.g., very lar ed rootwad in deep / fast water, POOLS > 70cm [2] ROOTWADS [1]	ghest quality or in small amount ge boulders in deep or fast wate	s of highest er, large Chec al pools.	AMOUNT k ONE (Or 2 & average) TENSIVE >75% [11] DDERATE 25-75% [7] ARSE 5-<25% [3] ARLY ABSENT <5% [1] Cover Maximum 20
3] CHANNEL MORPHOLOGY C SINUOSITY DEVELOPMEN HIGH [4] EXCELLENT [ MODERATE [3] GOOD [5] LOW [2] FAIR [3] NONE [1] POOR [1] Comments	NT CHANNELIZATIO	ON STABILITY ☐ HIGH [3] ☑ MODERATE [2 ☐ LOW [1]	1	Channel Maximum 20
	ARIAN WIDTH       R         E > 50m [4]       Image: Complexity of the second sec	FLOOD PLAIN QUAL DREST, SWAMP [3] TRUB OR OLD FIELD [2] ESIDENTIAL, PARK, NEW FIELD		ERVATION TILLAGE [1] N OR INDUSTRIAL [0] G / CONSTRUCTION [0] ominant land use(s)
Check ONE (ONLY!)         Check           □ > 1m [6]         □ POOL WI           □ 0.7-<1m [4]	IANNEL WIDTH         ONE (Or 2 & average)         DTH > RIFFLE WIDTH [2]         DTH = RIFFLE WIDTH [1]         INTH > RIFFLE WIDTH [1]	CURRENT VELOCITY Check ALL that apply FORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERST FAST [1] INTERST MODERATE [1] EDDIES [ Indicate for reach - pools and r	F ITIAL [-1] ITIENT [-2]	creation Potential Primary Contact condary Contact e one and comment on back) Pool / Current Maximum 12
BEST AREAS > 10cm [2] MAXIM	Check ONE (0           N DEPTH         RIFFLE /           IUM > 50cm [2]         STABLE (e           IUM < 50cm [1]	Or 2 & average). RUN SUBSTRATE RIF .g., Cobble, Boulder) [2]	FLE / RUN EM	[2] ]
	VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]	%POOL: 30 %RUN: 30	$\sim$	0 Gradient 40 Maximum 10 06/16/06

HARDENED / URBAN / DIRT&GRIME LOGGING / IRRIGATION / COOLING **BMPs-CONSTRUCTION-SEDIMENT** FALSE BANK / MANURE / LAGOON NATURAL / WETLAND / STAGNANT WWTP / CSO / NPDES / INDUSTRY **ATMOSPHERE / DATA PAUCITY** WASH H<sub>2</sub>0 / TILE / H<sub>2</sub>0 TABLE ACID / MINE / QUARRY / FLOW PARK / GOLF / LAWN / HOME **BANK / EROSION / SURFACE CONTAMINATED / LANDFILL** E] ISSUES Circle some & COMMENT FLOOD CONTROL / DRAINAGE PUBLIC / PRIVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA MODIFIED / DIPPED OUT / NA **MOVING-BEDLOAD-STABLE** SPRAY / SNAG / REMOVED IMPOUNDED / DESICCATED YOUNG-SUCCESSION-OLD **RELOCATED / CUTOFFS D] MAINTENANCE ARMOURED / SLUMPS** LEVEED / ONE SIDED **ISLANDS / SCOURED** INVASIVE MACROPHYTES EXCESS TURBIDITY
 DISCOLORATION
 FOAM / SCUM
 OIL SHEEN **B**] **AESTHETICS** SLUDGE DEPOSITS **NUISANCE ALGAE** POOL: 0>100ft2 >3ft AREA DEPTH NUISANCE ODOR TRASH / LITTER **CJ RECREATION** □ 40-70 cm □ □ > 70 cm/ CTB □ □ SECCHI DEPTH□ ຮູ E 1st --sample pass-- 2nd HIGH UP NORMAL LOW DRY 1st -sample pass- 2nd **CLARITY** STAGE 20-<40 cm AJ SAMPLED REACH Check ALL that apply □ < 20 cm Jud bass 1st <10%- CLOSED □ > 85%- OPEN □ 55%-<85% CANOPY DISTANCE 30%-<55% 10%-<30% 0.5 Km 0.2 Km 0.15 Km 0.12 Km METHOD OTHER L. LINE OTHER meters □ BOAT WADE П

FI MEASUREMENTS

bankfull max. depth loodprone x<sup>2</sup> width

entrench. ratio Legacy Tree:

bankfull x depth x bankfull width

W/D ratio

max. depth

x depth x width

Stream Drawing:



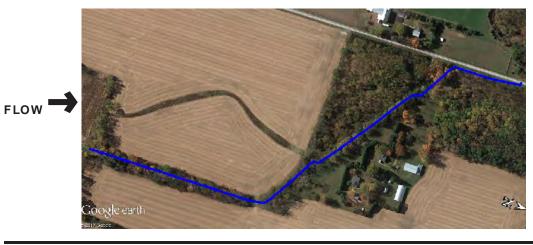
Comment RE: Reach consistency/Is reach typical of steam?, Recreation/Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

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SITE NUMBER       SOH-004       RNER BASIN Beaver Creek       DRAINAGE AREA (m²)       0.30         ENGTH OF STREAM REACH (m²)       2,538       LAT. 41.22509       LONG.       B3.04449       RVER CODE       RIVER MILE         NOTE: Complete All tems On This Form. FRefer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY Mg predominant substrate TYPE boxes       RECENT OF NO RECOVERY       RECENT OF NO RECOVERY         SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY Mg predominant substrate TYPE boxes       PERCENT       PERCENT         TPE       BLDR SLABS (fig pis)       PERCENT       PERCENT       PERCENT         OBBER (54.264 mm) (fig pis)       0%       O%       O%       O%         OCOBBLE (64.264 mm) (fig pis)       0%       O%       O%       O%         Start Fick I (fig pis)       0%       O%       O%       O%       O%         Start Fick I (fig pis)       0%       O%       O%       O%       O%       O%         CARA OR (2.264 mm) (fig pis)       0%       O%	SITE NAME/LOCATION Apex Republic Wind	
ENGTH OF STREAM REACH (ft)       2.538       LAT.       41.22509       LONG.       33.04449       RIVER CODE       RIVER MILE         NOTE: Complete All items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions       STREAM CHANNEL       INONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       INONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY by predominant substrate types for ubstrate present. Check ONLY by predominant substrate types for ubstrate present. Check ONLY by predominant substrate types for ubstrate present. Check ONLY one box:       PERCENT         TYPE       BOULDER (>236 mm) (16 pts)       05       INT FIGURATION (16 pts)       05       95         COBBLE (62:256 mm) (12 pts)       05       04       04       04       95       95         COULDER (>236 mm) (16 pts)       05       005       005       001       95       95       95       95       95       95       95       95       95       96       95       96       95       96       95       96       95       95       96       95       96       95       95       96       95       95       95       96       96	SITE NAME/LOCATION APEX REPUBLIC VIIII	-004 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²) 0.30
DATE       09/29/16       SCORER       BJS       COMMENTS         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       RECOVERID       RECENT OR NO RECOVERY         WODDIFLCATIONS:       NONE / NATURAL CHANNEL       RECOVERED       RECOVERID       RECENT OR NO RECOVERY         SUBSTRATE (Estimate percent of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8.       Recent of boxes A & 8.         TYPE       BLDR SLASS (16 pts)       05/2       EAF PACKWOODY DEBRIS (3 pts)       05/2         DEDROCK (16 pt)       05/2       EAF PACKWOODY DEBRIS (3 pts)       05/2       05/2         CLAY or HARDPAN (19 pt)       05/2       07/2       07/2       07/2         Bidr Stabs Found (C4 arm (19 pts)       05/2       07/2       07/2       07/2         Maximum Pool Depth (Messure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation act active the so stoms water pipes)       (Check ONLY one box):       10         > 40 centimeters (13) (20 pts)       > 50 centimeters (13) (20 pts)       > 10 m (15 pts)       10       15         > 40 meters (13) (20 pts)       > 10 m (15 mts) of (14 mts)       10 m (15 mts) (5 mts)       10       10	LENGTH OF STREAM REACH (ft) 2,538 LA	T. <b>41.22509</b> LONG. <b>-83.04449</b> RIVER CODE RIVER MILE
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       INDME / NATURAL CHANNEL       RECOVERID		
STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         Max of 32). Add total number of significant substrate present. Check: ONLY two predominant substrate TVPE backs. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       The PERCENT (Max of 22). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       The PERCENT (Max of 22). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       The PERCENT (Max of 22). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       The PERCENT (Max of 22). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       The PERCENT (Max of 22). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       The PERCENT (Max of 22). Add total number of significant substrate types found (Max of 20). Depresent metric score is sum of boxes A & B.       The PERCENT (Max of 20). Add total number of significant substrate types found (Max of 20). Depresent metric score is sum of boxes A & B.       The PERCENT (Max of 20). Depresent found (Max of 20). Depresent metric score is sum of boxes A & B.       The PERCENT (Max of 20). Depresent metric score is sum of boxes A & B.         Total of Percentages of the metric score is sum of boxes A & B.       Total NUMBER OF SUBSTRATE TYPES:       Total		Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
MODIFICATIONS:         SUBSTRATE (Estimate percent of every type of substrate present. Check ONL Y two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         Image: Substrate (Statistic present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         Image: Substrate (Statistic present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         Image: Substrate (Statistic present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         Image: Substrate (Statistic present of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         Image: Substrate (Statistic present)       Image: Statistic present (Statistic present)         Image: Substrate (Statistic present)       Image: Statistic present (Statistic present)       Image: Statistic present (Statistic present)         Image: Substrate (Statistic present)       Image: Statistic present (Statistic present)       Image: Statistic present (Statistic present)       Image: Statistic present (Statistic present)         Image: Substrate (Statistic present)       Image: Statistic present (Statistic present)         Image: Statistic present (Statistic present)       Image: Statistic present (Statistic present)       Image: Statistic present (Statistic presen		
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       Final metric score is sum of boxes A & B.         YPE       BLDR SLABS [16 pts]       PECENT       YPE         BOULDER (>256 mm) [16 pts]       0%       0%       0%       0%         COBBLE (65-256 mm) [17 pts]       0%       0%       0%       0%       0%         COBBLE (65-256 mm) [17 pts]       0%       0%       0%       0%       0%         Bit Slass, Boulder, Cobble, Bedrock       00%       (A)       0%       0%       0%         Bit Slass, Boulder, Cobble, Bedrock       00%       (A)       0%       0%       0%         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):       10         > 30 centimeters (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       10         > 40 meters (> 13) [30 pts]       > 1.0 m - 1.5 m (> 3' 3' + 6' S') [15 pts]       15         Southerest       Average of 3.4 measurements)       (Check ONLY one box):       5.00         Southerest       Start 3' 15 pts]       > 1.0 m - 1.5 m (> 3' 3' + 6' S') [15 pts]       15 <t< td=""><td>MODIFICATIONS:</td><td>AL CHANNEL MRECOVERED RECOVERING RECENT OR NO RECOVERY</td></t<>	MODIFICATIONS:	AL CHANNEL MRECOVERED RECOVERING RECENT OR NO RECOVERY
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.       Image: Constraint of the state o	1. SUBSTRATE (Estimate percent of every to	vne of substrate present Check ON/ Y two predominant substrate TYPE hoves
BLDR SLABS (16 pts)       0%		substrate types found (Max of 8) Final metric score is sum of boxes A & B
BOULDER (>2556 mm) (16 pts)       0%		
BELRACK (16 PL)       0% </td <td></td> <td>LEAF PACK/WOODY DEBRIS [3 pts] 5%</td>		LEAF PACK/WOODY DEBRIS [3 pts] 5%
Conservation       Conservation <td< td=""><td></td><td>Max = 4</td></td<>		Max = 4
SAND (<2 mm) [6 pts]		
Bidr Stabs, Boulder, Cobie, Bedrock       U0076       TOTAL NUMBER OF SUBSTRATE TYPES:       4         Score of two MOST PREDOMINATE SUBSTRATE TYPES:       15       TOTAL NUMBER OF SUBSTRATE TYPES:       4         Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]       9       > 5 cm - 10 cm [15 pts]       15         > 30 centimeters [20 pts]       > 10 - 22.5 cm [25 pts]       MAXIMUM POOL DEPTH (centimeters):       10       15         BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       > 1.0 m - 1.5 m [>3'3' - 4'2') [15 pts]       15         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m [>3'3' - 4'2') [15 pts]       5       5         > 5.0 m - 4.0 m (> 9' 7' - 4'8') [20 pts]       AVERAGE BANKFULL WIDTH (meters):       0.50       5         This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       AVERAGE BANKFULL WIDTH (meters):       0.50       5         This information must also be completed         RIPARIAN WIDTH       ELOODPLAIN QUALITY       SNOTE: River Left (L) and Right (R) as looking downstream :       10       10       10       10       10       1		
Bidr Stabs, Boulder, Cobie, Bedrock       U0076       TOTAL NUMBEROF SUBSTRATE TYPES:       15       TOTAL NUMBEROF SUBSTRATE TYPES:       4         Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]       9 or 10 cm [15 pts]       15         > 30 centimeters [20 pts]       > 10 - 22.5 cm [20 pts]       > 5 cm - 10 cm [15 pts]       10       15         > 40 neters (> 13) [30 pts]       > 1.0 m - 1.5 m (> 3'3' - 4'8') [15 pts]       15       15         > 4.0 meters (> 13) [30 pts]       > 1.0 m (-s'3'') [15 pts]       5 cm - 10 m (s'3'' - 4'8') [15 pts]       5         > 5.0 m - 4.0 m (> 9' 7' - 4'8') [20 pts]       AVERAGE BANKFULL WIDTH (meters):       0.50       5         COMMENTS       AVERAGE BANKFULL WIDTH (meters):       0.50       5         This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       xNOTE: River Left (L) and Right (R) as looking downstream x's         RIPARIAN WIDTH       FLOODPLAIN QUALITY       xNOTE: River Left (L) and Right (R) as looking downstream x's         RIPARIAN WIDTH       FLOODPLAIN QUALITY       width mature Forest, Shrub or Old       Urban or Industrial         Moderate 5-10m       Immature Forest, Shrub or O	Total of Percentages of	% (A) Substrate Percentage 100% (B)
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 (measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):       > 5 cm - 10 cm [15 pls]        > 5 cm - 5 cm - 5 cm [5 pls]        > 5 cm - 5 cm - 5 cm [5 pls]        > 5 cm - 10 cm [15 pls]        > 10 m [15	Bldr Slabs, Boulder, Cobble, Bedrock	Check 100%
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]         > 10 - 22.5 cm [30 pts]       > 6 cm [5 pts]       10         > 10 - 22.5 cm [30 pts]       > 10 cm [15 pts]       10         > 10 - 22.5 cm [30 pts]       > 10 cm [15 pts]       10         > 10 - 22.5 cm [30 pts]       > 10 cm [15 pts]       10         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3' - 4' 8') [15 pts]       10         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3' - 4' 8') [15 pts]       10         > 3.0 m (> 9' 7' - 13') [25 pts]       > 1.0 m (<=3' 3'') [5 pts]		
> 30 centimeters [20 pts]       → 5 cm - 10 cm [15 pts]       → 5 cm [5 pts]       > 10 cm [15 pts]         > > 22.5 - 30 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]       NO WATER OR MOIST CHANNEL [0 pts]       15         DANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       10       15         BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       10       15         > 4.0 m (> 9' 7' - 13') [25 pts]       > 1.0 m (<=3' 3'') [5 pts]		
> > 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]         OMMENTS       MAXIMUM POOL DEPTH (centimeters):       10         BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):       10         > 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]       10 m (<=3' 3'') [5 pts]	> 30 centimeters [20 pts]	
OMMENTS       MAXIMUM POOL DEPTH (centimeters):       10         BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       >10         > 4.0 meters (> 13') [30 pts]       >10 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       >10 m (< 3' 3" - 4' 8") [15 pts]		
BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       Image: Sinual structure in the image: Sin		
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Width Max=30         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]		MAXIMUM POOL DEPTH (centimeters): 10
→ 3.0 m - 4.0 m (< 9'7' - 13') [25 pts]		
COMMENTS       AVERAGE BANKFULL WIDTH (meters):       0.50       5         This information must also be completed       RIPARIAN ZONE AND FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN WIDTH       FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN WIDTH       FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN WIDTH       FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN WIDTH       FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN WIDTH       FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN WIDTH       FLOODPLAIN QUALITY       % NOTE: River Left (L) and Right (R) as looking downstream %       RIPARIAN 2006       RIPARIAN 2006       RIPARIAN WIDTH       Matter Sorest, Wetland       Conservation Tillage       Matter Sorest, Wetland       Conservation Tillage       Matter Sorest, Shrub or Old       Urban or Industrial       Depen Pasture, Row Crop       Depen Pasture, Row Crop       None       Some Conservation       Conservation <td< td=""><td></td><td></td></td<>		
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       ANOTE: River Left (L) and Right (R) as looking downstream %         RIPARIAN WIDTH       FLOODPLAIN QUALITY       ANOTE: River Left (L) and Right (R) as looking downstream %         Image: Riparity of the state of the stat	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
RIPARIAN ZONE AND FLOODPLAIN QUALITY         RIPARIAN WIDTH       FLOODPLAIN QUALITY         L       R         (Per Bank)       L         Wide >10m       Mature Forest, Wetland         Moderate 5-10m       Immature Forest, Shrub or Old         Hind       Wide >10m         Narrow <5m	COMMENTS	AVERAGE BANKFULL WIDTH (meters): 0.50 5
RIPARIAN ZONE AND FLOODPLAIN QUALITY         RIPARIAN WIDTH       FLOODPLAIN QUALITY         L       R         (Per Bank)       L         Wide >10m       Mature Forest, Wetland         Moderate 5-10m       Immature Forest, Shrub or Old         Hind       Wide >10m         Narrow <5m		
RIPARIAN WIDTH       FLOODPLAIN QUALITY         Image: Problem in the state in the	RIPARIAN ZONE AND FLOODPLAI	
Wide >10m Mature Forest, Wetland Conservation Tillage   Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial   Immature Forest, New Field Open Pasture, Row Crop   None Fenced Pasture   Immature Forest, New Field Mining or Construction   COMMENTS Fenced Pasture   Immature Forest, New Field Mining or Construction   COMMENTS Fenced Pasture   Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)   Subsurface flow with isolated pools (Interstitial) Moist Channel, no water (Ephemeral)   COMMENTS Series of pools along the channel, with evidence of linkage during high flow	RIPARIAN WIDTH	LOODPLAIN QUALITY
Moderate 5-10m Immature Forest, Shrub or Old   Narrow <5m		
Field     Image: Narrow <5m		Immature Forest, Shrub or Old
Narrow <sm< td=""> 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 (Intermittent)   Dry channel, no water (Ephemeral)   COMMENTS     SINUOSITY (Number of bends per 61 m (200 ft) of channel)   None     1.0     2.0     3.0</sm<>		Field Open Pasture Row Crop
COMMENTS		
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS       Series of pools along the channel, with evidence of linkage during high flow         SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0		Fenced Pasture     Mining or Construction
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS       Series of pools along the channel, with evidence of linkage during high flow         SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0	FLOW REGIME (At Time of Evaluat	(Check QN/ Y one box)
COMMENTS       Series of pools along the channel, with evidence of linkage during high flow         SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0	Stream Flowing	Moist Channel, isolated pools, no flow (Intermittent)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0		
None 1.0 2.0 3.0		
		The (200 ft) of channel) (Check OVLY one box):
0.5 1.5 2.5 >3		.0 2.0 3.0
STREAM GRAD <u>IENT ESTIMATE</u>	None 1	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:Watson NRCS Soil Map Page:NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/28/16 Quantity: 0.42
Photograph Information: 5 Photos taken, 3 upstream, 2 downstream
Elevated Turbidity? (Y/N):N Canopy (% open):15%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mq/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:
Located near active crop areas and has a road overpass.
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) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher?
Comments Regarding Biology:

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



PHWH Form Page - 2

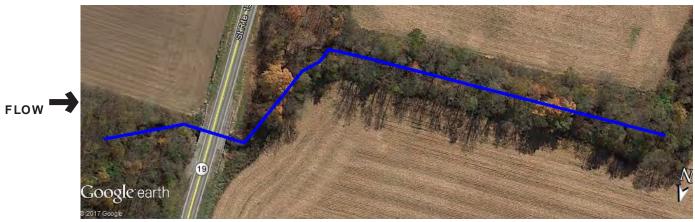
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SITE NAME/LOCATION Apex Republic W	ind Farm	
SITE NAME/LOCATION ADEX REPUBLIC V	OH-005 RIVER BASIN Beaver Creek	DRAINAGE AREA (mi²) 3.05
LENGTH OF STREAM REACH (ft) 560		
DATE 09/29/16 SCORER BJS		
	• - Refer to "Field Evaluation Manual for C	Dhio's PHWH Streams" for Instructions
· _		
STREAM CHANNEL NONE / NAT MODIFICATIONS:	URAL CHANNEL RECOVERED RECO	OVERING 🔲 RECENT OR NO RECOVERY
	ry type of substrate present. Check ONLY two	
. , , , , , , , , , , , , , , , , , , ,	ant substrate types found (Max of 8). Final metric ERCENT TYPE	PERCENT Metr
BLDR SLABS [16 pts]	0% SILT [3 pt]	20% Poin
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY           0%         FINE DETRITUS [3 p	tsl 0% Substr
COBBLE (65-256 mm) [12 pts]	45% CLAY or HARDPAN	Max =
GRAVEL (2-64 mm) [9 pts]	20% MUCK [0 pts]	0% 23
SAND (<2 mm) [6 pts]	10% ARTIFICIAL [3 pts]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	5.00% (A) Substrate Percentage 100	0% (B) A + B
CORE OF TWO MOST PREDOMINATE SUBS	TRATE TYPES: 18 TOTAL NUMBER	OF SUBSTRATE TYPES: 5
	aximum pool depth within the 61 meter (200 ft,	) evaluation reach at the time of <b>Pool De</b>
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]		m [15 pts]
□ > 22.5 - 30 cm [30 pts]	🔲 🔲 < 5 cm [5 pts]	
✓ □ > 10 - 22.5 cm [25 pts]		OR MOIST CHANNEL [0 pts] 25
OMMENTS Deeper pools by over	rpass MAXIMUM PO	OL DEPTH (centimeters): 16
BANK FULL WIDTH (Measured as the	average of 3-4 measurements) (Check	ONLY one box): Bankfi
<ul> <li>4.0 meters (&gt; 13') [30 pts]</li> <li>3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m → 1.5 m (> 3' 3 ≤ 1.0 m (<=3' 3") [5 pi	
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BA	NKFULL WIDTH (meters): 0.50 30
RIPARIAN ZONE AND FLOODP	This information must also be comple	eted Right (R) as looking downstream☆
RIPARIAN WIDTH	FLOODPLAIN QUALITY	
L R (Per Bank) Wide >10m	L R (Most Predominant per Bank) Mature Forest, Wetland	L R Conservation Tillage
Moderate 5-10m	Immature Forest, Shrub or Old	
	Field	
Narrow <5m	Residential, Park, New Field	
COMMENTS	Fenced Pasture	Mining or Construction
	(union) (Chook ONI Vana have)	
FLOW REGIME (At Time of Eval		el, isolated pools, no flow (Intermittent)
Subsurface flow with isolated pool	s (Interstitial) Dry channel, along the channel, with evidence of linka	no water (Ephemeral)
SINUOSITY (Number of bends p None	er 61 m (200 ft) of channel) (Check ONLY one b 1.0 2.0	ox):
	1.5 2.0	>3
STREAM GRADIENT ESTIMATE	Moderate (2 ft/100 ft)	Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach C	Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: D	istance from Evaluated Stream
CWH Name: D	istance from Evaluated Stream
EWH Name: Di	stance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AR	EA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page	NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/28/16	Quantity: 0.42
Photograph Information: 3 Photos taken, 2 upstream, 1 downstream	
Elevated Turbidity? (Y/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) Y If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop areas and has a road overpass.	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. No ID number. Include appropriate field data sheets from the Primary	
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates C	Voucher? (Y/N) N Dbserved? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
<u> </u>	

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



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Anex Depublic Mi		
SITE NAME/LOCATION Apex Republic Wi	H-006 RIVER BASIN Beaver creek	
SITE NUMBER SC		
LENGTH OF STREAM REACH (ft) 85 I DATE 09/30/16 SCORER BJS		
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Ohio's Pl	HWH Streams" for Instructions
STREAM CHANNEL NONE / NATU MODIFICATIONS:	JRAL CHANNEL RECOVERED RECOVERING	RECENT OR NO RECOVERY
	y type of substrate present. Check ONLY two predomina	
	nt substrate types found (Max of 8). Final metric score is s RCENT TYPE	REPCENT Metr
BLDR SLABS [16 pts]	0% SILT [3 pt]	35% Poin
	0%     LEAF PACK/WOODY DEBRIS         0%     FINE DETRITUS [3 pts]	3 pts] 5% Substra
	0%     FINE DETRITUS [3 pts]       5%     CLAY or HARDPAN [0 pt]	Max =
	25% MUCK [0 pts]	0%
SAND (<2 mm) [6 pts]	20% ARTIFICIAL [3 pts]	0%
Total of Percentages of 15	.00% (A) Substrate Percentage 100%	(B) A + B
Bldr Slabs, Boulder, Cobble, Bedrock		STRATE TYPES 5
<ol> <li>Maximum Pool Depth (Measure the ma evaluation. Avoid plunge pools from road</li> </ol>	ximum pool depth within the 61 meter (200 ft) evaluation culverts or storm water pipes) (Check ONLY one box):	on reach at the time of <b>Pool De</b> Max =
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
✓         □         > 22.5 - 30 cm [30 pts]           □         □         > 10 - 22.5 cm [25 pts]	└── < 5 cm [5 pts]	T CHANNEL [0 pts] 30
OMMENTS	MAXIMUM POOL DEPT	'H (centimeters): 28
3. BANK FULL WIDTH (Measured as the a		
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [ ✓ ≤ 1.0 m (<=3' 3") [5 pts]	15 pts] Width Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS Widens out by SR 778,	but averages smaller AVERAGE BANKFULL	WIDTH (meters): 0.60 5
	This information must also be completed	
<b>RIPARIAN ZONE AND FLOODPL</b> RIPARIAN WIDTH	AIN QUALITY ☆NOTE: River Left (L) and Right (R) a FLOODPLAIN QUALITY	as looking downstream 🛠
L R (Per Bank)	L R (Most Predominant per Bank) L R	
Wide >10m	Mature Forest, Wetland	Conservation Tillage
Moderate 5-10m	Immature Forest, Shrub or Old	Urban or Industrial
Narrow <5m	Residential, Park, New Field	Open Pasture, Row Crop
None None	Fenced Pasture	Mining or Construction
COMMENTS To west of SR 77	<u>8 lacks riparian buffer. but between SR 101/778.</u>	minor riparian area
FLOW REGIME (At Time of Evalu	ation) (Check ONLY one b <u>ox</u> ):	
Stream Flowing		l pools, no flow (Intermittent)
Subsurface flow with isolated pools COMMENTS_	(Interstitial) Dry channel, no water	
SINUCSITY (Number of bands on	r 61 m (200 ft) of channel) (Check ONLY one box):	
None	1.0 2.0	3.0
✓ 0.5	1.5 2.5	>3

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score 38.5 (If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Pa	age: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/29/16	Quantity: 0.23
Photograph Information: 4 Photos taken, 1 upstream, 3 downstream	
Elevated Turbidity? (Y/N): _ N Canopy (% open): 50%	
Were samples collected for water chemistry? (Y/N): _N (Note lab sample no. or id. a	nd attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop and residential areas and has two road overpasses.	
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Prir         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)

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



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SITE NAME/LOCATION Apex Republic Wind Fa		
	rm 7 Peover Creek	70
SITE NUMBER SOH-007		/3
	1.20722 LONG83.05186 RIVER CODERIVER MILE	
NOTE: Complete All Items On This Form - Refe	r to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL C	HANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
	of substrate present. Check ONLY two predominant substrate TYPE boxes	
	trate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE     PERCENT       BLDR SLABS [16 pts]     0%	TYPE         PERCENT           Image: Silver [3 pt]         50%	Points
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts] 5%	Substrate
BEDROCK [16 pt] 0%	FINE DETRITUS [3 pts]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 0% GRAVEL (2-64 mm) [9 pts] 20%	CLAY or HARDPAN [0 pt]         0%           MUCK [0 pts]         0%	
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	13
	(A) Substrate Percentage 400% (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	Check 100%	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE 1	TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum	pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dept
	s or storm water pipes) (Check ONLY one box):	Max = 30
<ul> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> </ul>	> 5 cm - 10 cm [15 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	25
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 16	
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts]		Bankfull Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	e of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	
> 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]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	<pre>&gt; 1.0 m - 1.5 m (&gt; 3' 3" - 4' 8") [15 pts] </pre> ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<pre>&gt; 4.0 meters (&gt; 13') [30 pts] &gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts] &gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts] COMMENTS</pre>	<ul> <li>&gt; 1.0 m - 1.5 m (&gt; 3' 3" - 4' 8") [15 pts]</li> <li>≤ 1.0 m (&lt;=3' 3") [5 pts]</li> <li>AVERAGE BANKFULL WIDTH (meters): 0.60</li> <li>This information must also be completed</li> </ul>	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           COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS           COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 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         RIPARIAN ZONE AND FLOODP LAIN QU         RIPARIAN WIDTH       FLOOD	> 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         RIPARIAN ZONE AND FLOODP LAIN QU         RIPARIAN WIDTH       FLOOD         L R       (Per Bank)       L R	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 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         RIPARIAN ZONE AND FLOODPLAIN QU RIPARIAN WIDTH         E       RIPARIAN WIDTH         L       R         (Per Bank)       L         Moderate 5-10m       Image: Colspan="2">Commenter 5-10m	> 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         RIPARIAN ZONE AND FLOODPLAIN QU RIPARIAN WIDTH         L R       (Per Bank)       L R         Wide >10m       Image: Colspan="2">Commente State         Moderate 5-10m       Image: Colspan="2">Commente State	> 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         RIPARIAN ZONE AND FLOODPLAIN QU RIPARIAN WIDTH         E       RIPARIAN WIDTH         L       R         (Per Bank)       L         Moderate 5-10m       Image: Colspan="2">Commenter 5-10m	> 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         RIPARIAN ZONE AND FLOODPLAIN QU         RIPARIAN WIDTH       FLOOD         L R       (Per Bank)       L R         Wide >10m       Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">COMMENTS         Moderate 5-10m       Image: Colspan="2">Image: Colspan="2"         Image: Colspan="2"       Image: Colspan="2"         Image: Colspan="2"       Image: Colspan="2"       Image: Colspan="2"         Image: Colspan="2"	> 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         RIPARIAN ZONE AND FLOODPLAIN QU RIPARIAN WIDTH         L R       (Per Bank)       L R         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN QU RIPARIAN WIDTH         L R       (Per Bank)       L R         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN QUE         RIPARIAN WIDTH       FLOOD         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN QUE         RIPARIAN WIDTH       FLOOD         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN QUE         RIPARIAN WIDTH       FLOOD         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN QUE         RIPARIAN WIDTH       FLOOD         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI	Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Distance from Eva	luated Stream
CWH Name: Distance from Eval	uated Stream
EWH Name: Distance from Eval	uated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY M	ARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS	Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/29/16 Quantity: 0	.23
Photograph Information: 1 upstream	
Elevated Turbidity? (Y/N): Canopy (% open):20%	
Were samples collected for water chemistry? (Y/N): _N (Note lab sample no. or id. and attach results) La	b 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:	
Located near active crop areas.	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher s ID number. Include appropriate field data sheets from the Primary Headwater Habit	
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)	N Voucher? (Y/N)
Comments Regarding Biology:	

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





SITE NAME/LOCATION Apex Republic Wind F	arm	
SITE NUMBER SOH-0	09 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi²) 0.	62
	41.20722 LONG -83.05186 RIVER CODE RIVER MILE	
DATE 09/30/16 SCORER BJS	COMMENTS	
NOTE: Complete All Items On This Form - Ret	fer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL	CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	OVERY
	e of substrate present. Check ONLY two predominant substrate TYPE boxes	
· · · · · · · · · · · · · · · · · · ·	ostrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE         PERCEN           Image: Description of the state of	IT         TYPE         PERCENT           Image: Sild of the second	Points
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts]	Substrate
BEDROCK [16 pt] 0% COBBLE (65-256 mm) [12 pts] 10%	FINE DETRITUS [3 pts]     [0%     CLAY or HARDPAN [0 pt]	Max = 40
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts]	
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	14
Total of Percentages of 10.00%	(A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	Check	
	<i>m pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of	Pool Dept
evaluation. Avoid plunge pools from road culver > 30 centimeters [20 pts]	rts or storm water pipes) (Check ONLY one box): 5 cm - 10 cm [15 pts]	Max = 30
$\square$ > 22.5 - 30 cm [30 pts]	5 cm [5 pts]	
□ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	15
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 10	
		Bankfull
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts]	ge of 3-4 measurements) (Check ONLY one box):	Width
<ul> <li>BANK FULL WIDTH (Measured as the average &gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	ge of 3-4 measurements) (Check ONLY one box):	
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	ge of 3-4 measurements) (Check ONLY one box):	Width Max=30
<ul> <li>BANK FULL WIDTH (Measured as the average &gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	ge of 3-4 measurements) (Check ONLY one box):	Width
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	ge of 3-4 measurements) (Check ONLY one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODPLAIN (	ge of 3-4 measurements)       (Check ONLY one box):            ✓       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODPLAIN O <u>RIPARIAN WIDTH</u>	ge of 3-4 measurements)       (Check ONLY one box):         Image: State of the s	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODPLAIN ( <u>RIPARIAN WIDTH</u> <u>L R</u> (Per Bank) L	ge of 3-4 measurements)       (Check ONLY one box):         Image: State of the s	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODPLAIN O <u>RIPARIAN WIDTH</u> L R (Per Bank) L	ge of 3-4 measurements)       (Check ONLY one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODP LAIN O RIPARIAN WIDTH FLO L R (Per Bank) L ↓ Wide >10m ↓ Moderate 5-10m	ge of 3-4 measurements)       (Check ONLY one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 	ge of 3-4 measurements)       (Check ONL Y one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODPLAIN O RIPARIAN WIDTH FLO L R (Per Bank) L ↓ Wide >10m ↓ Moderate 5-10m ↓ Narrow <5m ↓	ge of 3-4 measurements)       (Check ONLY one box):	Width Max=30
3.       BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS	ge of 3-4 measurements)       (Check ONL Y one box):	Width Max=30
3.       BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS	ge of 3-4 measurements)       (Check ONL Y one box):	Width Max=30
3.       BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS	ge of 3-4 measurements)       (Check ONL Y one box):	Width Max=30
3.       BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS	ge of 3-4 measurements)       (Check ONLY one box):         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 1.0 m (<=3' 3") [5 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS COMMENTS RIPARIAN ZONE AND FLOODPLAIN ( RIPARIAN WIDTH FLO L R (Per Bank) L ✓ Wide >10m Moderate 5-10m Narrow <5m ✓ None COMMENTS FLOW REGIME (At Time of Evaluation, Stream Flowing Subsurface flow with isolated pools (Inte COMMENTS SINUOSITY (Number of bends per 61 m None 1.0	ge of 3-4 measurements)       (Check ONLY one box):         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the average > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS COMMENTS RIPARIAN ZONE AND FLOODPLAIN ( RIPARIAN WIDTH FLO L R (Per Bank) L Vide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation, Stream Flowing Subsurface flow with isolated pools (Inter COMMENTS] SINUOSITY (Number of bends per 61 m	ge of 3-4 measurements)       (Check ONLY one box):         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (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, INCLUDING THE ENTIRE WATERSHEE	O AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/30/16	Quantity: 0.15
Photograph Information: 2 upstream	
Elevated Turbidity? (Y/N): Canopy (% open): _ 70%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop areas.	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optiona ID number. Include appropriate field data sheets from the Pri	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebra	Voucher? (Y/N) N tes Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	· ·

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



Save as pdf Reset Form

OTTENIANE CONTION CONCOUNTS WIND	Farm	
SITE NAME/LOCATION Apex Republic Wind SITE NUMBER SOH-		.00
	41.17936 LONG83.00501 RIVER CODE RIVER MILE	
DATE 10/01/16 SCORER BJS	COMMENTS	
	efer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
· · ·		
STREAM CHANNEL NONE / NATURA	L CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
	pe of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant su TYPE PERCE	ubstrate types found (Max of 8). Final metric score is sum of boxes A & B.	Metric
BLDR SLABS [16 pts]	SILT [3 pt] 15%	Points
BOULDER (>256 mm) [16 pts] 0%	LEAF PACK/WOODY DEBRIS [3 pts]         10%           FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts]		Max = 40
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts]	26
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	20
Total of Percentages of <b>30.00</b>	% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	Chicok	
	<i>um pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of verts or storm water pipes) (Check <i>ONLY</i> one box):	Pool Dept Max = 30
> 30 centimeters [20 pts] 225 - 30  cm [30  pts]	> 5 cm - 10 cm [15 pts]	
□ > 22.5 - 30 cm [30 pts] □ > 10 - 22.5 cm [25 pts]	S cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts]	20
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 32	
	MAXIMOM FOOL DEFTH (centimeters). 32	
3. BANK FULL WIDTH (Measured as the avera		Bankfull Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	age of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul> COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul> COMMENTS          RIPARIAN ZONE AND FLOODPLAIN	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]     ≤ 1.0 m (<=3' 3") [5 pts]     AVERAGE BANKFULL WIDTH (meters): 2.40 This information <u>must</u> 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           RIPARIAN ZONE AND FLOODPLAIN           RIPARIAN WIDTH           L           R           (Per Bank)	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 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	> 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 RIPARIAN ZONE AND FLOODPLAIN <u>RIPARIAN WIDTH</u> L_R (Per Bank) L	> 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	> 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         RIPARIAN ZONE AND FLOODPLAIN RIPARIAN WIDTH         EL       R         (Per Bank)       L         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m		Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FL         L       R         (Per Bank)       L         ✓       Wide >10m         ✓       Moderate 5-10m         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS</li> <li> <i>RIPARIAN ZONE AND FLOODPLAIN RIPARIAN WIDTH L R</i> (Per Bank)         <i>L Wide</i> &gt;10m         <i>Moderate</i> 5-10m         <i>Moderate</i> 5-10m         <i>Narrow</i> &lt;5m         <i>None COMMENTS FLOW REGIME (At Time of Evaluation) At Time of Evaluation At Time of Evaluation L</i></li></ul>		Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FL         L       R         (Per Bank)       L         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FL         L       R         (Per Bank)       L         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN         RIPARIAN WIDTH       FL         L       R         (Per Bank)       L         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODP LAIN         RIPARIAN WIDTH       FL         L       R         (Per Bank)       L         ✓       Wide >10m         ✓       Moderate 5-10m         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODP LAIN         RIPARIAN WIDTH       FL         L       R         (Per Bank)       L         Image: Colspan="2">Image: Colspan="2">OMMENTS         Image: Colspan="2">Moderate 5-10m         Image: Colspan="2">FLOW REGIME (At Time of Evaluation Stream Flowing         Subsurface flow with isolated pools (Integration COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes No QHEI Score 51.0 (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, INCLUDING THE ENTIRE WATERSHEI	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:Watson NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/30/16	Quantity: 0.15
Photograph Information: 3 photos taken, 1 upstream, 1 downstream and 1 cross cha	innel
Elevated Turbidity? (Y/N): Canopy (% open):40%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id.	and attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop areas.	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional	NOTE: all valuables complete must be labeled with the site
ID number. Include appropriate field data sheets from the Pr	
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebra	Voucher? (Y/N)
Comments Regarding Biology:	

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



PHWH Form Page - 2

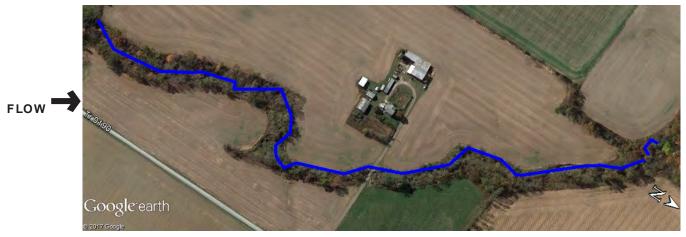
Save as pdf

**Reset Form** 

SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER SOH-011 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi²)	).28
LENGTH OF STREAM REACH (ft) 2,915 LAT. 41.19532 LONG83.01085 RIVER CODE RIVER MILE	
DATE 10/01/16 SCORER BJS COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
·	
STREAM CHANNEL INONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	IVERY
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] 15%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts]     30%     CLAY or HARDPAN [0 pt]     0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 25% MUCK [0 pts] 0%	26
SAND (<2 mm) [6 pts]         20%         ARTIFICIAL [3 pts]         0%	20
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of	Pool Depti
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]	
Image: Solution provide the solution of	20
OMM ENTS MAXIMUM POOL DEPTH (centimeters): 45	
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
$\begin{array}{c c c c c c c c c } &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ \hline \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ \hline \end{array} \le 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ \hline \end{array}$	Max=30
	25
COMMENTS AVERAGE BANKFULL WIDTH (meters): 3.70	25
This information <u>must</u> 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	
Moderate 5-10m Field Urban or Industrial	2
	)
None     Fenced Pasture     Mining or Construction       COMMENTS     Image: Community of Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS       SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes No QHEI Score 61.5 (If Yes, Atta	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	_ Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map P	Page: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/30/16	Quantity: <b>0.15</b>
Photograph Information: 6 photos taken, 2 upstream, 2 downstream and 2 cross cha	nnel
Elevated Turbidity? (Y/N): Canopy (% open):10%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	and attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop areas.	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional	
ID number. Include appropriate field data sheets from the Pri	mary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       Aquatic Macroinvertebrat	Voucher? (Y/N) N tes Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

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



PHWH Form Page - 2

Save as pdf



SITE NAME/LOCATION ADEX REPUBLIC WIND FAIM	
SITE NAME/LOCATION Apex Republic Wind Farm	A (mi²) <b>15.73</b>
	R MILE
DATE 10/02/16 SCORER BJS COMMENTS	
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 MODIFICATIONS:	R NO RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE	
(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] 20%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 15% CLAY or HARDPAN [0 pt] 0%	Max = 40
Image: GRAVEL (2-64 mm) [9 pts]       30%       Image: MUCK [0 pts]       0%         Image: GRAVEL (2-64 mm) [9 pts]       25%       Image: GRAVEL (2 mm) [6 pts]       0%         Image: GRAVEL (2-64 mm) [6 pts]       25%       Image: GRAVEL (2 mm) [6 pts]       0%	20
Total of Percentages of (A) Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> </ol>	e of Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
□         > 22.5 - 30 cm [30 pts]         □         < 5 cm [5 pts]	<u> </u>
OMMIENTS MAXIMUM POOL DEPTH (centimeters):	
3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
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
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	Width Max=30
= 2.0  meters  (> 13') [30  pts] = 2.0  m - 1.5  m (> 3' 3" - 4' 8") [15  pts] = 2.0  m (<=3' 3") [5  pts] = 2.0  m	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 Max=30           2.00         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]	Width Max=30           2.00         20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width       Max=30       2.00       20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30       2.00     20       ream ☆       Tillage
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Width Max=30       2.00     20       ream ☆       Tillage ustrial
> 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       2.00     20       ream☆       Tillage Istrial e, Row Crop
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Width Max=30       2.00     20       ream☆       Tillage Istrial e, Row Crop
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30       2.00     20       ream☆       Tillage Istrial e, Row Crop
> 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       2.00     20       ream ☆       Tillage ustrial e, Row Crop nstruction
> 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       2.00     20       ream ☆       Tillage ustrial e, Row Crop nstruction
> 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       2.00     20       ream ☆       Tillage ustrial e, Row Crop nstruction
> 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       2.00     20       ream ☆       Tillage ustrial e, Row Crop nstruction
> 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       2.00     20       ream ☆       Tillage ustrial e, Row Crop nstruction

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes No QHEI Score 52.0 (If Yes, Attack	n 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 A	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page	ge: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y _ Date of last precipitation: 10/01/16	Quantity: 0.37
Photograph Information: 4 photos taken, 2 downstream and 2 upstream	
Elevated Turbidity? (Y/N): Canopy (% open):30%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. an	d 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:	
Located near active crop areas and a road crossing	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional.	
ID number. Include appropriate field data sheets from the Prime	ary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates	Voucher? (Y/N) Voucher? (Y/N) N
Comments Regarding Biology:	

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



PHWH Form Page - 2



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SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER SOH-015 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi <sup>2</sup> )	1.44
LENGTH OF STREAM REACH (ft) 2,402 LAT. 41.20081 LONG83.00001 RIVER CODE RIVER MILE	
DATE 10/02/16 SCORER BJS COMMENTS	
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	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]         5%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%	Points
BEDROCK [16 pt]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       65%       CLAY or HARDPAN [0 pt]       0%         CLAY or HARDPAN [0 pt]       15%       MUCK [0 pts]       0%	
□       GRAVEL (2-64 mm) [9 pts]       15%       □       MUCK [0 pts]       0%         □       SAND (<2 mm) [6 pts]	25
Total of Percentages of c= coor( (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock (X) 100% 100% SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21	
	<u> </u>
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 cm [5 pts]	
Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Solution program         Image: Solution program         Image: Solution program         Image: Solution program           Image: Sol	15
OMMENTS MAXIMUM POOL DEPTH (centimeters): 10	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.0 m (&lt;=3' 3") [5 pts]</li> </ul>	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (meters): 2.30	20
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Field     Open Pasture, Row Cl       Narrow <5m	ор
Image: Sector Mail, Frank, Fourthead    Image: Sector Mail, Fourthead </td <td></td>	
COMMENTS	L
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral)</li> </ul>	.)
	7
COMMENTS	]
COMMENTS	1
COMMENTS	1

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: I	Distance from Evaluated Stream
CWH Name: [	Distance from Evaluated Stream
EWH Name: E	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AN	REA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson/Fireside NRCS Soil Map Page	e: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/01/16	Quantity: 0.37
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):75%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and	attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Located near active crop areas.	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. N ID number. Include appropriate field data sheets from the Primar Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Aquatic Macroinvertebrates Comments Regarding Biology:	ry Headwater Habitat Assessment Manual) Voucher? (Y/N)

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





45

SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER SOH-016 RIVER BASIN Beaver Creek DRAINAGE AREA (mi	) <b>13.98</b>
LENGTH OF STREAM REACH (ft) 2,643 LAT. 41.21080 LONG82.89879 RIVER CODE RIVER MIL	
DATE 10/04/16 SCORER BJS COMMENTS	
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 F	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
TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]         0%         SILT [3 pt]         5%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%	Points
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       65%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%	
GRAVEL (2-64 mm) [9 pts]       15%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	25
Total of Percentages of (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Types: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
<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 Dept 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]         □       > 10 - 22.5 cm [25 pts]	0
OMMIENTS MAXIMUM POOL DEPTH (centimeters): 0	
3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
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
$ \begin{array}{ c c c c c c } &> 4.0 \text{ meters } (> 13') [30 \text{ pts}] \\ &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ \hline &> 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \end{array} $	Width Max=30
$ = > 4.0 \text{ meters} (> 13') [30 \text{ pts}] > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] = > 1.0 \text{ m} - 1.5 \text{ m} (> 3' 3" - 4' 8") [15 \text{ pts}] \le 1.0 \text{ m} (<=3' 3") [5 \text{ pts}] $	Width Max=30
> 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
> 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
$ \begin{array}{c} \begin{array}{c} > 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ \end{array} \end{array} $	Width Max=30 20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	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]	e Width Max=30 20 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]	Width Max=30 20 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]	Width Max=30 20 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]	Width Max=30 20 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]	Width Max=30 20 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         AVERAGE BANKFULL WIDTH (meters):         Itis information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY         \$\Lambda NOTE: River Left (L) and Right (R) as looking downstream\$         RIPARIAN WIDTH       FLOODPLAIN QUALITY         \$\Lambda Noderate 5-10m       \$\Lambda Mature Forest, Wetland         \$\Lambda Narrow <5m	Width Max=30 20 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]	width Max=30 20 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]         > 1.5 m - 3.0 m (> 9' 7'' - 4' 8'') [20 pts]         AVERAGE BANKFULL WIDTH (meters):         I.8         This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY         Shuber Colspan="2">AVERAGE BANKFULL WIDTH (meters):         1.8         This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY         Shuber Colspan="2">AVERAGE BANKFULL WIDTH (meters):         1.8         Importance Colspan="2">Importance Colspan= 2         Importance Colspan= 2         Importance Colspan= 2         Moderate 5-10m         Importance Forest, Shrub or Old         Importance Colspan= 2         Moderate 5-10m         Importance Forest, Shrub or Old         Importance Colspan= 2          None	Width Max=30 20 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]	Width Max=30 20 20

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach C	Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: D	istance from Evaluated Stream
CWH Name: Di	stance from Evaluated Stream
EWH Name: Di	stance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AR	EA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:10/02/16	Quantity: 0.06
Photograph Information: 2 photos taken, 1 upstream and 1 cross channel	
Elevated Turbidity? (Y/N): N Canopy (% open): 35%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	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:	
Located near active crop areas and roads.	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates C	Voucher? (Y/N) N Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
1	

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



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SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER SOH-017 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi	<sup>2</sup> ) <b>1.16</b>
LENGTH OF STREAM REACH (ft) 3,094 LAT. 41.18723 LONG82.95322 RIVER CODE RIVER MIL	
DATE 10/04/16 SCORER BJS COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for I	nstructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO MODIFICATIONS:	RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxed	es
(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] 65%	Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	Substrate
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%	Max = 40
GRAVEL (2-64 mm) [9 pts]         15%         MUCK [0 pts]         0%	12
☑         SAND (<2 mm) [6 pts]         20%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	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
> 30 centimeters [20 pts]       > 5 cm -       10 cm [15 pts]         □       > 22.5 - 30 cm [30 pts]       □       < 5 cm [5 pts]	
□ > 10 - 22.5 cm [25 pts] □ NO WATER OR MOIST CHANNEL [0 pts]	0
OMMENTSMAXIMUM POOL DEPTH (centimeters): 0	
3BANK 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 Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	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 Max=30 0 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]	Width Max=30 0 20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30 20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	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]	Width Max=30 20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	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]	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]	Width Max=30 20
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (< 3' 3" - 4' 8") [15 pts]	Width Max=30 20 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         AVERAGE BANKFULL WIDTH (meters):         COMMENTS         AVERAGE BANKFULL WIDTH (meters):         RIPARIAN ZONE AND FLOODPLAIN QUALITY         \$\Lambda NOTE: River Left (L) and Right (R) as looking downstream):         RIPARIAN WIDTH       FLOODPLAIN QUALITY         \$\Lambda Noterate 5-10m       \$\Lambda Residential, Park, New Field         \$\Lambda Noterate 5-10m       \$\	Width Max=30 20 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]	Width Max=30 20 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]	Width Max=30 20 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]	Width Max=30 20 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]	width Max=30 20 20

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/02/16 Quantity: 0.06
Photograph Information: 3 photos taken, 1 upstream, 1 downstream, and 1 cross channel
Elevated Turbidity? (Y/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:
Additional comments/description of pollution impacts:
Located near active crop areas.
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Ladpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:

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



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SITE NAME/LOCATION Apex Republic Wind Fa	8 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²) 13.73
LENGTH OF STREAM REACH (ft) 5,888 LAT.	11.20600 LONG82.90061 RIVER CODE RIVER MILE
NOTE: Complete All items on This Form - Refe	er to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATURAL C MODIFICATIONS:	CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY
	of substrate present. Check ONLY two predominant substrate TYPE boxes strate types found (Max of 8). Final metric score is sum of boxes A & B.
(Max of 32). Add total number of significant subs	T TYPE Metr
BLDR SLABS [16 pts]	SILT [3 pt] 65% POIN
BOULDER (>256 mm) [16 pts] 0% BEDROCK [16 pt] 0%	LEAF PACK/WOODY DEBRIS [3 pts] 0% FINE DETRITUS [3 pts] 0% Substr
COBBLE (65-256 mm) [12 pts]	Max =
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts] 0% 12
SAND (<2 mm) [6 pts] 20%	ARTIFICIAL [3 pts]
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	n pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool De
evaluation. Avoid plunge pools from road culvert	s or storm water pipes) (Check ONLY one box): Max =
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]
□ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 0
3 BANK FULL WIDTH (Measured as the average	e of 3-4 measurements) (Check ONLY one box): Bankf
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	✓       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Widtl         ≤ 1.0 m (<=3' 3") [5 pts]
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.50 15
	This information <u>must</u> also be completed
RIPARIAN ZONE AND FLOODPLAIN Q RIPARIAN WIDTH FLOO	UALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ ODPLAIN QUALITY
LR (Per Bank) LF	
Wide > 10m	_ Mature Forest, Wetland Conservation Tillage
Wide >10m	Immature Ecrest Shrub or Old
Moderate 5-10m	Immature Forest, Shrub or Old Field
	Immature Forest, Shrub or Old
Moderate 5-10m       Narrow <5m	Immature Forest, Shrub or Old Field Urban or Industrial
Moderate 5-10m       Narrow <5m	Immature Forest, Shrub or Old       Immature Forest, Shrub or Old         Field       Urban or Industrial         Residential, Park, New Field       Immature Forest, Shrub or Old
Moderate 5-10m	Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         (Check ONLY one box):
Moderate 5-10m	Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         (Check ONLY one box):       Moist Channel, isolated pools, no flow (Intermittent)
Moderate 5-10m  Moderate 5-10m  Narrow <5m  None  COMMENTS  FLOW REGIME (At Time of Evaluation)  Stream Flowing	Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         (Check ONLY one box):       Moist Channel, isolated pools, no flow (Intermittent)
Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation) Stream Flowing Subsurface flow with isolated pools (Inters COMMENTS_	Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         (Check ONLY one box):       Moist Channel, isolated pools, no flow (Intermittent)
Moderate 5-10m         Narrow <5m	Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Residential, Park, New Field       Mining or Construction         Fenced Pasture       Mining or Construction         (Check ONLY one box):       Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)         (200 ft) of channel)       (Check ONLY one box):         2.0       3.0
Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation) Stream Flowing Subsurface flow with isolated pools (Inters COMMENTS SINUOSITY (Number of bends per 61 m	Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crop         Fenced Pasture       Mining or Construction         (Check ONLY one box):       Moist Channel, isolated pools, no flow (Intermittent)         bry channel, no water (Ephemeral)         (200 ft) of channel)       (Check ONLY one box):

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Ves No QHEI Score (If Yes, Attack	n 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: Fireside NRCS Soil Map Page	ge: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/02/16	Quantity: 0.06
Photograph Information: 2 photos taken, 1 upstream and 1 downstream	
Elevated Turbidity? (Y/N): N Canopy (% open): 60%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. an	d 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:	
Located near active crop areas.	
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Prim         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)	
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrate:	
Comments Regarding Biology:	

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



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SITE NAME/LOCATION Apex Republic Wi	ind Farm	
SITE NUMBER SC		52
	LAT. 41.21316 LONG83.05617 RIVER CODE RIVER MILE	
DATE 09/30/16 SCORER BJS		
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ictions
	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	
MODIFICATIONS:		
1. SUBSTRATE (Estimate percent of ever	y type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significa	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
	RCENT         TYPE         PERCENT           0%         SILT [3 pt]         20%	Points
BOULDER (>256 mm) [16 pts]	0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	Substrate
	0%         Image: Fine detritus [3 pts]         0%           25%         Image: CLAY or HARDPAN_I0 pt]         0%	Max = 40
	25%         CLAY or HARDPAN [0 pt]         0%           30%         MUCK [0 pts]         0%	
	20% ARTIFICIAL [3 pts] 0%	26
Total of Percentages of 28	5.00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
2. Maximum Pool Depth (Measure the ma evaluation. Avoid plunge pools from road	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of culverts or storm water pipes) (Check ONLY one box):	Pool Depti Max = 30
30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
□ > 22.5 - 30 cm [30 pts] □ > 10 - 22.5 cm [25 pts]	<ul> <li>S cm [5 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	20
OMMIENTS	MAXIMUM POOL DEPTH (centimeters): 35	
3. BANK FULL WIDTH (Measured as the a	average of 3-4 measurements) (Check ONLY one box):	Bankfull Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>		
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	✓ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	✓ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	Y = 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] Image north of CR 44 AVERAGE BANKFULL WIDTH (meters): 1.00	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	✓       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Widens out on averag</li> <li>RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH</li> </ul>	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS Widens out on averag RIPARIAN ZONE AND FLOODPI	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS Widens out on averag RIPARIAN ZONE AND FLOODPI <u>RIPARIAN VIDTH</u> L_R (Per Bank)	✓       > 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 Widens out on averag RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m	✓       > 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 Widens out on average RIPARIAN ZONE AND FLOODPIL RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m ✓ ✓ Narrow <5m	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS Widens out on average RIPARIAN ZONE AND FLOODPIC RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m ✓ Narrow <5m None	✓       > 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 Widens out on average RIPARIAN ZONE AND FLOODPIC RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m ✓ Narrow <5m None	✓       > 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 Widens out on average RIPARIAN ZONE AND FLOODPIC RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m ✓ Narrow <5m None COMMENTS North of CR 44 here FLOW REGIME (At Time of Evaluation of the flowing	✓       > 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 Widens out on average RIPARIAN ZONE AND FLOODPIC RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m ✓ Narrow <5m None COMMENTS North of CR 44 h FLOW REGIME (At Time of Evaluation of the second	✓       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Widens out on average</li> <li>RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH         L R (Per Bank)         Wide &gt;10m         Moderate 5-10m         Moderate 5-10m         None         COMMENTS North of CR 44 h         FLOW REGIME (At Time of Evalue         Stream Flowing         Subsurface flow with isolated pools         COMMENTS_</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]   ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Widens out on average</li> <li>RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH         L R (Per Bank)         Wide &gt;10m         Moderate 5-10m         Moderate 5-10m         None         COMMENTS North of CR 44 h         Stream Flowing         Subsurface flow with isolated pools         COMMENTS_</li> <li>SINUOSITY (Number of bends per None         None         SINUOSITY (Number of bends per None         SINUE PER NONE         SINUE</li></ul>	Image: Provide the system   Image: Pro	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Widens out on average</li> <li>RIPARIAN ZONE AND FLOODPI RIPARIAN WIDTH         L R (Per Bank)         Wide &gt;10m         Moderate 5-10m         Moderate 5-10m         Mone         COMMENTS North of CR 44 h         FLOW REGIME (At Time of Evalue         Stream Flowing         Subsurface flow with isolated pools         COMMENTS_         SINUOSITY (Number of bends per         Sinuosity (Number of bends per</li></ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 09/29/16 Quantity: 0.23
Photograph Information: 2 Photos taken, 1 upstream, 1 downstream
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:
Located near active crop and residential areas and has a road overpasses.
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)       N         Voucher? (Y/N)       N         Aquatic Macroinvertebrates Observed? (Y/N)       N
Comments Regarding Biology:

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





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SITE NAME/LOCATION Apex Republic Win		
	H-100 RIVER BASIN Sugar Creek DRAINAGE AREA (mi²) 0.	00
	AT. 41.19953 LONG83.09697 RIVER CODE RIVER MILE	
DATE 04/08/17 SCORER BJS		
	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
·		
STREAM CHANNEL NONE / NATU MODIFICATIONS:	IRAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	OVERY
	type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHE
	nt substrate types found (Max of 8). Final metric score is sum of boxes A & B.  RCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	0% SILT [3 pt] 60%	Point
	D%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           D%         FINE DETRITUS [3 pts]         0%	Substrat
	5% CLAY or HARDPAN [0 pt] 0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	0% MUCK [0 pts] 0%	14
SAND (<2 mm) [6 pts]	5% ARTIFICIAL [3 pts] 0%	14
Total of Percentages of <b>5.</b>	00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBST		
2. Maximum Pool Depth (Measure the ma	ximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road	culverts or storm water pipes) (Check ONLY one box):	Max = 3
> 30 centimeters [20 pts]	✓ > 5 cm - 10 cm [15 pts] ✓ < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	15
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 6	
3. BANK FULL WIDTH (Measured as the a	verage of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	✓ ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
	AVERAGE BANKFULL WIDTH (meters): 0.50	5
	AVERAGE BANKFULL WIDTH (meters): 0.50	5
	This information must also be completed	_
RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH	AIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A FLOODPLAIN QUALITY	
L R (Per Bank)	L R (Most Predominant per Bank) L R	
✓ ✓ Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Field Field	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Cro	р
None None	Fenced Pasture Mining or Construction	
COMMENTS <u>Located in wood</u>	ot. drains field	
FLOW REGIME (At Time of Evalu		
Stream Flowing Subsurface flow with isolated pools	(Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
COMMENTS		
SINUOSITY (Number of bends pe	r 61 m (200 ft) of channel) (Check ONLY one box):	
None 0.5	1.0     2.0     3.0       1.5     2.5     >3	
STREAM GRADIENT ESTIMATE		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Com	pleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dista	nce from Evaluated Stream
CWH Name: Distar	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: Watson NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/05/17 Qu	antity: <b>0.54</b>
Photograph Information: Representative Photos Taken	
Elevated Turbidity? (Y/N): N Canopy (% open): 5%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attac	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:	
Additional comments/description of pollution impacts:	
Nearby road and crop areas	
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE ID number. Include appropriate field data sheets from the Primary He	
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed?	erved? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	

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



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SITE NAME/LOCATION Apex Republic Wi		
	0H-101 RIVER BASIN Beaver Creek DRAINAGE AREA (mi <sup>2</sup> ) 0.2	20
	AT. 41.22957 LONG83.04101 RIVER CODE RIVER MILE	
DATE 04/11/17 SCORER BJS		
	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru-	ctions
STREAM CHANNEL NONE / NATU MODIFICATIONS:	JRAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
	y type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
	nt substrate types found (Max of 8). Final metric score is sum of boxes A & B.           RCENT         TYPE         PERCENT	Metrie
BLDR SLABS [16 pts]	0% SILT [3 pt] 80%	Points
	0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           0%         FINE DETRITUS [3 pts]         0%	Substrat
	0% CLAY or HARDPAN [0 pt] 0%	Max = 4
	5% MUCK [0 pts] 0%	40
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%	13
Total of Percentages of <b>0.</b>	00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
	ximum pool depth within the 61 meter (200 ft) evaluation reach at the time of culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 30
> 30 centimeters [20 pts]	$\sim$ > 5 cm - 10 cm [15 pts]	Max - 5
22.5 - 30  cm [30  pts]		05
✓ □ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	25
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 15	
3 BANK FULL WIDTH (Measured as the a	verage of 3-4 measurements) (Check ONLY one box):	Bankfull
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 0.50	5
		-
	This information must also be completed	
<b>RIPARIAN ZONE AND FLOODPL</b> <u>RIPARIAN WIDTH</u>	AIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ 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 Irban or Industrial	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop	)
	Fenced Pasture	
COMMENTS Located in wood		
FLOW REGIME (At Time of Evalu	ation) (Check ONLY one box):	
Stream Flowing	Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools COMMENTS	(Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends pe	r 61 m (200 ft) of channel) (Check ONLY one box): 1.0	
0.5	1.5 2.5 >3	
STREAM GRADIENT ESTIMATE	Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100	(ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Con	npleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dista	ance from Evaluated Stream
CWH Name: Dista	nce from Evaluated Stream
EWH Name: Dista	nce from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA	CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:04/10/17 Qu	uantity: 0.09
Photograph Information: Representative Photos Taken	
Elevated Turbidity? (Y/N): Canopy (% open): _5%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and atta	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:	
Additional comments/description of pollution impacts:	
Nearby crop areas	
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Obs	eadwater Habitat Assessment Manual) ucher? (Y/N)
Comments Regarding Biology:	

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





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	lind Farm	
SITE NAME/LOCATION Apex Republic W	OH-102 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²) 0	.08
	LAT. 41.23104 LONG83.03892 RIVER CODE RIVER MILE	
DATE 04/11/17 SCORER BJS	COMMENTS	
	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NAT MODIFICATIONS:	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHE
· · · · ·	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B.           ERCENT         TYPE         PERCENT	Metri
BLDR SLABS [16 pts]	0% SILT [3 pt] 95%	Point
BOULDER (>256 mm) [16 pts]	0%         □         LEAF PACK/WOODY DEBRIS [3 pts]         5%           0%         □         FINE DETRITUS [3 pts]         0%	Substra
COBBLE (65-256 mm) [12 pts]	0% CLAY or HARDPAN [0 pt] 0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	0% MUCK [0 pts] 0%	8
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%	U
Total of Percentages of	.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Decl Di
	d culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
□         > 22.5 - 30 cm [30 pts]           □         > 10 - 22.5 cm [25 pts]	☐ < 5 cm [5 pts] ☐ NO WATER OR MOIST CHANNEL [0 pts]	15
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 10	
3. BANK FULL WIDTH (Measured as the		
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	average of 3-4 measurements)       (Check ONLY one box):         > 1.0 m       - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	> 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]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Wide/braided, shallow</li> </ul>	$ = \frac{1.0 \text{ m} - 1.5 \text{ m} (> 3' 3'' - 4' 8'') [15 \text{ pts}]}{\le 1.0 \text{ m} (<=3' 3'') [5 \text{ pts}]} $ $ = \frac{1.0 \text{ m} (<=3' 3'') [5 \text{ pts}]}{\text{AVERAGE BANKFULL WIDTH (meters): 4.00}} $ This information <u>must</u> also be completed	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>		Width Max=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 Wide/braided, shallow RIPARIAN ZONE AND FLOODP <u>RIPARIAN WIDTH</u> L R (Per Bank)	$ \begin{array}{c} > 1.0 \text{ m} - 1.5 \text{ m} (> 3' 3'' - 4' 8'') [15 \text{ pts}] \\ \leq 1.0 \text{ m} (<=3' 3'') [5 \text{ pts}] \end{array} \\ \hline \\ \textbf{v poorly defined channel.} \qquad \textbf{AVERAGE BANKFULL WIDTH (meters): 4.00} \\ \hline \\ \textbf{This information must also be completed} \\ \hline \\ \textbf{This information must also be completed} \\ \hline \\ \textbf{CLAIN QUALITY} \qquad \stackrel{\wedge}{\rightarrow} \text{NOTE: River Left (L) and Right (R) as looking downstream } \stackrel{\wedge}{\rightarrow} \\ \hline \\ \textbf{FLOODPLAIN QUALITY} \\ \hline \\ \hline \\ \textbf{L} \begin{array}{c} \textbf{R} \\ (\text{Most Predominant per Bank)} \\ \hline \\ $	Width Max=30
	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=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 Wide/braided, shallow RIPARIAN ZONE AND FLOODP <u>RIPARIAN WIDTH</u> L R (Per Bank)	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS Wide/braided, shallow RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) √ ✓ Wide >10m	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Wide/braided, shallow</li> <li>RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH</li> <li>L R (Per Bank)</li> <li>✓ ✓ Wide &gt;10m</li> <li>Moderate 5-10m</li> <li>Narrow &lt;5m</li> <li>None</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Wide/braided, shallow</li> <li>RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH             L R (Per Bank)             √ ✓ Wide &gt;10m             Moderate 5-10m             Moderate 5-10m             Narrow &lt;5m             None             COMMENTS Located in wood</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Wide/braided, shallow</li> <li>RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH             L R (Per Bank)             √ ✓ Wide &gt;10m             Moderate 5-10m             Moderate 5-10m             Narrow &lt;5m             None             COMMENTS Located in wood             FLOW REGIME (At Time of Eval         </li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30 25
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS Wide/braided, shallow         RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L R       (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30 25
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS Wide/braided, shallow         RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L R       (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30 25
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Wide/braided, shallow</li> <li>RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH</li> <li>L R (Per Bank)</li> <li>✓ ✓ Wide &gt;10m</li> <li>Moderate 5-10m</li> <li>Morrow &lt;5m</li> <li>None COMMENTS Located in wood</li> <li>FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS_</li> <li>SINUOSITY (Number of bends points)</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30 25
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS Wide/braided, shallow         RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L R       (Per Bank)         ✓       Wide > 10m         Moderate 5-10m         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30 25
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS Wide/braided, shallow</li> <li>RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH</li> <li>L R (Per Bank)</li> <li>✓ Wide &gt; 10m</li> <li>Moderate 5-10m</li> <li>Moderate 5-10m</li> <li>Narrow &lt;5m</li> <li>None COMMENTS Located in wood</li> <li>FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS_</li> <li>SINUOSITY (Number of bends points)</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30 25

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/10/17 Quantity: 0.09
Photograph Information: Representative Photos Taken
Elevated Turbidity? (Y/N): Canopy (% open):0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Nearby crop areas. Fed by tile.
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher?
Comments Regarding Biology:

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





Anex Depublic M		
SITE NAME/LOCATION Apex Republic W SITE NUMBER S	OH-103 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²)	0.53
LENGTH OF STREAM REACH (ft) 733	CH-103         RIVER BASIN         Beaver Creek         DRAINAGE AREA (mi²)           LAT.         41.21351         LONG.         -83.04254         RIVER CODE         RIVER MILE	0.33
DATE 04/12/17 SCORER BJS		
	m - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL INONE / NAT MODIFICATIONS:	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RE	COVERY
	ery type of substrate present. Check ONLY two predominant substrate TYPE boxes	
( , , , , , , , , , , , , , , , , , , ,	cant substrate types found (Max of 8). Final metric score is sum of boxes A & B. PERCENT TYPE PERCENT	HHE   Metr
BLDR SLABS [16 pts]	0% SILT [3 pt] 70%	Poin
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%           0%         FINE DETRITUS [3 pts]         0%	Substr
COBBLE (65-256 mm) [12 pts]	15% CLAY or HARDPAN [0 pt] 0%	Max =
GRAVEL (2-64 mm) [9 pts]	5% MUCK [0 pts] 0%	20
SAND (<2 mm) [6 pts]	5% ARTIFICIAL [3 pts] 0%	20
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	15.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBS	STRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
• •	naximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool De
evaluation. Avoid plunge pools from roa > 30 centimeters [20 pts]	d culverts or storm water pipes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]	Max =
22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	
▶ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	30
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 30	
BANK FULL WIDTH (Measured as the		Bankf
> 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]	Widtl Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.70	20
RIPARIAN ZONE AND FLOODF	This information <u>must</u> also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
<u>RIPARIAN WIDTH</u>	FLOODPLAIN QUALITY	
L R (Per Bank)	L R (Most Predominant per Bank) L R Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Immature Forest, Shrub or Old     Urban or Industrial	
		ron
Narrow <5m		•
COMMENTS	Fenced Pasture Mining or Constructio	n
Stream Flowing	aluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermitter	nt)
Subsurface flow with isolated poor		-
SINUOSITY (Number of bends p None	ber 61 m (200 ft) of channel)         (Check ONLY one box):           1.0         2.0         3.0	
0.5	1.5     2.5     3	
STREAM GRADIENT ESTIMATE		
Flat (0.5 ft/100 ft)	Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft	(100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Distance from Evaluated Stre	eam
CWH Name: Distance from Evaluated Stree	am
EWH Name: Distance from Evaluated Stream	am
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE S	
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map S	Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/11/17 Quantity: 0.05	
Photograph Information: Representative Photos Taken	
Elevated Turbidity? (Y/N): Canopy (% open):40%	
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	n)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Nearby crop areas and roads.	
BIOTIC EVALUATION Performed? (Y/N): N ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessm Fish Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Comments Regarding Biology:	

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





		Score (sum of mo	etrics $1, 2, 3$ .	
SITE NAME/LOCATION Apex Republic W	nd Farm DH-104 RIVER BASIN Beav	vor Crook		00
SITE NUMBER S	LAT. <b>41.21319</b> LONG83.0		RAINAGE AREA (mi²)	00
LENGTH OF STREAM REACH (ft) 343 DATE 04/12/17 SCORER BJS	COMMENTS	RIVER CODE	RIVER MILE	
NOTE: Complete All Items On This Form		lanual for Obio's PHV	NH Strooms" for Instru	uctions
·				
STREAM CHANNEL NONE / NAT MODIFICATIONS:			RECENT OR NO RECO	OVERY
<ol> <li>SUBSTRATE (Estimate percent of eve (Max of 32). Add total number of significa</li> </ol>				HHE
	RCENT TYPE		PERCENT	Metri Point
BLDR SLABS [16 pts]	0% ✓ SILT [3 pt 0% LEAF PA	IJ CK/WOODY DEBRIS [3	75% pts] 5%	
BEDROCK [16 pt]		TRITUS [3 pts]	0%	Substra Max = 4
COBBLE (65-256 mm) [12 pts]	5%         CLAY or I           5%         MUCK [0	HARDPAN [0 pt]	0%	
SAND (<2 mm) [6 pts]		AL [3 pts]	0%	14
Total of Percentages of	00% (A) Substrate Pe	ercentage	(B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBS	Check	100%	RATE TYPES: 5	A.D
2. Maximum Pool Depth (Measure the me evaluation. Avoid plunge pools from road		neter (200 ft) evaluation heck ONLY one box):	reach at the time of	Pool Dep Max = 3
> 30 centimeters [20 pts]	<u> </u>	· 10 cm [15 pts]		
		< 5 cm [5 pts] NO WATER OR MOIST (	CHANNEL [0 pts]	15
OMMENTS	м	AXIMUM POOL DEPTH	(centimeters): 10	
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]		(Check ONLY one - 1.5 m (> 3' 3" - 4' 8") [15	,	Bankfu 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			IDTH (meters): 0.50	5
	A	VERAGE BANKFULL W	IDTH (meters): 0.50	5
	This information must als	o be completed		
	LAIN QUALITY ANOTE: River	Left (L) and Right (R) as	looking downstream 🛠	
<u>RIPARIAN WIDTH</u> <u>L_R</u> (Per Bank)	<u>FLOODPLAIN QUALITY</u> <u>L R</u> (Most Predominant per	Bank) <u>L R</u>		
✓ ✓ Wide >10m	Mature Forest, Wetland		Conservation Tillage	
Moderate 5-10m	Field		Urban or Industrial	
Narrow <5m	Residential, Park, New	Field	Open Pasture, Row Cro	р
None	Fenced Pasture		Mining or Construction	
COMMENTS				
FLOW REGIME (At Time of Eval Stream Flowing		Moist Channel, isolated n	ools, no flow (Intermittent)	
Subsurface flow with isolated poo		Dry channel, no water (E	,	
COMMENTS_				
SINUOSITY (Number of bends p	er 61 m (200 ft) of channel) (Check 1.0		3.0	
0.5	1.0 <b>2</b> .		>3	
STREAM GRADIENT ESTIMATE			_	
Flat (0.5 ft/100 ft)	Moderate (2 ft/100 ft)	Moderate to Severe	Severe (10 ft/10	0 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/11/17 Quantity: 0.05
Photograph Information: Representative Photos Taken
Elevated Turbidity? (Y/N): Canopy (% open):10%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

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



PHWH Form Page - 2



SITE NAME/LOCATION Apex Republic Wi	ind Farm	
		)
	LAT. 41.20374 LONG83.04634 RIVER CODE RIVER MILE	
DATE 04/12/17 SCORER BJS	COMMENTS	
NOTE: Complete All Items On This Form	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL IN NONE / NATURAL MODIFICATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE	ERY
1. SUBSTRATE (Estimate percent of ever	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	
. ,		HHEI Netrio
	ERCENT         TYPE         PERCENT         P           0%         Image: Silt [3 pt]         70%         P	Points
	0%     LEAF PACK/WOODY DEBRIS [3 pts]     10%       0%     EINE DETRITUS [3 pts]     0%	Substrat
BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts]	0% LILE FINE DETRITUS 13 DISL 070	Max = 40
	5% MUCK [0 pts] 0%	4.4
	10% ARTIFICIAL [3 pts] 0%	14
Total of Percentages of <b>5</b> .	.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBST		
2. Maximum Pool Depth (Measure the ma	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	ool Dep
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
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 8	
3. BANK FULL WIDTH (Measured as the a	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]	✓ ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
	AVERAGE BANKFULL WIDTH (meters): 0.50	F
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 0.50	5
	This information must also be completed	
<b>RIPARIAN ZONE AND FLOODPI</b> RIPARIAN WIDTH		
L R (Per Bank)	FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R	
Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Immature Forest, Shrub or Old Irban or Industrial	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop	
None None	Fenced Pasture	
COMMENTS		
	<i>luation)</i> (Check ONLY one <u>box</u> ):	
FLOW REGIME (At Time of Evalu		
Stream Flowing	Is (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
Stream Flowing Subsurface flow with isolated pools COMMENTS		
Stream Flowing Subsurface flow with isolated pools COMMENTS	er 61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.0 3.0	
Stream Flowing Subsurface flow with isolated pools COMMENTS	er 61 m (200 ft) of channel) (Check ONLY one box):	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/11/17 Quantity: 0.05
Photograph Information: Representative Photos Taken
Elevated Turbidity? (Y/N): _ N Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher?
Comments Regarding Biology:

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



Save as pdf

SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER SOH-106 RIVER BASIN Beaver Creek DRAINAGE AREA	(mi²) <b>0.00</b>
LENGTH OF STREAM REACH (ft) 458 LAT. 41.20368 LONG83.04664 RIVER CODE RIVER	MILE
DATE 04/12/17 SCORER BJS COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" fo	or Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR N MODIFICATIONS:	IO RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE b	oxes
(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%         Image: Silt [3 pt]         70%           BOULDER (>256 mm) [16 pts]         0%         Image: Leaf Pack/WOODY DEBRIS [3 pts]         10%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	14
Total of Percentages of 5.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 5	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): > 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
OMMENTS MAXIMUM POOL DEPTH (centimeters):	5
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
$ \begin{array}{ c c c c c } &> 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ &> 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \end{array} $	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	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 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 Max=30
$ \begin{array}{c} > 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ > 3.0 \text{ m} - 4.0 \text{ m} (> 9'7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9'7" - 4'8") [20 \text{ pts}] \\ \hline \end{array} \\ \hline \begin{array}{c} > 1.0 \text{ m} (<=3'3") [5 \text{ pts}] \\ \le 1.0 \text{ m} (<=3'3") [5 \text{ pts}] \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} $ \\ \hline \end{array}  \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array}  \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array}  \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array} \\ \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array} \\ \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array} \\ \hline \end{array} \\ \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array} \\ \hline \end{array} \\ \\ \hline \end{array}  \\ \hline \end{array}  \\ \hline \end{array} \\ \\ \hline \end{array}  \\ \hline \end{array}  \\ \\ \\ \\ \\ \end{array}  \\ \hline \end{array} \\ \\ \\ \end{array} \\ \\ \\ \\ \end{array}  \\ \\ \\ \hline \end{array} \\ \\ \\ \end{array} \\ \\ \end{array} \\ \\ \end{array} \\ \\ \\ \end{array} \\ \\ \end{array} \\ \\ \\ \end{array}  \\ \\ \\ \end{array}  \\ \\ \\ \\	Width Max=30 0.50 5
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Width Max=30 0.50 5 3m☆
> 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 0.50 5 5 am ☆
> 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 5 am☆ illage rial Row Crop
> 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 5 am☆ illage rial Row Crop
> 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 5 am☆ illage rial Row Crop
> 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 0.50 5 3m ☆ illage trial Row Crop truction
> 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 0.50 5 3m ☆ illage trial Row Crop truction
> 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 0.50 5 3m☆ illage trial Row Crop truction
> 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 0.50 5 
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       1.0 m (<=3' 3") [5 pts]	Width Max=30 0.50 5 3m☆ illage trial Row Crop truction

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/11/17 Quantity: 0.05
Photograph Information: Representative Photos Taken
Elevated Turbidity? (Y/N): Canopy (% open):0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:
Comments Regarding Biology:

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





SITE NAME/LOCATION Apex Republic Wind Farm	
SITE NUMBER SOH-107 RIVER BASIN Morrison Creel	k DRAINAGE AREA (mi²) 0.00
DATE 04/27/17 SCORER BJS COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for O	hio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECO	VERING 🔲 RECENT OR NO RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two pr	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric s TYPE PERCENT TYPE	Motric
BLDR SLABS [16 pts] 0% SILT [3 pt]	70% Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY [16 pt]           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pt]	Cub strate
BEDROCK         [16 pt]         0%         FINE DETRITUS         [3 pts]           COBBLE         (65-256 mm)         [12 pts]         0%         CLAY or HARDPAN         [0	Max = 40
GRAVEL (2-64 mm) [9 pts]	0% 8
SAND (<2 mm) [6 pts] 0% ARTIFICIAL [3 pts]	<u> </u>
Total of Percentages of 0.00% (A) Substrate Percentage 100	(B) A + B
	OF SUBSTRATE TYPES: 2
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft)	
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY or > 30 centimeters [20 pts] > 5 cm - 10 cm	ne box): Max = 30
> 22.5 - 30 cm [30 pts] \$ 5 cm [5 pts]	
□ > 10 - 22.5 cm [25 pts] □ NO WATER C	PR MOIST CHANNEL [0 pts] 15
	DL DEPTH (centimeters): 10
	ONLY one box): Bankfull
> 4.0 meters (> 13') [30 pts]	" - 4' 8") [15 pts] Width
	" - 4' 8") [15 pts] Width
$ \begin{array}{ c c c c c c } &> 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] \\ &> 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7'' - 4' 8'') [20 \text{ pts}] \end{array} $	" - 4' 8") [15 pts] Width Max=30
$ \begin{array}{ c c c c c } &> 4.0 \text{ meters} (> 13') [30 \text{ pts}] \\ &> 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] \\ &> 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7'' - 4' 8'') [20 \text{ pts}] \end{array} $	" - 4' 8") [15 pts] Width
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3')         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts] S] Width Max=30 NKFULL WIDTH (meters): 1.20 1.20
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3')         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         NKFULL WIDTH (meters):       1.20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	" - 4' 8") [15 pts] S] Width Max=30 IKFULL WIDTH (meters): 1.20 15
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	" - 4' 8") [15 pts] Width Max=30 MKFULL WIDTH (meters): 1.20 ted tight (R) as looking downstream ☆
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	" - 4' 8") [15 pts]       Width Max=30         NKFULL WIDTH (meters):       1.20         ted       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	" - 4' 8") [15 pts] Width Max=30 WKFULL WIDTH (meters): 1.20 Index Hight (R) as looking downstream ☆ Conservation Tillage
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3' ≤ 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         NKFULL WIDTH (meters):       1.20         ted       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3' $\leq 1.0$ m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         NKFULL WIDTH (meters):       1.20         ted       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS	" - 4' 8") [15 pts]       Width Max=30         MKFULL WIDTH (meters):       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop         Mining or Construction
> 4.0 meters (> 13') [30 pts] > 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 BAN AVERAGE BAN <b>This information must also be complet RIPARIAN ZONE AND FLOODPLAIN QUALITY</b> AVERAGE BAN <b>RIPARIAN WIDTH L</b> R (Per Bank) <b>L</b> R (Per Bank) <b>Mature Forest, Wetland</b> Moderate 5-10m Moderate 5-10m Moderate 5-10m Flow REGIME (At Time of Evaluation) (Check ONLY one box): <b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box): Moist Channel	" - 4' 8") [15 pts]       Width Max=30         NKFULL WIDTH (meters):       1.20         ted       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3')         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         WKFULL WIDTH (meters):       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop         Mining or Construction
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3' ≤ 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         MKFULL WIDTH (meters):       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop         Mining or Construction         , isolated pools, no flow (Intermittent)         o water (Ephemeral)
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3')         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         MKFULL WIDTH (meters):       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop         Mining or Construction         , isolated pools, no flow (Intermittent)         o water (Ephemeral)         xx):       3.0
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3' ≤ 1.0 m (<=3' 3") [5 pts]	" - 4' 8") [15 pts]       Width Max=30         MKFULL WIDTH (meters):       1.20         tight (R) as looking downstream ☆         L       R         Conservation Tillage         Urban or Industrial         Open Pasture, Row Crop         Mining or Construction         , isolated pools, no flow (Intermittent)         o water (Ephemeral)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach	Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	Distance from Evaluated Stream
CWH Name: [	Distance from Evaluated Stream
EWH Name: [	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED A	REA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page	e: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/27/07	Quantity: <b>0.07</b>
Photograph Information: Representative Photos Taken	
Elevated Turbidity? (Y/N): Canopy (% open):0%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and	attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Nearby road and crop areas	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. N ID number. Include appropriate field data sheets from the Prima	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates	Voucher? (Y/N) N Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

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



PHWH Form Page - 2

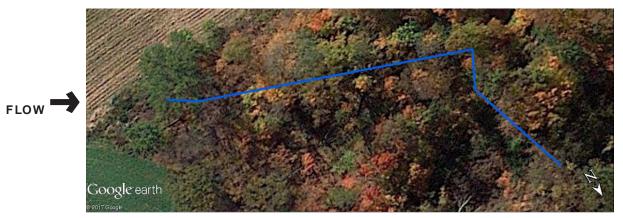
Save as pdf

**Reset Form** 

SITE NAME/LOCATION Apex Republic Win	id Farm	
	H-108 RIVER BASIN Westerhouse Ditch DRAINAGE AREA (mi²) 0.	00
LENGTH OF STREAM REACH (ft) 333	AT. 41.19504 LONG83.01710 RIVER CODE RIVER MILE	
DATE 04/25/17 SCORER BJS	COMMENTS	
NOTE: Complete All Items On This Form -	Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATUR MODIFICATIONS:	RAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
	type of substrate present. Check ONLY two predominant substrate TYPE boxes	
· · · · · ·	t substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
BLDR SLABS [16 pts]	1% SILT [3 pt] 85%	Points
	Image: Weight of the sector with the sector withe sector with the sector with the sector with the secto	Substrate
	0%         0%           CLAY or HARDPAN [0 pt]         0%	Max = 40
	%         0%           %         0%	9
	%   ARTIFICIAL [3 pts]	
Total of Percentages of <b>0.0</b> Bldr Slabs, Boulder, Cobble, Bedrock	0% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTR	ATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
		Pool Depth
evaluation. Avoid plunge pools from road c > 30 centimeters [20 pts]	ulverts or storm water pipes) (Check ONLY one box): 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	S cm [5 pts]	_
▶ 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	5
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 5	
3. BANK FULL WIDTH (Measured as the av		Bankfull
> 4.0 meters (> 13') [30 pts]	verage of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	<pre>&gt; 1.0 m - 1.5 m (&gt; 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (&lt;=3' 3") [5 pts]</pre>	Width Max=30
<pre>&gt; 4.0 meters (&gt; 13') [30 pts] &gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts] &gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts] COMMENTS</pre>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<pre>&gt; 4.0 meters (&gt; 13') [30 pts] &gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts] &gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts] COMMENTS</pre>	> 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           COMMENTS           RIPARIAN ZONE AND FLOODPLA <u>RIPARIAN WIDTH</u> 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 <b>RIPARIAN ZONE AND FLOODPLA</b> <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 1.0 m (<=3' 3") [5 pts]	Width Max=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 <b>RIPARIAN ZONE AND FLOODPLA</b> <u>RIPARIAN WIDTH</u> L R (Per Bank) ✓ ✓ Wide >10m Moderate 5-10m	> 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 <b>RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH</b> L R (Per Bank) ✓ ✓ Wide >10m ✓ ✓ Moderate 5-10m Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 1.0 m (<=3' 3") [5 pts]	Width Max=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 <b>RIPARIAN ZONE AND FLOODPLA</b> <u>RIPARIAN WIDTH</u> L R (Per Bank) ✓ ✓ Wide >10m Moderate 5-10m	> 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 RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH L R (Per Bank) ✓ ✓ Wide >10m Moderate 5-10m Morrow <5m None COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH L R (Per Bank) ✓ ✓ Wide >10m ✓ ✓ Wide >10m Moderate 5-10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluate Stream Flowing	> 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         RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L R (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	Image: Provide the state of the state	Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLA         RIPARIAN WIDTH         L       R         (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	<ul> <li>&gt; 1.0 m - 1.5 m (&gt; 3' 3" - 4' 8") [15 pts]</li> <li>≤ 1.0 m (&lt;=3' 3") [5 pts]</li> </ul> <b>AVERAGE BANKFULL WIDTH (meters):</b> <ul> <li>1.20</li> </ul> <b>This information must also be completed</b> AVERAGE BANKFULL WIDTH (meters): <b>This information must also be completed</b> ANOTE: River Left (L) and Right (R) as looking downstream ☆ <b>FLOODPLAIN QUALITY</b> L R             (Most Predominant per Bank)                 L R             (Most Predominant per Bank)             L R             Conservation Tillage             Immature Forest, Shrub or Old             Urban or Industrial             Field             Urban or Industrial             Open Pasture, Row Crope             Fenced Pasture             Mining or Construction                 ation) (Check ONLY one box):             (Interstitial)             Moist Channel, isolated pools, no flow (Intermittent)             Dry channel, no water (Ephemeral)                 61 m (200 ft) of channel) (Check ONLY one box):             1.0             2.0             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         RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH         L R (Per Bank)         ✓ ✓ Wide >10m         Moderate 5-10m         Moderate 5-10m         Stream Flowing         Subsurface flow with isolated pools of COMMENTS         SINUOSITY (Number of bends per	Image: Provide the state of the state	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/20/17 Quantity: 0.21
Photograph Information: Representative Photos Taken
Elevated Turbidity? (Y/N): Canopy (% open): 5%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Crop area upslope
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

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



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**Reset Form** 

SITE NAME/LOCATION ADEX REDUDIC: VV	lind Form	
SITE NAME/LOCATION Apex Republic W	SOH-109 RIVER BASIN Sugar Creek DRAINAGE AREA (mi²)	05
ENGTH OF STREAM REACH (ft) 327	LAT. 41.18208 LONG83.02568 RIVER CODE RIVER MILE	.00
DATE 04/26/17 SCORER BJS		
	m - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uction
· _		
STREAM CHANNEL NONE / NAT MODIFICATIONS:	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
. SUBSTRATE (Estimate percent of eve	within a fauthetic present Charle AVI View and an inset autheticate TVPE haves	_
	ery type of substrate present. Check ONLY two predominant substrate TYPE boxes cant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HH
	PERCENT         PERCENT           0%         Image: Sill 13 pt]         90%	Met Poi
BLDR SLABS [16 pts]	0%         ✓         SILT [3 pt]         90%           0%         ✓         LEAF PACK/WOODY DEBRIS [3 pts]         10%	
BEDROCK [16 pt]	0% FINE DETRITUS [3 pts] 0%	Subs <sup>®</sup> Max
COBBLE (65-256 mm) [12 pts]	0%         CLAY or HARDPAN [0 pt]         0%           0%         MUCK [0 pts]         0%	
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts] 0%	8
Total of Percentages of <b>0</b>	0.00% (A) Substrate Percentage (B)	A +
Bldr Slabs, Boulder, Cobble, Bedrock CORE OF TWO MOST PREDOMINATE SUBS	Check 10070	
		<u> </u>
	naximum pool depth within the 61 meter (200 ft) evaluation reach at the time of ad culverts or storm water pipes) (Check ONLY one box):	Pool [ Max
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	5
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 5	
BANK FULL WIDTH (Measured as the	e average of 3-4 measurements) (Check ONLY one box):	Banl
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Wid
> 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
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.00	5
	This information <u>must</u> also be completed	. 3
<b>RIPARIAN ZONE AND FLOODP</b> RIPARIAN WIDTH		5
RIPARIAN ZONE AND FLOODP <u>RIPARIAN WIDTH</u> L_R(Per Bank)	PLAIN QUALITY       ANOTE: River Left (L) and Right (R) as looking downstream         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L	5
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) Vide >10m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         (Most Predominant per Bank)       L         Mature Forest, Wetland       Conservation Tillage	
RIPARIAN ZONE AND FLOODP <u>RIPARIAN WIDTH</u> LR (Per Bank)	PLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream if         FLOODPLAIN QUALITY       L         L       R         (Most Predominant per Bank)       L         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial	
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R         (Per Bank)         ✓       ✓         Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY       L         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Cropping	
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R         (Per Bank)         Image: Straight of the straight o	PLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         FLOODPLAIN QUALITY         L       R         Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture, Row Crr	
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R       (Per Bank)         Image: State of the st	PLAIN QUALITY       Image: Note: River Left (L) and Right (R) as looking downstream in the second seco	
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R         (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       Image: NOTE: River Left (L) and Right (R) as looking downstream in the second seco	pp -
RIPARIAN ZONE AND FLOODP <u>RIPARIAN WIDTH</u> L R (Per Bank) Vide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval	PLAIN QUALITY       Image: NOTE: River Left (L) and Right (R) as looking downstream in the second seco	pp -
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R         (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       Image: NOTE: River Left (L) and Right (R) as looking downstream in the second seco	pp -
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R         (Per Bank)         ✓       Wide >10m         Moderate 5-10m         Narrow <5m	PLAIN QUALITY       \$\frac{1}{2}\$ NOTE: River Left (L) and Right (R) as looking downstream \$\frac{2}{3}\$         FLOODPLAIN QUALITY       L       R         L       R       (Most Predominant per Bank)       L       R         Mature Forest, Wetland       Immature Forest, Wetland       Immature Forest, Shrub or Old       Urban or Industrial         Immature Forest, Shrub or Old       Immature Forest, Shrub or Old       Immature, Row Crosservation Tillage         Residential, Park, New Field       Open Pasture, Row Crosservation       Open Pasture, Row Crosservation         Immature Forest Pasture       Mining or Construction       Immature Forest, Row Crosservation         Immature Forest Pasture       Immature Forest, Row Crosservation       Mining or Construction         Immature Forest Pasture       Immature Forest, Row Crosservation       Immature, Row Crosservation         Immature Forest Pasture       Immature Forest, Row Crosservation       Immature, Row Crosservation         Immature Forest Pasture       Immature Forest, Row Crosservation       Immature, Row Crosservation         Immature Forest Pasture       Immature Forest, Row Crosservation       Immature, Row Crosservation         Immature Forest Pasture       Immature Forest, Row Crosservation       Immature, Row Crosservation         Immature Forest Pasture Forest Pasture Forest Pasture Forest Pasture Forest Pasture Forest Pasture Forest Pas	pp -
RIPARIAN ZONE AND FLOODP         RIPARIAN WIDTH         L       R       (Per Bank)         ✓       ✓       Wide >10m         ✓       ✓       Moderate 5-10m         ✓       ✓       Moderate 5-10m         ✓       Narrow <5m	PLAIN QUALITY       \$\frac{1}{2}\$ NOTE: River Left (L) and Right (R) as looking downstream \$\frac{2}{3}\$         FLOODPLAIN QUALITY       L       R         L       R       (Most Predominant per Bank)       L       R         Mature Forest, Wetland       Immature Forest, Wetland       Immature Forest, Shrub or Old       Urban or Industrial         Immature Forest, Shrub or Old       Immature Forest, Shrub or Old       Open Pasture, Row Cross         Residential, Park, New Field       Open Pasture, Row Cross         Fenced Pasture       Mining or Construction         aluation)       (Check ONLY one box):         Moist Channel, isolated pools, no flow (Intermittent)         Dry channel, no water (Ephemeral)	pp -

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (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, INCLUDING THE ENTIRE WATERSHEE	O AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/20/17	Quantity: 0.21
Photograph Information: Representative Photos Taken	
Elevated Turbidity? (Y/N): Canopy (% open):5%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Crop area upslope	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pri	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrat	Voucher? (Y/N) N tes Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	· · · · · · · · · · · · · · · · · · ·

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





74

	arm	
SITE NAME/LOCATION Apex Republic Wind Fa		.36
	41.16722 LONG82.89357 RIVER CODE RIVER MILE	
DATE 10/17/17 SCORER MAM		
NOTE: Complete All Items On This Form - Ref	er to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL MODIFICATIONS:	CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	OVERY
	of substrate present. Check ONLY two predominant substrate TYPE boxes         strate types found (Max of 8). Final metric score is sum of boxes A & B.         T       TYPE         Image: Sile of the strate	HHEI Metric Points Substrate Max = 40
Total of Percentages of <b>30.00%</b>	(A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		A · B
• •	m pool depth within the 61 meter (200 ft) evaluation reach at the time of ts or storm water pipes)       (Check ONLY one box):         > 5 cm -       10 cm [15 pts]          < 5 cm [5 pts]         NO WATER OR MOIST CHANNEL [0 pts]	Pool Dept Max = 30
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 30	
3. BANK FULL WIDTH (Measured as the averag > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	le of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	<ul> <li>&gt; 1.0 m - 1.5 m (&gt; 3' 3" - 4' 8") [15 pts]</li> <li>≤ 1.0 m (&lt;=3' 3") [5 pts]</li> <li>AVERAGE BANKFULL WIDTH (meters): 4.00</li> </ul>	Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN Q         RIPARIAN WIDTH       FLO         L       R       (Per Bank)       L         ✓       ✓       Wide >10m       ✓	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]         AVERAGE BANKFULL WIDTH (meters):         4.00         This information must also be completed         QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         ODPLAIN QUALITY         R       (Most Predominant per Bank)         L       R         Mature Forest, Wetland         Immature Eorest, Shrub or Old	Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN Q         RIPARIAN WIDTH       FLO         L       R       (Per Bank)       L         ✓       Wide >10m       ✓       ✓	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]         AVERAGE BANKFULL WIDTH (meters):         4.00         This information must also be completed         QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         ODPLAIN QUALITY         R       (Most Predominant per Bank)         ✓       Mature Forest, Wetland         ✓       Mature Forest, Shrub or Old         Immature Forest, Shrub or Old       Urban or Industrial         Field       Open Pasture Row Crr	Width Max=30 25
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN Q         RIPARIAN WIDTH       FLO         L       R       (Per Bank)       L         ✓       Wide >10m       ✓	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]         AVERAGE BANKFULL WIDTH (meters):         4.00         This information must also be completed         QUALITY<       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         ODPLAIN QUALITY         R       (Most Predominant per Bank)         ✓       Mature Forest, Wetland         ✓       Mature Forest, Shrub or Old         Urban or Industrial	Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN Q         RIPARIAN WIDTH       FLO         L R       (Per Bank)       L F         ✓       Wide >10m       ✓         ✓       Moderate 5-10m       □         Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]         AVERAGE BANKFULL WIDTH (meters):         4.00         This information must also be completed         QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         ODPLAIN QUALITY         R       (Most Predominant per Bank)         L       R         Mature Forest, Wetland         Immature Forest, Shrub or Old         Immature Forest, Shrub or Old         Field         Open Pasture, Row Croc         Fenced Pasture         Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30 25
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPLAIN Q         RIPARIAN WIDTH       FLO         L R       (Per Bank)       L F         ✓       Wide >10m       ✓         ✓       Wide >10m       ✓         Moderate 5-10m       □       Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]         AVERAGE BANKFULL WIDTH (meters):         4.00         This information must also be completed         QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         ODPLAIN QUALITY         R       (Most Predominant per Bank)         L       R         Mature Forest, Wetland         Immature Forest, Shrub or Old         Immature Forest, Shrub or Old         Field         Open Pasture, Row Croc         Fenced Pasture         Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (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, INCLUDING THE ENTIRE WATERSHEE	DAREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/12/17	Quantity: 0.02
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):40%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pri	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrat	Voucher? (Y/N) N tes Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	

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





PHWH Form Page - 2

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Anox Popublic W	ind Form	
SITE NAME/LOCATION Apex Republic W	OH-158 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²)	0 11
	LAT. 41.18183 LONG82.87481 RIVER CODE RIVER MILE	0.11
DATE 10/17/17 SCORER MAM		
		ructions
NOTE. Complete All items on This Form		luctions
STREAM CHANNEL NONE / NAT MODIFICATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	COVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	
· · · · · ·	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B. ERCENT TYPE PERCENT	Metr
BLDR SLABS [16 pts]	0% SILT [3 pt] 95%	Poin
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           0%         FINE DETRITUS [3 pts]         0%	Substr
COBBLE (65-256 mm) [12 pts]	0% CLAY or HARDPAN [0 pt] 0%	Max =
GRAVEL (2-64 mm) [9 pts]	0% MUCK [0 pts] 0%	11
SAND (<2 mm) [6 pts]	5% ARTIFICIAL [3 pts] 0%	
Total of Percentages of	.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool De
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	d culverts or storm water pipes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]	Max =
> 22.5 - 30 cm [30 pts]	C < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	0
OMM ENTS	MAXIMUM POOL DEPTH (centimeters): 0	
BANK FULL WIDTH (Measured as the	average of 3-4 measurements) (Check ONLY one box):	Bankf
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=3
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	✓ ≤ 1.0 m (<=3' 3") [5 pts]	
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 0.90	5
	This information must also be completed	
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH	LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ FLOODPLAIN QUALITY	
L R (Per Bank)	L R (Most Predominant per Bank) L R	
✓ ✓ Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Field Groat of Industrial	
Narrow <5m	Residential, Park, New Field Open Pasture, Row C	rop
None	Fenced Pasture Mining or Construction	1
COMMENTS Historic stream	modified for drainage	
FLOW REGIME (At Time of Eval		
Stream Flowing Subsurface flow with isolated pool	Is (Interstitial) Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral)	it)
COMMENTS		_
SINUOSITY (Number of ben <u>ds pages</u>	er 61 m (200 ft) of channel) (Check ONLY one box):	
● None ✓ 0.5	1.0     2.0     3.0       1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	Moderate (2 ft/100 ft) Moderate to Severe	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Attach Co	mpleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	tance from Evaluated Stream
CWH Name: Dist	ance from Evaluated Stream
EWH Name: Dist	ance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/12/17	Quantity: 0.02
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 0%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and at	tach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain:	· · · · · · · · · · · · · · · · · · ·
Additional comments/description of pollution impacts:	
tile discharge	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOT ID number. Include appropriate field data sheets from the Primary H	
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Ob	oucher? (Y/N) N served? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	

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



PHWH Form Page - 2



SITE NAME/LOCATION Apex Republic Wi	nd Farm	
SITE NAME/ECCATIONSITE NUMBER_SC		90
LENGTH OF STREAM REACH (ft) 1,915	LAT. 41.14564 LONG82.93163 RIVER CODE RIVER MILE	
DATE 10/19/17 SCORER MAM	COMMENTS	
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ictions
STREAM CHANNEL NONE / NATURATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	OVERY
	y type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	nt substrate types found (Max of 8). Final metric score is sum of boxes A & B.  RCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts]	0% SILT [3 pt] 90%	Points
	0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           0%         FINE DETRITUS [3 pts]         0%	Substrate
	0% □□ CLAY or HARDPAN [0 pt] 0%	Max = 40
	5% MUCK [0 pts] 0%	12
SAND (<2 mm) [6 pts]	5% ARTIFICIAL [3 pts] 0%	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBST	RATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the ma	ximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Deptl
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]	
✓ □ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	25
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 20	
3. BANK FULL WIDTH (Measured as the a	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
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	<ul> <li>✓ &gt; 1.0 m - 1.5 m (&gt; 3' 3" - 4' 8") [15 pts]</li> <li>≤ 1.0 m (&lt;=3' 3") [5 pts]</li> </ul>	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	✓       > 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           RIPARIAN ZONE AND FLOODPL	✓       > 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	> 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           COMMENTS           RIPARIAN ZONE AND FLOODPL <u>RIPARIAN WIDTH</u>	Image: Second system       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 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           COMMENTS           RIPARIAN ZONE AND FLOODPL <u>RIPARIAN WIDTH</u> (Per Bank)	Image: Second system       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 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	✓       > 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	✓       > 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 COMMENTS RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m ✓ ✓ Narrow <5m	✓       > 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         RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH         L       R       (Per Bank)         Wide >10m       Moderate 5-10m         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH         L       R       (Per Bank)         Wide >10m       Moderate 5-10m         ✓       Narrow <5m	→ 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] <b>COMMENTS RIPARIAN ZONE AND FLOODPL</b> <u>RIPARIAN WIDTH</u> L       R       (Per Bank)         Wide >10m       Moderate 5-10m         ✓       Narrow <5m	→ 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         RIPARIAN ZONE AND FLOODPL         RIPARIAN WIDTH         L R (Per Bank)         Wide >10m         Moderate 5-10m         ✓         Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPL         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         ✓       Narrow <5m	Image: Provide the system of the system	Width Max=30
> 4.0 meters (> 13') [30 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]         COMMENTS         RIPARIAN ZONE AND FLOODPL         RIPARIAN WIDTH         L       R         (Per Bank)         Wide >10m         Moderate 5-10m         ✓       Narrow <5m	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information M	ust Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Sco	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, INCLUDING	G THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitat	ion: 10/12/17 Quantity: 0.02
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): _	10%
Were samples collected for water chemistry? (Y/N): N	(Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (m	g/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations.	Voucher collections optional. NOTE: all voucher samples must be labeled with the site
	field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salama Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N)	anders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
1	

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



FLOW

Save as pdf

**Reset Form** 

	arm	
SITE NAME/LOCATION Apex Republic Wind F		18
	41.21888 LONG82.86025 RIVER CODE RIVER MILE	
DATE 04/07/17 SCORER BH	_ COMMENTS	
NOTE: Complete All Items On This Form - Re	fer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL INONE / NATURAL MODIFICATIONS:	CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
1. SUBSTRATE (Estimate percent of every type	e of substrate present. Check ONLY two predominant substrate TYPE boxes	
	bstrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE         PERCEI           D         BLDR SLABS [16 pts]         0%	NT         TYPE         PERCENT           SILT [3 pt]         85%	Points
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts]	Substrate
BEDROCK [16 pt] 0% COBBLE (65-256 mm) [12 pts] 0%	FINE DETRITUS [3 pts]         0%           CLAY or HARDPAN [0 pt]         0%	Max = 40
GRAVEL (2-64 mm) [9 pts]	MUCK [0 pts]	40
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	12
Total of Percentages of 0.00%	(A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
2. Maximum Pool Depth (Measure the maximu	m pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dept
evaluation. Avoid plunge pools from road culve		Max = 30
<ul> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> </ul>	> 5 cm - 10 cm [15 pts]	
□	NO WATER OR MOIST CHANNEL [0 pts]	20
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 60	
3. BANK FULL WIDTH (Measured as the avera	ge 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
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS</li> </ul> <b>RIPARIAN ZONE AND FLOODPLAIN</b> RIPARIAN WIDTH       FLO         L       R         (Per Bank)       L	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] $\leq$ 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         RIPARIAN ZONE AND FLOODPLAIN OF INCOMPLAIN OF INCOM	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.5 m - 3.0 m (&gt; 9' 7" - 4' 8") [20 pts]</li> <li>COMMENTS</li> </ul> <b>RIPARIAN ZONE AND FLOODPLAIN</b> <u>RIPARIAN WIDTH</u> <u>L R</u> (Per Bank) L	> 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         RIPARIAN ZONE AND FLOODPLAIN OF INCOMPLAIN OF INCOM	> 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         RIPARIAN ZONE AND FLOODPLAIN ( RIPARIAN WIDTH         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN ( RIPARIAN WIDTH         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN ( RIPARIAN WIDTH         L       R         (Per Bank)       L         Wide >10m       □         Moderate 5-10m       □         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN OF REPARIAN WIDTH         L       R         (Per Bank)       L         Wide >10m       L         Moderate 5-10m       D         Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN OF         RIPARIAN WIDTH       FLO         L       R         (Per Bank)       L         Wide >10m       Image: Commenter of the second secon	> 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         RIPARIAN ZONE AND FLOODPLAIN OF RIPARIAN WIDTH         L       R         (Per Bank)       L         Wide >10m       L         Moderate 5-10m       Moderate 5-10m         ✓       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN OF REPARIAN WIDTH         L R       (Per Bank)       L         Wide >10m       □       Moderate 5-10m       □         Moderate 5-10m       □       Narrow <5m	> 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         RIPARIAN ZONE AND FLOODPLAIN OF REPARIAN WIDTH         L       R         (Per Bank)       L         Wide >10m       L         Moderate 5-10m       Moderate 5-10m         ✓       None         COMMENTS	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes Vo 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	DAREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Watson NRCS Soil Map I	Page: NRCS Soil Map Stream Order
County: Seneca Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/20/17	Quantity: 0.21
Photograph Information: Representative Photos Taken	
Elevated Turbidity? (Y/N): N Canopy (% open): 5%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id.	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Crop area upslope	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pr	•
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebra	Voucher? (Y/N) N ates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
<u> </u>	

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





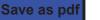
Anox Popublic W	ind Form	
SITE NAME/LOCATION Apex Republic W	OH-201 RIVER BASIN Beaver Creek DRAINAGE AREA (mi²)	3.61
	LAT. 41.18233 LONG82.93057 RIVER CODE RIVER MILE	
DATE 04/14/17 SCORER BH		-
	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for In	structions
·		
STREAM CHANNEL NONE / NAT MODIFICATIONS:	URAL CHANNEL RECOVERED RECOVERING RECENT OR NO R	ECOVERY
	ry type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B. ERCENT TYPE PERCENT	Metr
BLDR SLABS [16 pts]	10% SILT [3 pt] 60%	Poin
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           0%         FINE DETRITUS [3 pts]         0%	Substr
COBBLE (65-256 mm) [12 pts]	5% CLAY or HARDPAN [0 pt] 0%	Max =
GRAVEL (2-64 mm) [9 pts]	5% MUCK [0 pts] 0%	14
SAND (<2 mm) [6 pts]	20% ARTIFICIAL [3 pts] 0%	
Total of Percentages of 1	5.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
Nacional David (Massau de		
<ol> <li>Maximum Pool Depth (Measure the ma evaluation. Avoid plunge pools from road</li> </ol>	aximum pool depth within the 61 meter (200 ft) evaluation reach at the time of d culverts or storm water pipes) (Check ONLY one box):	Pool De Max = 3
30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	> 5 cm - 10 cm [15 pts]	
□         > 22.5 - 30 cm [30 pts]           □         > 10 - 22.5 cm [25 pts]	<ul> <li>&lt; 5 cm [5 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	20
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 32	
<ul> <li>BANK FULL WIDTH (Measured as the</li> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> </ul>	average of 3-4 measurements) (Check ONLY one box):	Bankfu Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	$\leq 1.0 \text{ m} (<=3' 3'') [5 \text{ pts}]$	Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		a
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 3.10	25
RIPARIAN ZONE AND FLOODP	<b>This information</b> <u>must</u> also be completed LAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN ZONE AND FLOODF	FLOODPLAIN QUALITY	
L R (Per Bank)	L R (Most Predominant per Bank) L R	
Wide >10m	Mature Forest, Wetland Conservation Tillage	<b>;</b>
Moderate 5-10m	Field Gran of Industrial	~
Narrow <5m	Residential, Park, New Field Open Pasture, Row	Crop
	Fenced Pasture Mining or Constructi	on
FLOW REGIME (At Time of Eval Stream Flowing	luation) (Check ONLY one box):	ent)
Subsurface flow with isolated poo		5.11.7
COMMENTS		
	er 61 m (200 ft) of channel) (Check ONLY one box):	
□ None ✓ □ 0.5	1.0     2.0     3.0       1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	Moderate (2 ft/100 ft) Moderate to Severe	

ADDITIONAL STREAM INFORMATION (This Information M	lust Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Sco	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, INCLUDING	G THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitat	tion: 04/11/17 Quantity: 0.05
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open):	5%
Were samples collected for water chemistry? (Y/N): N	(Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (m	
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
Crop area upslope	
	. Voucher collections optional. NOTE: all voucher samples must be labeled with the site field data sheets from the Primary Headwater Habitat Assessment Manual)
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N	anders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	

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



PHWH Form Page - 2



**Reset Form** 

SITE NAME/LOCATION Apex Republic Wi	nd Farm	
		DRAINAGE AREA (mi²) 0.00
	LAT. 41.18198 LONG82.93081 RIVER CODE	
DATE 04/26/17 SCORER BH	COMMENTS	
	- Refer to "Field Evaluation Manual for Ohio's Pl	HWH Streams" for Instructions
·		
STREAM CHANNEL INONE / NATI MODIFICATIONS:	JRAL CHANNEL RECOVERED RECOVERING	RECENT OR NO RECOVERY
	y type of substrate present. Check ONLY two predomina	
. ,	nt substrate types found (Max of 8). Final metric score is s RCENT TYPE	DEDCENT Met
BLDR SLABS [16 pts]	0% SILT [3 pt]	30% Poir
BOULDER (>256 mm) [16 pts]	0%         LEAF PACK/WOODY DEBRIS [           0%         FINE DETRITUS [3 pts]	3 pts] 10% Subst
	0% CLAY or HARDPAN [0 pt]	0%
	40% MUCK [0 pts]	0%
SAND (<2 mm) [6 pts]	20% ARTIFICIAL [3 pts]	<u> </u>
Total of Percentages of <b>D</b> . Bldr Slabs, Boulder, Cobble, Bedrock	00% (A) Substrate Percentage 100%	(B) A + E
SCORE OF TWO MOST PREDOMINATE SUBST		STRATE TYPES: 4
	ximum pool depth within the 61 meter (200 ft) evaluation	
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	culverts or storm water pipes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]	Max =
> 22.5 - 30 cm [30 pts]	S cm [5 pts]	
> 10 - 22.5 cm [25 pts]		<u>T CHANNEL [0 pts]</u> 5
OMM ENTS	MAXIMUM POOL DEPT	'H (centimeters): 3
3 BANK FULL WIDTH (Measured as the a	average of 3-4 measurements) (Check ONLY or	ne box): Bank
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [ ✓ ≤ 1.0 m (<=3' 3") [5 pts]	15 pts] Widt Max=
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL	WIDTH (meters): 1.00 5
	This information <u>must</u> also be completed	
<b>RIPARIAN ZONE AND FLOODPI</b> RIPARIAN WIDTH	AIN QUALITY ☆NOTE: River Left (L) and Right (R) a FLOODPLAIN QUALITY	as looking downstream 🛣
L R (Per Bank)	LR (Most Predominant per Bank) LR	
✓ ✓ Wide >10m	Mature Forest, Wetland	Conservation Tillage
Moderate 5-10m	Field	Urban or Industrial
Narrow <5m	Residential, Park, New Field	Open Pasture, Row Crop
None	Fenced Pasture	Mining or Construction
COMMENTS		
FLOW REGIME (At Time of Evalu		
Stream Flowing Subsurface flow with isolated pools		l pools, no flow (Intermittent) (Ephemeral)
COMMENTS_		
SINUOSITY (Number of bends pe	r 61 m (200 ft) of channel) <u>(C</u> heck <i>ONLY</i> one box):	_
None		3.0
	1.5 2.5	>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: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/20/17 Quantity: 0.21
Photograph Information: Representative Photos Taken
Elevated Turbidity? (Y/N): Canopy (% open):5%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
Crop area upslope
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)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

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



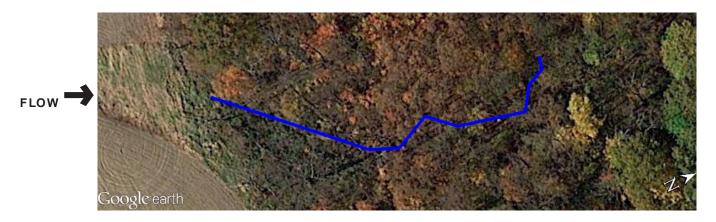
Save as pdf Reset Form

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SITE NAME/LOCATION Apex Republic Win	d Farm	
SITE NUMBER SOL		5
	AT. 41.18142 LONG82.93387 RIVER CODE RIVER MILE	
DATE 04/27/17 SCORER BH	COMMENTS	
NOTE: Complete All Items On This Form -	Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATUR MODIFICATIONS:	RAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER	/ERY
. SUBSTRATE (Estimate percent of every	type of substrate present. Check ONLY two predominant substrate TYPE boxes	
		HHE Metr
		Poin
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts]	Substr
	70 FINE DETRITUS 13 DISL	Max =
	0% MUCK [0 pts] 0%	40
SAND (<2 mm) [6 pts]	0%   ARTIFICIAL [3 pts]	16
Total of Percentages of 0.0	0% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock		
		Pool De
evaluation. Avoid plunge pools from road co > 30 centimeters [20 pts]	ulverts or storm water pipes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]	Max =
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	
□ > 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	15
OMMENTS	MAXIMUM POOL DEPTH (centimeters): 10	
3. BANK FULL WIDTH (Measured as the av	verage of 3-4 measurements) (Check ONLY one box):	Bankf
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> </ul>		Widtl Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.00	5
	This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLA RIPARIAN WIDTH	AIN QUALITY SNOTE: River Left (L) and Right (R) as looking downstream <u>FLOODPLAIN QUALITY</u>	
L R (Per Bank)	<u>L R</u> (Most Predominant per Bank) <u>L R</u>	
✓ ✓ Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Field Urban or Industrial	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Crop	
None	Fenced Pasture	
FLOW REGIME (At Time of Evalua		
Stream Flowing Subsurface flow with isolated pools ( COMMENTS	(Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
	61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.0 3.0	
None	1.0       2.0       3.0         1.5       2.5       >3	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Fireside NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Seneca Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/27/17 Quantity: 0.07
Photograph Information: Representative Photos Taken
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:
Crop area upslope
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

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



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Commission of Ohio Docketing Information System on

12/26/2018 3:09:19 PM

in

Case No(s). 17-2295-EL-BGN

Summary: Application Exhibit J Part 33 of 33 electronically filed by Teresa Orahood on behalf of Dylan F. Borchers