



[WPAA005_UDP_002E] facing east



[WPAA005_UDP_003W] facing west

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: AEP - Allen Station City/County: Paulding Sampling Date: 7/15/15
 Applicant/Owner: AEP State: OH Sampling Point: WPAA004_WDP
 Investigator(s): SCI Engineering, Inc. Section, Township, Range: 30, 1N, R1E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.01800472 Long: -84.67654312 Datum: NAD83
 Soil Map Unit Name: Hoytville silty clay NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation Y, Soil Y, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation Y, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	
Wetland is located in a depression in a corn field. Corn growth is sparse. Some small specimens of yellow foxtail present. The entire field is wet and has little relief. This field may have been planted later, as the corn is short on the high spots as well. Vegetation and soil disturbed by farming.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		☒ Surface Soil Cracks (B6)
☒ Surface Water (A1)	Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☒ High Water Table (A2)	Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☒ Saturation (A3)	Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: WPAA004_WDP

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>5</u> x 3 = <u>15</u> FACU species _____ x 4 = _____ UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>10</u> (A) <u>40</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☒ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Zea mays</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Setaria pumila</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>10</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>001N, 002E, 003W</u>				

SOIL

Sampling Point: WPAA004_WDP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)	___ Polyvalue Below Surface (S8) (LRR R,
___ Histic Epipedon (A2)	MLRA 149B)
___ Black Histic (A3)	___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
___ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (LRR K, L)
___ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)
___ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)
___ Thick Dark Surface (A12)	✓ Redox Dark Surface (F6)
___ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Sandy Redox (S5)	
___ Stripped Matrix (S6)	
___ Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: AEP - Allen Station City/County: Paulding Sampling Date: 7/15/15
 Applicant/Owner: AEP State: OH Sampling Point: WPAA004_UDP
 Investigator(s): SCI Engineering, Inc. Section, Township, Range: S30 T1N R1E
 Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.01800472 Long: -84.67654312 Datum: NAD83
 Soil Map Unit Name: Hoytville silty clay NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation Y, Soil Y, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Upland point is on a higher spot in the field under the existing power lines. Vegetation and soils considered disturbed due to active farming.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>21</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>21</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: WPAA004_UDP

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>10</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>5.0</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Zea mays</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>10</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>001N, 002E, 003W</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

SOIL

Sampling Point: WPAA004_UDP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)	___ Polyvalue Below Surface (S8) (LRR R,
___ Histic Epipedon (A2)	MLRA 149B)
___ Black Histic (A3)	___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
___ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (LRR K, L)
___ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)
___ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)
___ Thick Dark Surface (A12)	Redox Dark Surface (F6)
___ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Sandy Redox (S5)	
___ Stripped Matrix (S6)	
___ Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
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☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Small gravel may indicated it was disturbed. This is in the location of a former railroad grade.

Version 5.0	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization	
	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

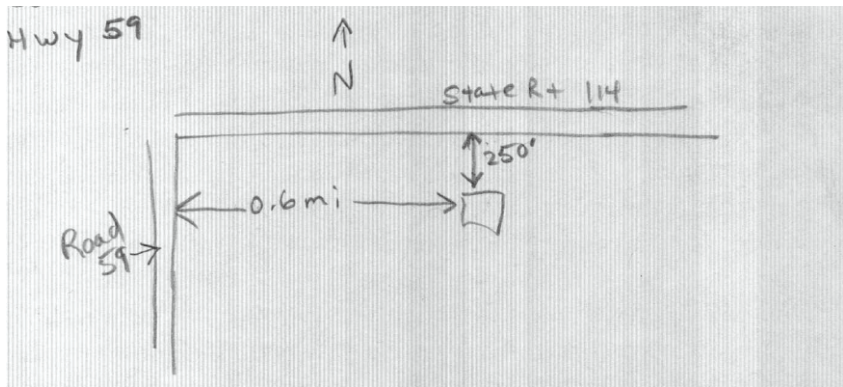
The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

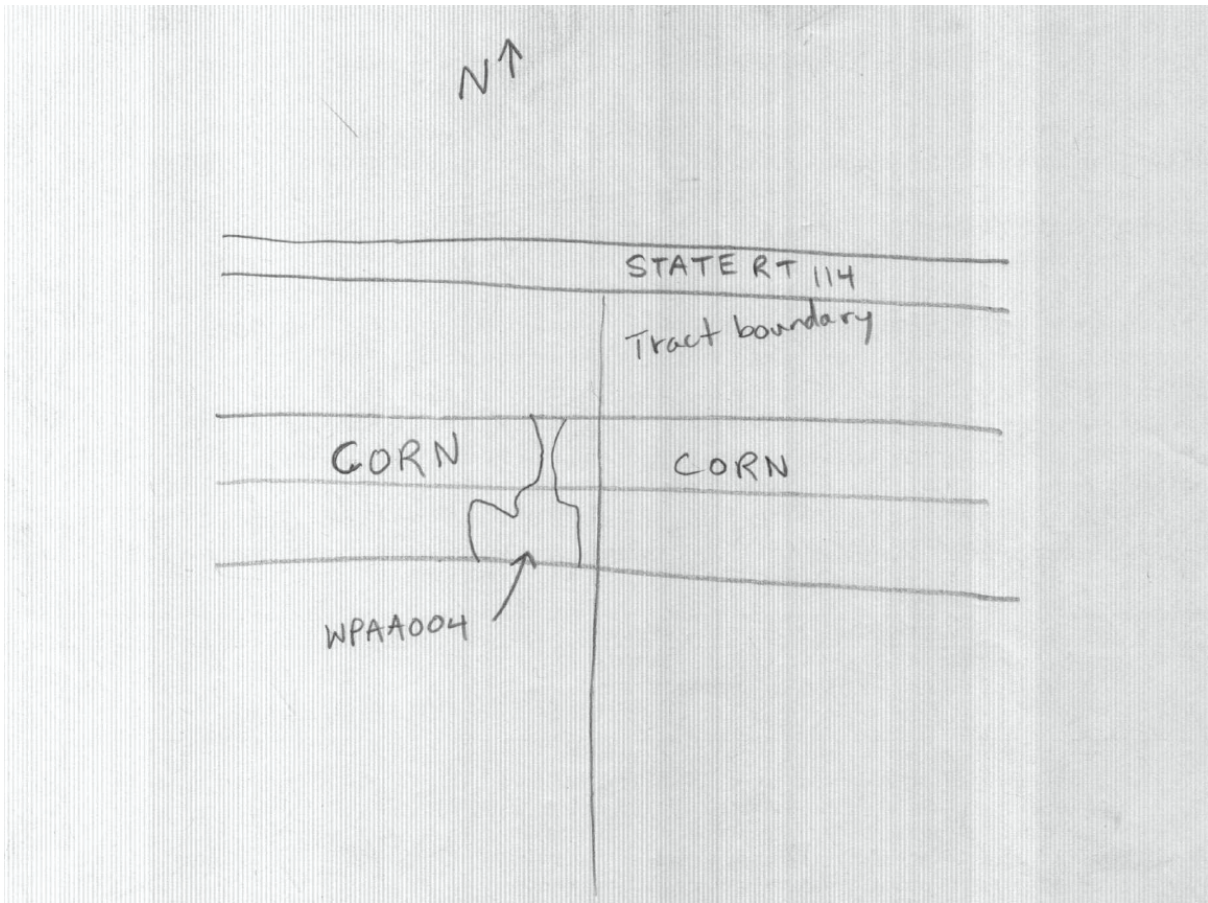
The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx>

Background Information

Name: AEP - Allen Station	
Date: 7/15/2015	
Affiliation: SCI Engineering	
Address: 650 Pierce Boulevard, O'Fallon, IL 62269	
Phone Number: 618-624-6969	
e-mail address:	
Name of Wetland: WPAA004	
Vegetation Communit(ies): Farmed Emergent	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Approximately 250' south of State Route 114 and 0.6 miles east of Township Highway 59. 	
Lat/Long or UTM Coordinate	41.01800472, -84.67654312
USGS Quad Name	Payne
County	Paulding
Township	1N
Section and Subsection	30
Hydrologic Unit Code	4100007
Site Visit	7/15/15
National Wetland Inventory Map	n/a
Ohio Wetland Inventory Map	n/a
Soil Survey	Hoytville Silty Clay
Delineation report/map	n/a

Name of Wetland: WPAA004	
Wetland Size (acres, hectares): 0.07 acres	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
	
Comments, Narrative Discussion, Justification of Category Changes:	
Small wetland in a depression within a corn field. Corn is either much shorter or did not emerge here. There is approximately 1" of standing water. Some small specimens of yellow foxtail present.	
Final score : 22	Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the “scoring boundaries” of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the “jurisdictional boundaries.” For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland’s jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	X	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <http://www.dnr.state.oh.us/dnap>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES ☐ Wetland should be evaluated for possible Category 3 status Go to Question 2	NO ☒ Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES ☐ Wetland is a Category 3 wetland. Go to Question 3	NO ☒ Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES ☐ Wetland is a Category 3 wetland Go to Question 4	NO ☒ Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES ☐ Wetland is a Category 3 wetland Go to Question 5	NO ☒ Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES ☐ Wetland is a Category 1 wetland Go to Question 6	NO ☒ Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES ☐ Wetland is a Category 3 wetland Go to Question 7	NO ☒ Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES ☐ Wetland is a Category 3 wetland Go to Question 8a	NO ☒ Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES ☐ Wetland is a Category 3 wetland. Go to Question 8b	NO ☒ Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES ☐ Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO ☒ Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES ☐ Go to Question 9b	NO ☒ Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES ☐ Wetland should be evaluated for possible Category 3 status Go to Question 10	NO ☒ Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES ☐ Go to Question 9d	NO ☒ Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES ☐ Wetland is a Category 3 wetland Go to Question 10	NO ☒ Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES ☐ Wetland should be evaluated for possible Category 3 status Go to Question 10	NO ☒ Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES ☐ Wetland is a Category 3 wetland. Go to Question 11	NO ☒ Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES ☐ Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO ☒ Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinarum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: WPAA004	Rater(s): J. Stone	Date: 7/15/2015
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0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Category	ORAM Score
1	0 - 30
2	31 - 64
3	65 - 100

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

1	1
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	17
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed	
☐ ditch ☐ tile ☐ dike ☐ weir ☐ stormwater input	☐ point source (nonstormwater) ☐ filling/grading ☐ road bed/RR track ☐ dredging ☐ other _____

3	20
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☒ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☒ Recent or no recovery (1)

Check all disturbances observed	
☐ mowing ☐ grazing ☐ clearcutting ☐ selective cutting ☐ woody debris removal ☐ toxic pollutants	☐ shrub/sapling removal ☐ herbaceous/aquatic bed removal ☐ sedimentation ☐ dredging ☒ farming ☐ nutrient enrichment

20
subtotal this page

Site: WPAA004	Rater(s): J. Stone	Date: 7/15/2015
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20

subtotal first page

0

20

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2

22

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0

 Aquatic bed
- 0

 Emergent
- 0

 Shrub
- 0

 Forest
- 0

 Mudflats
- 1

 Open water
- 0

 Other _____

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- X

 None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- X

 Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0

 Vegetated hummocks/tussocks
- 0

 Coarse woody debris >15cm (6in)
- 0

 Standing dead >25cm (10in) dbh
- 0

 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

22

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES ☐	NO ☒	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES ☐	NO ☒	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES ☐	NO ☒	If yes, Category 3.
	Question 4. Significant bird habitat	YES ☐	NO ☒	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES ☐	NO ☒	If yes, Category 1.
	Question 6. Bogs	YES ☐	NO ☒	If yes, Category 3.
	Question 7. Fens	YES ☐	NO ☒	If yes, Category 3.
	Question 8a. Old Growth Forest	YES ☐	NO ☒	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES ☐	NO ☒	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES ☐	NO ☒	If yes, Category 3
Question 11. Relict Wet Prairies	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0		
	Metric 2. Buffers and surrounding land use	1		
	Metric 3. Hydrology	16		
	Metric 4. Habitat	3		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersions, microtopography	2		
	TOTAL SCORE	22		Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES ☐ Wetland is categorized as a Category 3 wetland	NO ☒ Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES ☐ Wetland should be evaluated for possible Category 3 status	NO ☒ Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES ☐ Wetland is categorized as a Category 1 wetland	NO ☒ Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES ☒ Wetland is assigned to the appropriate category based on the scoring range	NO ☐ If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES ☐ Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO ☒ Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES ☐ Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO ☒ Wetland is assigned to category as determined by the ORAM. A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	☒ Category 1	☐ Category 2	☐ Category 3
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End of Ohio Rapid Assessment Method for Wetlands.



[WPAA004_WDP_001N] facing north



[WPAA004_WDP_002E] facing east



[WPAA004_WDP_003W] facing west



[WPAA004_UDP_001N] facing north



[WPAA004_UDP_002E] facing east



[WPAA004_UDP_003W] facing west

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: AEP - Allen Station City/County: Paulding Sampling Date: 7/15/15
 Applicant/Owner: AEP State: OH Sampling Point: WPAA003_WDP
 Investigator(s): SCI Engineering, Inc. Section, Township, Range: 30, 1N, R1E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.01785189 Long: -84.67321512 Datum: NAD83
 Soil Map Unit Name: Hoytville silty clay NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation Y, Soil Y, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation Y, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetland is located in a depression in a cornfield. Above normal rainfall and recent rains have kept this area wet for an extended period. The entire field is wet and has stunted corn, but this area is holding more water and corn grown is sparse. Vegetation and soils disturbed by farming activities.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) Water Marks (B1) Sediment Deposits (B2) ☐ Drift Deposits (B3) ☒ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) Aquatic Fauna (B13) Marl Deposits (B15) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: WPAA003_WDP

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>5</u> (A) <u>25</u> (B) Prevalence Index = B/A = <u>5.0</u>
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☒ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) 001N, 002E, 003W				

SOIL

Sampling Point: WPAA003_WDP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)	___ Polyvalue Below Surface (S8) (LRR R,
___ Histic Epipedon (A2)	MLRA 149B)
___ Black Histic (A3)	___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
___ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (LRR K, L)
___ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)
✓ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)
___ Thick Dark Surface (A12)	✓ Redox Dark Surface (F6)
___ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Sandy Redox (S5)	
Stripped Matrix (S6)	
Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: AEP - Allen Station City/County: Paulding Sampling Date: 7/15/15
 Applicant/Owner: AEP State: OH Sampling Point: WPAA003_UDP
 Investigator(s): SCI Engineering, Inc. Section, Township, Range: S30 T1N R1E
 Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR or MLRA): LRR L, MLRA 99 Lat: 41.01785189 Long: _____ Datum: NAD83
 Soil Map Unit Name: Hoytville silty clay NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation Y, Soil Y, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Upland point is on slightly higher ground than the wetland point. Corn is short, but taller than that in wetter areas. Vegetation and soils disturbed by farming.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>20</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>20</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: WPAA003_UDP

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00%</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>5</u> (A)</td> <td><u>25</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>5.0</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>5</u> (A)	<u>25</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>5</u> (A)	<u>25</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5'</u>)																		
1. <u>Zea mays</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>10</u> = Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																		
Remarks: (Include photo numbers here or on a separate sheet.) <u>001N, 002E, 003W</u>																		

SOIL

Sampling Point: WPAA003_UDP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)	___ Polyvalue Below Surface (S8) (LRR R,
___ Histic Epipedon (A2)	MLRA 149B)
___ Black Histic (A3)	___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
___ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (LRR K, L)
___ Stratified Layers (A5)	Loamy Gleyed Matrix (F2)
___ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)
___ Thick Dark Surface (A12)	Redox Dark Surface (F6)
___ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)
___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Sandy Redox (S5)	
___ Stripped Matrix (S6)	
___ Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches):

Hydric Soil Present? Yes _____ No X

Remarks:

Soil profile may be mixed due to its sample location in the former railroad bed right-of-way.

Version 5.0	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization	
	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx>

Background Information

Name: AEP - Allen Station	
Date: 7/15/2015	
Affiliation: SCI Engineering	
Address: 650 Pierce Boulevard, O'Fallon, IL 62269	
Phone Number: 618-624-6969	
e-mail address:	
Name of Wetland: WPAA003	
Vegetation Communit(ies): PEMf	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Approximately 400' south of State Route 114 and approximately 700' west of Road 71..	
Lat/Long or UTM Coordinate	41.01785189, -84.67321512
USGS Quad Name	Payne
County	Paulding
Township	1N
Section and Subsection	30
Hydrologic Unit Code	4100007
Site Visit	7/15/15
National Wetland Inventory Map	n/a
Ohio Wetland Inventory Map	n/a
Soil Survey	Hoytville Silty Clay
Delineation report/map	n/a

Name of Wetland: WPAA003	
Wetland Size (acres, hectares): 0.3 acres	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Comments, Narrative Discussion, Justification of Category Changes:	
Farmed wetland in a depression within a corn field. The majority of the entire field is wet and corn is stunted, but this area is wetter and is a pronounced depression. Corn growth here is more sparse.	
Final score : 24	Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the “scoring boundaries” of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the “jurisdictional boundaries.” For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland’s jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	X	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <http://www.dnr.state.oh.us/dnap>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES ☐ Wetland should be evaluated for possible Category 3 status Go to Question 2	NO ☒ Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES ☐ Wetland is a Category 3 wetland. Go to Question 3	NO ☒ Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES ☐ Wetland is a Category 3 wetland Go to Question 4	NO ☒ Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES ☐ Wetland is a Category 3 wetland Go to Question 5	NO ☒ Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES ☐ Wetland is a Category 1 wetland Go to Question 6	NO ☒ Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES ☐ Wetland is a Category 3 wetland Go to Question 7	NO ☒ Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES ☐ Wetland is a Category 3 wetland Go to Question 8a	NO ☒ Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES ☐ Wetland is a Category 3 wetland. Go to Question 8b	NO ☒ Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES ☐ Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO ☒ Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES ☐ Go to Question 9b	NO ☒ Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES ☐ Wetland should be evaluated for possible Category 3 status Go to Question 10	NO ☒ Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES ☐ Go to Question 9d	NO ☒ Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES ☐ Wetland is a Category 3 wetland Go to Question 10	NO ☒ Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES ☐ Wetland should be evaluated for possible Category 3 status Go to Question 10	NO ☒ Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES ☐ Wetland is a Category 3 wetland. Go to Question 11	NO ☒ Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES ☐ Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO ☒ Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinarum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: WPAA003	Rater(s): J. Stone	Date: 7/15/2015
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2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Category	ORAM Score
1	0 - 30
2	31 - 64
3	65 - 100

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

1	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

16	19
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed	
☐ ditch ☐ tile ☐ dike ☐ weir ☐ stormwater input	☐ point source (nonstormwater) ☐ filling/grading ☐ road bed/RR track ☐ dredging ☐ other _____

3	22
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☒ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☒ Recent or no recovery (1)

Check all disturbances observed	
☐ mowing ☐ grazing ☐ clearcutting ☐ selective cutting ☐ woody debris removal ☐ toxic pollutants	☐ shrub/sapling removal ☐ herbaceous/aquatic bed removal ☐ sedimentation ☐ dredging ☒ farming ☐ nutrient enrichment

22
subtotal this page

Site: WPAA003	Rater(s): J. Stone	Date: 7/15/2015
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22

subtotal first page

0	22
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max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2	24
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max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ 0 Aquatic bed
- ☐ 0 Emergent
- ☐ 0 Shrub
- ☐ 0 Forest
- ☐ 0 Mudflats
- ☐ 0 Open water
- ☐ 0 Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ 0 Vegetated hummocks/tussocks
- ☐ 0 Coarse woody debris >15cm (6in)
- ☐ 0 Standing dead >25cm (10in) dbh
- ☐ 1 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

24

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES ☐	NO ☒	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES ☐	NO ☒	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES ☐	NO ☒	If yes, Category 3.
	Question 4. Significant bird habitat	YES ☐	NO ☒	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES ☐	NO ☒	If yes, Category 1.
	Question 6. Bogs	YES ☐	NO ☒	If yes, Category 3.
	Question 7. Fens	YES ☐	NO ☒	If yes, Category 3.
	Question 8a. Old Growth Forest	YES ☐	NO ☒	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES ☐	NO ☒	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES ☐	NO ☒	If yes, Category 3
	Question 11. Relict Wet Prairies	YES ☐	NO ☒	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2		
	Metric 2. Buffers and surrounding land use	1		
	Metric 3. Hydrology	16		
	Metric 4. Habitat	3		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersions, microtopography	2		
	TOTAL SCORE	24		Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES ☐ Wetland is categorized as a Category 3 wetland	NO ☒ Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES ☐ Wetland should be evaluated for possible Category 3 status	NO ☒ Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES ☐ Wetland is categorized as a Category 1 wetland	NO ☒ Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES ☒ Wetland is assigned to the appropriate category based on the scoring range	NO ☐ If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES ☐ Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO ☒ Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES ☐ Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO ☒ Wetland is assigned to category as determined by the ORAM. A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	☒ Category 1	☐ Category 2	☐ Category 3
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End of Ohio Rapid Assessment Method for Wetlands.



[WPAA003_WDP_001N] facing north



[WPAA003_WDP_002E] facing east



[WPAA003_WDP_003W] facing west



[WPAA003_UDP_001N] facing north



Lat: 41.018014° N Lon: 84.673615° W

[WPAA003_UDP_002E] facing east



Lat: 41.018007° N Lon: 84.673593° W

[WPAA003_UDP_003W] facing west

Waterbody Data Sheet

Survey Description					
Project Name: AEP Allen Station		Waterbody Name: State Line Ditch		Waterbody ID: SPAB001	Date: 7/13/15
State: OH	County: Paulding	Company: SCI Engineering	Crew Member Initials: ME/JM	Photo ID(s): 1s, 2n, 3w	
Tract Number(s): 0330S-00300, 0330S-00400		Milepost Entry: -	Milepost Exit: -	Associated Wetland ID(s): N/A	
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____					
Physical Attributes					
Stream Classification: (check one) ☐ Ephemeral ☐ Intermittent ☒ Perennial ☐ Connecting swale ^a					
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☒ Stream ☐ Drainage Ditch ☐ Other: _____					
OHWM Width: 9 ft. Height: 1.5 ft.		OHWM Indicator: (check all that apply) ☒ Clear line on bank ☐ Shelving ☐ Wrested vegetation ☒ Scouring ☐ Water staining ☒ Bent, matted, or missing vegetation ☒ Wrack line ☒ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 30 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 9 ft.		Depth of Water at Centerline: (Approx.) 1.5 ft.	
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) 0.01 fps		Bank height Right: 10 ft. Left: 10 ft.	
Bank slope Right: 80 degrees Left: 80 degrees					
Qualitative Attributes					
Water Appearance: (check one) ☐ No water ☐ Clear ☐ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☒ Other: Slightly Turbid					
Substrate: (check all that apply) ☐ Bedrock ☒ Gravel ☒ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____					
% of Substrate: _____ % 40 % 30 % 30 % _____ % _____ %					
Width of Riparian Zone: 20 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☐ Shrubs: _____ ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.			
Dominant Bank Vegetation: (list) Typa angustifolia, Phalaris arundinacea, Rubus ideaus					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) submerged vegetation					
Aquatic Organisms Observed: (list) Northern Leopard Frogs					
Invasive and/or T&E Species Observed: (list) N/A					
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated					
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☐ Other: _____					
Stream Quality ^b : (check one) ☐ High ☒ Moderate ☐ Low					

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

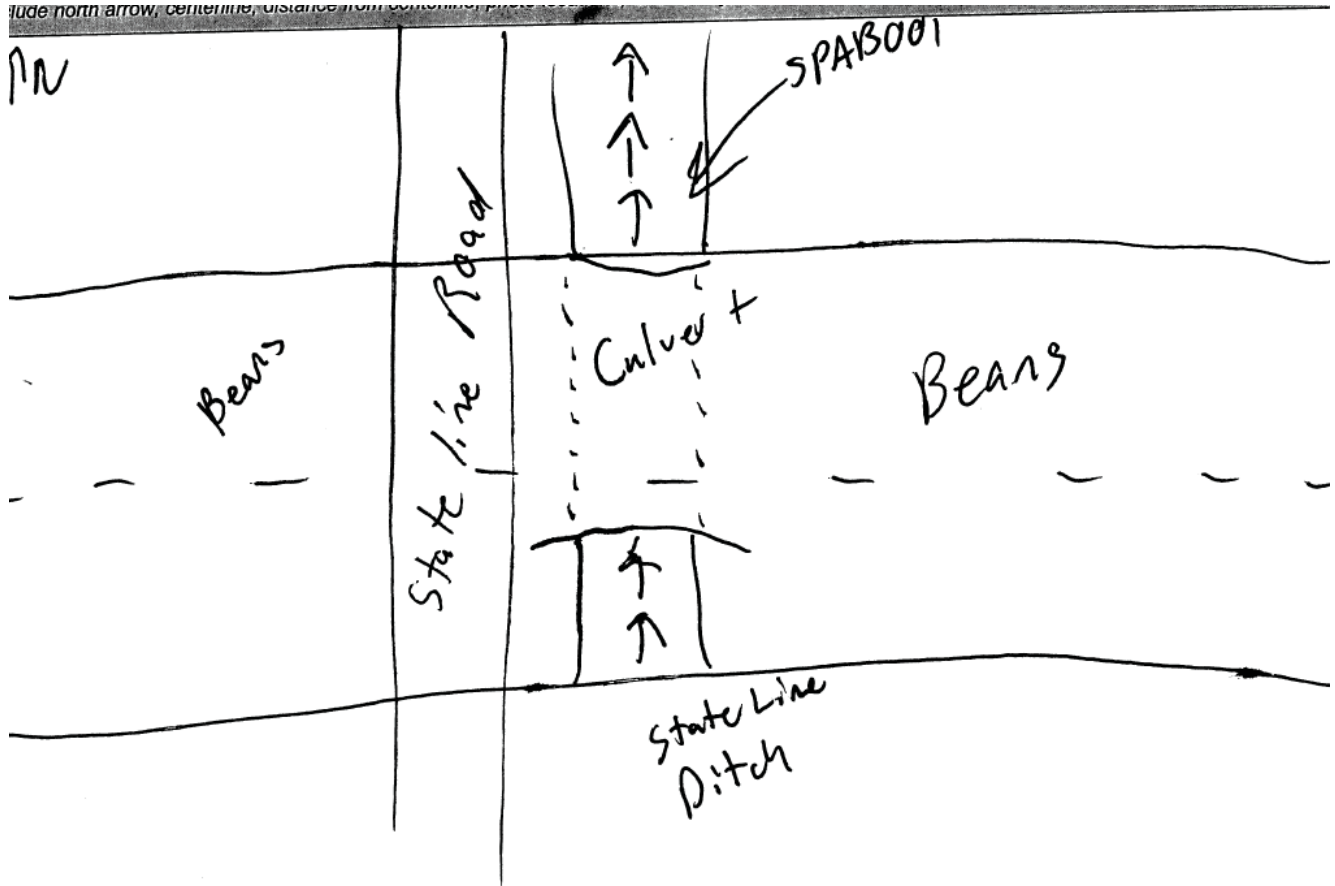
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Waterbody ID:

SPAB001

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, and survey area/corridor if applicable.



Notes

State Line Ditch flows south to north across the ROW. Majority of the stream segment has been encapsulated by a culvert for field access.

Stream & Location: State Line Ditch SPAB001

RM: N/A Date: 7 / 13 / 15

Scorers Full Name & Affiliation: Mark Eldridge / SCI Engineering

River Code: N/A - STORET #: N/A Lat./Long.: 41.01771 184.80316 Office verified location ☒1] SUBSTRATE Check ONLY Two substrate TYPE BOXES;
estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
☐ BLDR /SLABS [10]	☐ POOL RIFFLE	☐ HARDPAN [4]	☐ POOL RIFFLE	☐ LIMESTONE [1]	☐ SILT	☐ HEAVY [-2]	Substrate 14 Maximum 20
☐ BOULDER [9]		☐ DETRITUS [3]		☒ TILLS [1]		☐ MODERATE [-1]	
☐ COBBLE [8]		☐ MUCK [2]		☐ WETLANDS [0]		☒ NORMAL [0]	
☒ GRAVEL [7]	40	☒ SILT [2]	30	☐ HARDPAN [0]		☐ FREE [1]	
☒ SAND [6]	30	☐ ARTIFICIAL [0]		☐ SANDSTONE [0]		☐ EXTENSIVE [-2]	
☐ BEDROCK [5]				☐ RIP/RAP [0]		☐ MODERATE [-1]	
(Score natural substrates; ignore sludge from point-sources)				☐ LACUSTURINE [0]	☐ EMBEDDEDNESS	☒ NORMAL [0]	
NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]				☐ SHALE [-1]		☐ NONE [1]	
Comments							
				☐ COAL FINES [-2]			

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

0 UNDERCUT BANKS [1]	0 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]	☐ EXTENSIVE >75% [11]
0 OVERHANGING VEGETATION [1]	0 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]	☐ MODERATE 25-75% [7]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]	☐ SPARSE 5-<25% [3]
0 ROOTMATS [1]			☒ NEARLY ABSENT <5% [1]

Comments

Cover
Maximum 20
1

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☒ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☐ MODERATE [2]
☐ LOW [2]	☒ FAIR [3]	☐ RECOVERING [3]	☒ LOW [1]
☒ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel
Maximum 20
11

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION		RIPARIAN WIDTH		FLOOD PLAIN QUALITY		CONSERVATION TILLAGE	
☒ NONE / LITTLE [3]	☐ WIDE > 50m [4]	☐ FOREST, SWAMP [3]	☐ CONSERVATION TILLAGE [1]				
☐ MODERATE [2]	☐ MODERATE 10-50m [3]	☐ SHRUB OR OLD FIELD [2]	☐ URBAN OR INDUSTRIAL [0]				
☐ HEAVY / SEVERE [1]	☐ NARROW 5-10m [2]	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐ MINING / CONSTRUCTION [0]				
	☒ VERY NARROW < 5m [1]	☐ FENCED PASTURE [1]					
	☐ NONE [0]	☒ OPEN PASTURE, ROWCROP [0]					

Comments

Indicate predominant land use(s)
past 100m riparian.Riparian
Maximum 10
4

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

- ☐ > 1m [6]
☐ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☒ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

- ☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Comments

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)Pool /
Current
Maximum 12
2Indicate for functional riffles; Best areas must be large enough to support a population
of riffle-obligate species:

Check ONE (Or 2 & average).

☒ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☒ BEST AREAS < 5cm [metric=0]		☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☒ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle /
Run
Maximum 8
16] GRADIENT (N/A ft/mi) ☐ VERY LOW - LOW [2-4]
DRAINAGE AREA (mi²) ☒ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]%POOL: %GLIDE:
%RUN: 80 %RIFFLE: 20Gradient
Maximum 10
7

A] SAMPLED REACH

Check ALL that apply

METHOD

☐ BOAT
☐ WADE
☐ L. LINE
☒ OTHER

STAGE

1st -sample pass- 2nd
☐ HIGH
☐ UP
☒ NORMAL
☐ LOW
☐ DRY

DISTANCE

☐ 0.5 Km
☐ 0.2 Km
☐ 0.15 Km
☐ 0.12 Km
☒ OTHER
33
meters

CLARITY

1st --sample pass-- 2nd
☒ < 20 cm
☐ 20-<40 cm
☐ 40-70 cm
☐ > 70 cm/ CTB
☐ SECCHI DEPTH

CANOPY

☒ > 85%- OPEN
☐ 55%-<85%
☐ 30%-<55%
☐ 10%-<30%
☐ <10%- CLOSED

C] RECREATION

1st _____ cm
2nd _____ cm
pass

Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.
State Line Ditch flows south to north across the ROW.

Majority of the stream segment has been encapsulated by a culvert for field access.

B] AESTHETICS

☐ NUISANCE ALGAE
☐ INVASIVE MACROPHYTES
☐ EXCESS TURBIDITY
☐ DISCOLORATION
☐ FOAM / SCUM
☐ OIL SHEEN
☐ TRASH / LITTER
☐ NUISANCE ODOR
☐ SLUDGE DEPOSITS
☐ CSOs/SSOs/OUTFALLS

D] MAINTENANCE

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

Circle some & COMMENT

E] ISSUES

☐ WWTP / CSO / NPDES / INDUSTRY
☐ HARDENED / URBAN / DIRT&GRIME
☐ CONTAMINATED / LANDFILL
☐ BMPs-CONSTRUCTION-SEDIMENT
☐ LOGGING / IRRIGATION / COOLING
☐ BANK / EROSION / SURFACE
☐ FALSE BANK / MANURE / LAGOON
☐ WASH H₂O / TILE / H₂O TABLE
☐ ACID / MINE / QUARRY / FLOW
☐ NATURAL / WETLAND / STAGNANT
☐ PARK / GOLF / LAWN / HOME
☐ ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

☐ $\bar{x}$ width
☐ $\bar{x}$ depth
☐ max. depth
☐ $\bar{x}$ bankfull width
☐ bankfull $\bar{x}$ depth
☐ W/D ratio
☐ bankfull max. depth
☐ floodprone x² width
☐ entrench. ratio

Legacy Tree:

Stream Drawing:

See Waterbody Dataform



[SPAB001_001S up] facing south upstream



[SPAB001_002N down] facing north downstream



[SPAB001_003E across] facing east across bank

Waterbody Data Sheet

Survey Description				
Project Name: AEP Allen Station		Waterbody Name: unnamed tributary to Dickerson Ditch		Waterbody ID: SPAB002
State: OH		County: Paulding	Company: SCI Engineering	Crew Member Initials: ME/JM
Photo ID(s): 1s, 2n, 3w				
Tract Number(s): 03-30-001-00		Milepost Entry: -	Milepost Exit: -	Associated Wetland ID(s): WPAB004, WPAB005
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____				
Physical Attributes				
Stream Classification: (check one) ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Connecting swale ^a				
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☒ Stream ☐ Drainage Ditch ☐ Other: _____				
OHWM Width: 5 ft. Height: 1 ft.		OHWM Indicator: (check all that apply) ☒ Clear line on bank ☐ Shelving ☐ Wrested vegetation ☒ Scouring ☐ Water staining ☐ Bent, matted, or missing vegetation ☒ Wrack line ☒ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 8 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 5 ft.		Depth of Water at Centerline: (Approx.) 1 ft.
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) 0.01 fps		Bank height Right: 1 ft. Left: 1 ft.
Bank slope Right: 70 degrees Left: 70 degrees				
Qualitative Attributes				
Water Appearance: (check one) ☐ No water ☒ Clear ☐ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☐ Other: _____				
Substrate: (check all that apply) ☐ Bedrock ☐ Gravel ☐ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____				
% of Substrate: _____ % _____ % _____ % 100 % _____ % _____ %				
Width of Riparian Zone: 20 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☐ Shrubs: _____ ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.		
Dominant Bank Vegetation: (list) Glycine max, Seteria pumila, Asclepias syriaca, Poa spp.				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) submerged vegetation, leaf pack				
Aquatic Organisms Observed: (list) frog				
Invasive and/or T&E Species Observed: (list) N/A				
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated				
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☐ Other: _____				
Stream Quality ^b : (check one) ☐ High ☐ Moderate ☒ Low				

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

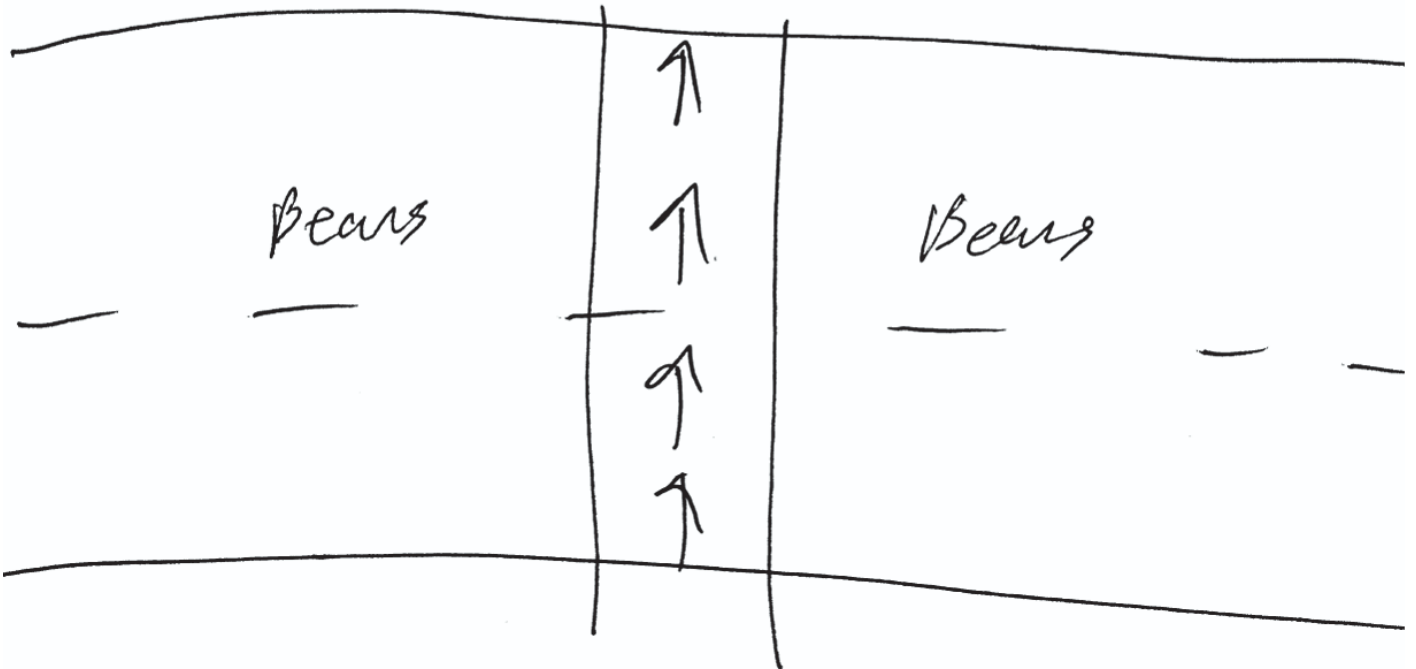
Waterbody ID:

SPAB002

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, and survey area/corridor if applicable.

7/12



Notes

Agricultural ditch that separates fields. Mapped per Rod Ginter. High water level due to heavy recent rain events.

Stream & Location: SPAB002

RM: N/A Date: 7 / 14 / 15

UNT to Dickerson Ditch

Scorers Full Name & Affiliation: Mark Eldridge / SCI Engineering

River Code: N/A

STORET #: N/A

Lat./ Long.: 41.01769 184.78871

Office verified location ☒

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
☐ BLDR /SLABS [10]	☐ POOL	☐ HARDPAN [4]	☐ POOL	☐ LIMESTONE [1]	☐ SILT	☐ HEAVY [-2]	Substrate 3 Maximum 20
☐ BOULDER [9]	☐ RIFFLE	☐ DETRITUS [3]	☐ RIFFLE	☒ TILLS [1]	☐ WETLANDS [0]	☐ MODERATE [-1]	
☐ COBBLE [8]		☐ MUCK [2]		☐ SANDSTONE [0]	☐ RIP/RAP [0]	☒ NORMAL [0]	
☐ GRAVEL [7]		☒ SILT [2]		☐ LACUSTURINE [0]	☐ SHALE [-1]	☐ FREE [1]	
☐ SAND [6]		☐ ARTIFICIAL [0]		☐ COAL FINES [-2]	☐ EMBEDDEDNESS	☐ EXTENSIVE [-2]	
☐ BEDROCK [5]						☐ MODERATE [-1]	
						☒ NORMAL [0]	
						☐ NONE [1]	

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

☐ UNDERCUT BANKS [1]	☐ POOLS > 70cm [2]	☐ OXBOWS, BACKWATERS [1]	☐ EXTENSIVE >75% [11]
☐ OVERHANGING VEGETATION [1]	☐ ROOTWADS [1]	☐ AQUATIC MACROPHYTES [1]	☐ MODERATE 25-75% [7]
☐ SHALLOWS (IN SLOW WATER) [1]	☐ BOULDERS [1]	☐ LOGS OR WOODY DEBRIS [1]	☐ SPARSE 5-<25% [3]
☐ ROOTMATS [1]			☒ NEARLY ABSENT <5% [1]

Comments

Cover
Maximum
20

1

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☒ NONE [6]	☒ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☐ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☒ NONE [1]	☒ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel
Maximum
20

11

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION	RIPIARIAN WIDTH	FLOOD PLAIN QUALITY	
☒ NONE / LITTLE [3]	☐ WIDE > 50m [4]	☐ FOREST, SWAMP [3]	☐ CONSERVATION TILLAGE [1]
☐ MODERATE [2]	☐ MODERATE 10-50m [3]	☐ SHRUB OR OLD FIELD [2]	☐ URBAN OR INDUSTRIAL [0]
☐ HEAVY / SEVERE [1]	☐ NARROW 5-10m [2]	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐ MINING / CONSTRUCTION [0]
	☒ VERY NARROW < 5m [1]	☐ FENCED PASTURE [1]	
	☒ NONE [0]	☒ OPEN PASTURE, ROWCROP [0]	

Comments

Indicate predominant land use(s)
past 100m riparian.Riparian
Maximum
10

3.5

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

- ☐ > 1m [6]
☐ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☒ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

- ☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Pool /
Current
Maximum
12

2

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

☒ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☒ BEST AREAS < 5cm [metric=0]		☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☒ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle /
Run
Maximum
8

1

6] GRADIENT (N/A ft/mi)
DRAINAGE AREA (mi²)

- ☒ VERY LOW - LOW [2-4]
☐ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]

%POOL:

%GLIDE:

Gradient
Maximum
10

2

%RUN:

%RIFFLE:

Check ALL that apply

STAGE

1st-sample pass- 2nd

- | | | | |
|-------------------------------------|---------|-------------------------------------|--------------------------|
| ☐ | BOAT | 1st-sample pass-2nd | ☐ |
| ☐ | WADE | ☐ | ☐ |
| ☐ | L. LINE | ☐ | ☐ |
| ☒ | OTHER | ☒ | ☐ |

CLARITY

1st --sample pass-- 2nd

- ☐ 0.5 Km
☐ 0.2 Km
☐ 0.15 Km
☐ 0.12 Km
☒ OTHER

33

meters

1st cm

2nd pass cm

- ☒ > 85%- OPEN
☐ 55%-<85%
☐ 30%-<55%
☐ 10%-<30%
☐ <10%- CLOSED

C] RECREATION

AREA DEPTH

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

B| AESTHETICS

D] MAINTENANCE

Circle some & COMMENT

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

E7 ISSUES

- WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H₂O / TILE / H₂O TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F1 MEASUREMENTS

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:

See Waterbody Dataform



[SPAB002_001S UP] facing south upstream



[SPAB002_002 N DOWN] facing north downstream



[SPAB002_003E ACROSS] facing east across bank

Waterbody Data Sheet

Survey Description					
Project Name: AEP Allen Station		Waterbody Name: Eibling Ditch		Waterbody ID: SPAA002	Date: 7/14/15
State: OH	County: Paulding	Company: SCI Engineering	Crew Member Initials: JS/ TC	Photo ID(s): 001 up 002 down 003 across	
Tract Number(s): 03-30-001-00		Milepost Entry: n/a	Milepost Exit: n/a	Associated Wetland ID(s): None	
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____					
Physical Attributes					
Stream Classification: (check one) ☐ Ephemeral ☐ Intermittent ☒ Perennial ☐ Connecting swale ^a					
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☒ Stream ☐ Drainage Ditch ☐ Other: _____					
OHWM Width: 3 ft. Height: .5 ft.		OHWM Indicator: (check all that apply) ☐ Clear line on bank ☐ Shelving ☐ Wrested vegetation ☐ Scouring ☐ Water staining ☒ Bent, matted, or missing vegetation ☐ Wrack line ☐ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 24 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 5 ft.		Depth of Water at Centerline: (Approx.) 1 ft.	
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) .5 fps		Bank height Right: 8 ft. Left: 8 ft.	
				Bank slope Right: 60 degrees Left: 45 degrees	
Qualitative Attributes					
Water Appearance: (check one) ☐ No water ☐ Clear ☒ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☐ Other: _____					
Substrate: (check all that apply) ☐ Bedrock ☐ Gravel ☐ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____					
% of Substrate: _____ % _____ % _____ % 100 % _____ % _____ %					
Width of Riparian Zone: 10 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☒ Shrubs: .5 in. ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in.			
Dominant Bank Vegetation: (list) Schedonorus pratensis					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) In-stream vegetation					
Aquatic Organisms Observed: (list) None					
Invasive and/or T&E Species Observed: (list) Cirsium arvense					
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated					
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☒ Other: drain tile discharge					
Stream Quality ^b : (check one) ☐ High ☒ Moderate ☐ Low					

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

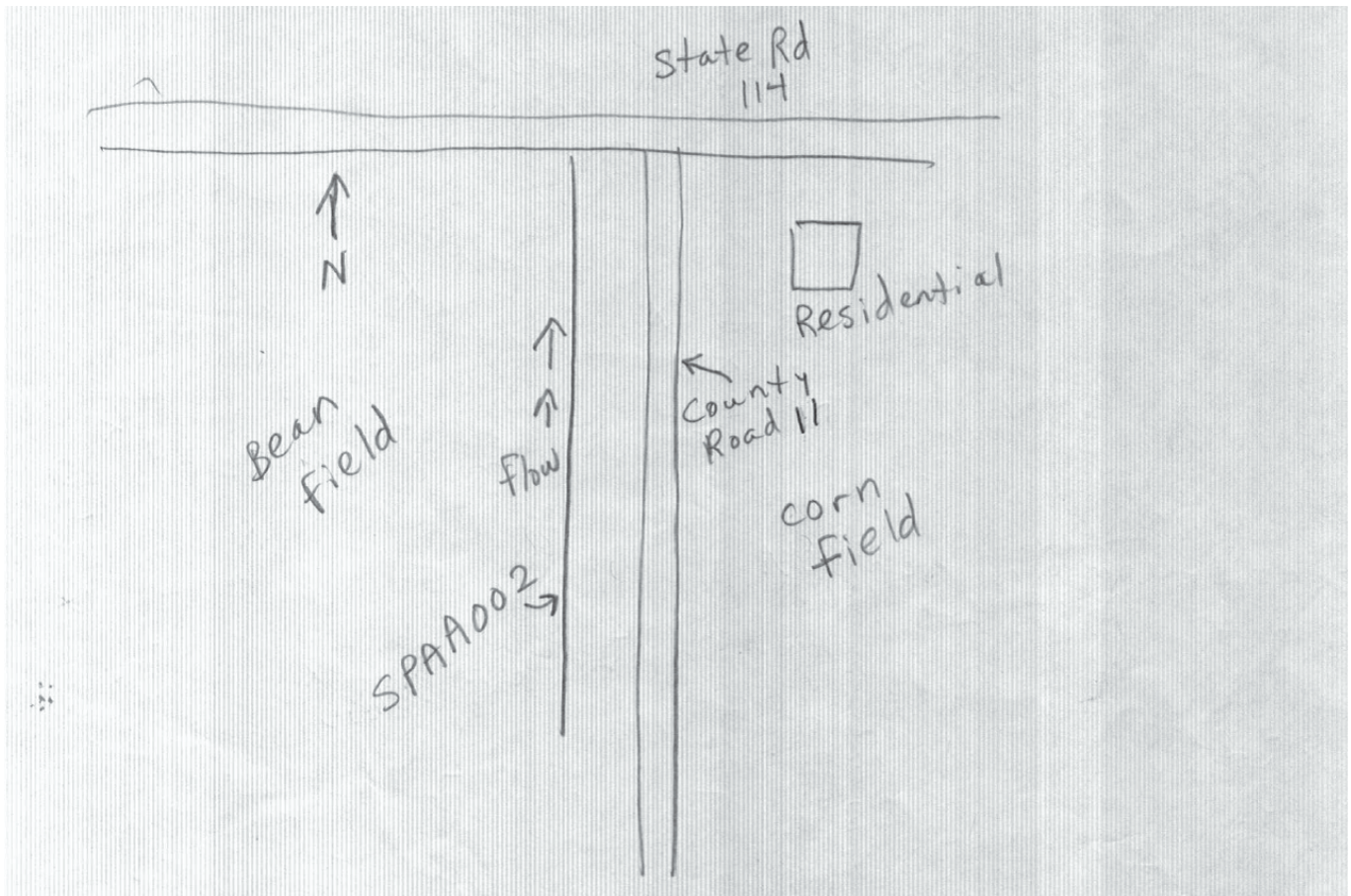
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Waterbody ID:

SPAA002

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, and survey area/corridor if applicable.



Notes

Unnamed ditch along a minimally maintained road. Apparently it is a channelized stream. There are several tile discharges visible along the reach. An adjacent landowner indicated that it flows year round.

Stream & Location: Eibling Ditch SPAA002 Paulding County, OH

RM: N/A Date: 7 / 14 / 15

AEP Allen Station

Scorers Full Name & Affiliation: J. Stone/ SCI Engineering

River Code: N/A - - - - STORET #: N/A - - - - Lat./ Long.: 41 . 01760 184 . 78399

Office verified location ☒1] SUBSTRATE Check ONLY Two substrate TYPE BOXES;
estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
☐ BLDR /SLABS [10]	☐ POOL RIFFLE	☐ HARDPAN [4]	☐ POOL RIFFLE	☐ LIMESTONE [1]	☒ SILT	☒ HEAVY [-2]	Substrate -1 Maximum 20
☐ BOULDER [9]	☐	☐ DETRITUS [3]	☐	☒ TILLS [1]	☐	☐ MODERATE [-1]	
☐ COBBLE [8]	☐	☐ MUCK [2]	☐	☐ WETLANDS [0]	☐	☐ NORMAL [0]	
☐ GRAVEL [7]	☐	☒ SILT [2]	☒	☐ HARDPAN [0]	☐	☐ FREE [1]	
☐ SAND [6]	☐	☐ ARTIFICIAL [0]	☐	☐ SANDSTONE [0]	☐	☒ EXTENSIVE [-2]	
☐ BEDROCK [5]	☐	(Score natural substrates; ignore sludge from point-sources)		☐ RIP/RAP [0]	☐	☐ MODERATE [-1]	
NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]				☐ LACUSTURINE [0]	☐	☐ NORMAL [0]	
Comments				☐ SHALE [-1]	☐	☐ NONE [1]	
				☐ COAL FINES [-2]	☐		

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

0 UNDERCUT BANKS [1]	0 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]	☐ EXTENSIVE >75% [11]
1 OVERHANGING VEGETATION [1]	0 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]	☐ MODERATE 25-75% [7]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]	☐ SPARSE 5-<25% [3]
0 ROOTMATS [1]			☒ NEARLY ABSENT <5% [1]

Comments

Cover

Maximum 20

2

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☒ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☒ RECOVERING [3]	☐ LOW [1]
☒ NONE [1]	☒ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel

Maximum 20

7

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION	RIPIARIAN WIDTH	FLOOD PLAIN QUALITY	
☒ NONE / LITTLE [3]	☐ WIDE > 50m [4]	☐ FOREST, SWAMP [3]	☐ CONSERVATION TILLAGE [1]
☐ MODERATE [2]	☐ MODERATE 10-50m [3]	☐ SHRUB OR OLD FIELD [2]	☐ URBAN OR INDUSTRIAL [0]
☐ HEAVY / SEVERE [1]	☐ NARROW 5-10m [2]	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐ MINING / CONSTRUCTION [0]
	☒ VERY NARROW < 5m [1]	☐ FENCED PASTURE [1]	
	☐ NONE [0]	☒ OPEN PASTURE, ROWCROP [0]	

Comments

Indicate predominant land use(s)
past 100m riparian.

Riparian

Maximum 10

4

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

- ☐ > 1m [6]
☐ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☒ 0.2-<0.4m [1]
☐ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

- ☐ TORRENTIAL [-1] ☐ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☒ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Comments

Pool / Current

Maximum 12

3

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

☒ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☐ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☐ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle / Run

Maximum 8

0

6] GRADIENT (N/A ft/mi) ☒ VERY LOW - LOW [2-4]
DRAINAGE AREA (mi²) ☐ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]%POOL: %GLIDE:

Gradient

Maximum 10

2

%RUN: 100 %RIFFLE:

A] SAMPLED REACH

Check ALL that apply

METHOD

☐ BOAT
☐ WADE
☐ L. LINE
☒ OTHER

STAGE

1st -sample pass- 2nd
☐ HIGH
☒ UP
☐ NORMAL
☐ LOW
☐ DRY

DISTANCE

☐ 0.5 Km
☐ 0.2 Km
☐ 0.15 Km
☐ 0.12 Km
☒ OTHER

CLARITY

1st --sample pass-- 2nd
☒ < 20 cm
☐ 20-<40 cm
☐ 40-70 cm
☐ > 70 cm/ CTB
☐ SECCHI DEPTH

CANOPY

☒ > 85%- OPEN
☐ 55%-<85%
☐ 30%-<55%
☐ 10%-<30%
☐ <10%- CLOSED

1st pass

2nd pass

_____ cm
_____ cm

C] RECREATION

AREA DEPTH
POOL: ☐ >100ft² ☐ >3ft

B] AESTHETICS

☐ NUISANCE ALGAE
☐ INVASIVE MACROPHYTES
☒ EXCESS TURBIDITY
☐ DISCOLORATION
☐ FOAM / SCUM
☐ OIL SHEEN
☐ TRASH / LITTER
☐ NUISANCE ODOR
☐ SLUDGE DEPOSITS
☐ CSOs/SSOs/OUTFALLS

D] MAINTENANCE

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

Circle some & COMMENT

E] ISSUES

☐ WWTP / CSO / NPDES / INDUSTRY
☐ HARDENED / URBAN / DIRT&GRIME
☐ CONTAMINATED / LANDFILL
☐ BMPs-CONSTRUCTION-SEDIMENT
☐ LOGGING / IRRIGATION / COOLING
☐ BANK / EROSION / SURFACE
☐ FALSE BANK / MANURE / LAGOON
☐ WASH H₂O / TILE / H₂O TABLE
☐ ACID / MINE / QUARRY / FLOW
☐ NATURAL / WETLAND / STAGNANT
☐ PARK / GOLF / LAWN / HOME
☐ ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

☐ $\bar{x}$ width
☐ $\bar{x}$ depth
☐ max. depth
☐ $\bar{x}$ bankfull width
☐ bankfull $\bar{x}$ depth
☐ W/D ratio
☐ bankfull max. depth
☐ floodprone x² width
☐ entrench. ratio

Legacy Tree:

Stream Drawing:

See waterbody dataform



[SPAA002_001S] facing south upstream



[SPAA002_002N] facing north downstream



[SPAA002_003W] facing west across bank

Waterbody Data Sheet

Survey Description					
Project Name: AEP Allen Station		Waterbody Name: Henry Ditch		Waterbody ID: SPAA001	Date: 7/13/15
State: IN	County: Allen	Company: SCI Engineering	Crew Member Initials: JS/ TC	Photo ID(s): 001 up 002 down 003 across	
Tract Number(s): 03-29-013-00, 0329S-01901		Milepost Entry: n/a	Milepost Exit: n/a	Associated Wetland ID(s): None	
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____					
Physical Attributes					
Stream Classification: (check one) ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Connecting swale ^a					
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☒ Stream ☐ Drainage Ditch ☐ Other: _____					
OHWM Width: 4 ft. Height: .5 ft.		OHWM Indicator: (check all that apply) ☐ Clear line on bank ☐ Shelving ☐ Wrested vegetation ☐ Scouring ☐ Water staining ☒ Bent, matted, or missing vegetation ☐ Wrack line ☐ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 30 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 5 ft.		Depth of Water at Centerline: (Approx.) .5 ft.	
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) 1 fps		Bank height Right: 8 ft. Left: 8 ft.	
				Bank slope Right: 45 degrees Left: 60 degrees	
Qualitative Attributes					
Water Appearance: (check one) ☐ No water ☐ Clear ☒ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☐ Other: _____					
Substrate: (check all that apply) ☐ Bedrock ☐ Gravel ☐ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____					
% of Substrate: _____ % _____ % _____ % 100 % _____ % _____ %					
Width of Riparian Zone: 10 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☐ Shrubs: _____ ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.			
Dominant Bank Vegetation: (list) Bromus inermis					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) None					
Aquatic Organisms Observed: (list) None					
Invasive and/or T&E Species Observed: (list) None					
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated					
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☒ Other: drain tile discharge					
Stream Quality ^b : (check one) ☐ High ☒ Moderate ☐ Low					

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

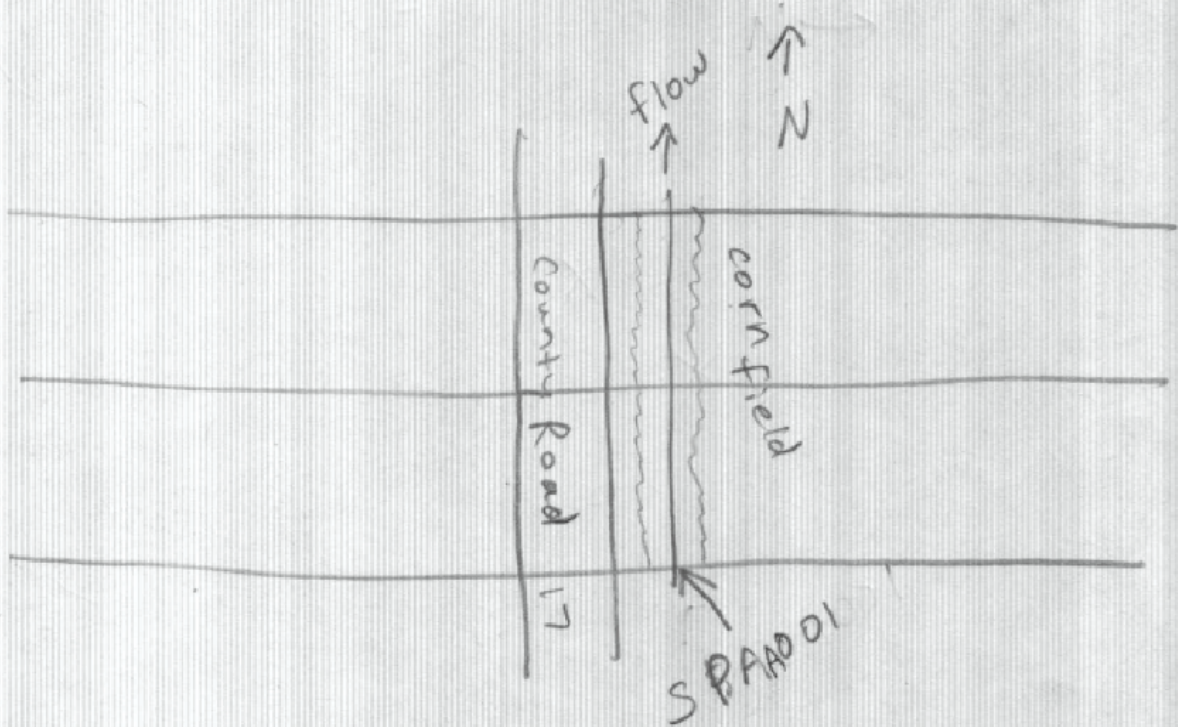
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Waterbody ID:

SPAA001

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, and survey area/corridor if applicable.



Notes

Stream is a deep channelized ditch parallel to County Road 17. Water level is up due to recent heavy rains and significant input from drain tile.

Stream & Location: Unnamed Ditch SPAA001

RM: N/A Date: 7 / 13 / 15

AEP Allen Station

Scorers Full Name & Affiliation: J. Stone/ SCI Engineering

River Code: N/A - - - - STORET #: N/A - - - - Lat./ Long.: 41.01762 184.77449

Office verified location ☒1] SUBSTRATE Check ONLY Two substrate TYPE BOXES;
estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
☐ BLDR /SLABS [10]	☐ POOL	☐ HARDPAN [4]	☐ POOL	☐ LIMESTONE [1]	☒ SILT	☒ HEAVY [-2]	Substrate -1 Maximum 20
☐ BOULDER [9]	☐ RIFFLE	☐ DETRITUS [3]	☐ RIFFLE	☒ TILLS [1]	☐ WETLANDS [0]	☐ MODERATE [-1]	
☐ COBBLE [8]		☐ MUCK [2]		☐ SANDSTONE [0]	☐ RIP/RAP [0]	☐ NORMAL [0]	
☐ GRAVEL [7]		☒ SILT [2]	☒	☐ LACUSTURINE [0]	☐ SHALE [-1]	☐ FREE [1]	
☐ SAND [6]		☐ ARTIFICIAL [0]		☐ COAL FINES [-2]	☐ EMBEDDEDNESS	☒ EXTENSIVE [-2]	
☐ BEDROCK [5]						☐ MODERATE [-1]	
(Score natural substrates; ignore sludge from point-sources)						☐ NORMAL [0]	
NUMBER OF BEST TYPES: ☐ 4 or more [2]						☐ NONE [1]	
☒ 3 or less [0]							

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

☐ UNDERCUT BANKS [1]	☐ POOLS > 70cm [2]	☐ OXBOWS, BACKWATERS [1]	☐ EXTENSIVE >75% [11]
☐ OVERHANGING VEGETATION [1]	☐ ROOTWADS [1]	☐ AQUATIC MACROPHYTES [1]	☐ MODERATE 25-75% [7]
☐ SHALLOWS (IN SLOW WATER) [1]	☐ BOULDERS [1]	☐ LOGS OR WOODY DEBRIS [1]	☐ SPARSE 5-<25% [3]
☐ ROOTMATS [1]			☒ NEARLY ABSENT <5% [1]

Comments

Cover
Maximum 20

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☒ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☒ RECOVERING [3]	☐ LOW [1]
☒ NONE [1]	☒ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel
Maximum 20

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION	RIPIARIAN WIDTH	FLOOD PLAIN QUALITY	
☒ NONE / LITTLE [3]	☐ WIDE > 50m [4]	☐ FOREST, SWAMP [3]	☐ CONSERVATION TILLAGE [1]
☐ MODERATE [2]	☐ MODERATE 10-50m [3]	☐ SHRUB OR OLD FIELD [2]	☐ URBAN OR INDUSTRIAL [0]
☐ HEAVY / SEVERE [1]	☐ NARROW 5-10m [2]	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐ MINING / CONSTRUCTION [0]
	☒ VERY NARROW < 5m [1]	☐ FENCED PASTURE [1]	
	☐ NONE [0]	☒ OPEN PASTURE, ROWCROP [0]	

Comments

Indicate predominant land use(s)
past 100m riparian.Riparian
Maximum 10

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

- ☐ > 1m [6]
☐ 0.7-<1m [4]
☒ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☐ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

- ☐ TORRENTIAL [-1] ☐ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☒ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Pool /
Current
Maximum 12Indicate for functional riffles; Best areas must be large enough to support a population
of riffle-obligate species:

Check ONE (Or 2 & average).

☒ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☐ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☐ MODERATE [0]
			☒ EXTENSIVE [-1]

Comments

Riffle /
Run
Maximum 86] GRADIENT (N/A ft/mi) ☒ VERY LOW - LOW [2-4]
DRAINAGE AREA (mi²) ☐ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]%POOL: %GLIDE:
%RUN: 100 %RIFFLE: Gradient
Maximum 10

Check ALL that apply

☐	0.5 Km	CLARITY	
☐	0.2 Km	1st --sample pass-- 2nd	
☐	0.15 Km	☒ < 20 cm	☐
☐	0.12 Km	☐ 20-<40 cm	☐
☐		☐ 40-70 cm	☐
☒	OTHER	☐ > 70 cm/ CTB	☐
	meters	☐ SECCHI DEPTH	☐

CANOPY

☒ > 85%- OPEN

☐ 55%-<85%

☐ 30%-<55%

☐ 10%-<30%

☐ <10%- CLOSED

1st _____ cm

pass

2nd _____ cm

C] RECRE

POOL: $\square > 100\text{ft}^2$ $\square > 3\text{ft}$

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☒ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

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

Circle some & COMMENT

WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H₂O / TILE / H₂O TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

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

Stream is a deep channelized ditch parallel to County Road 17. Water level is up due to recent heavy rains and significant input from

drain tiles.

Stream Drawing:

See [waterbody dataform](#)



Lat: 41.017751° N Lon: 84.774493° W

[SPAA001_001S] facing south upstream



Lat: 41.017705° N Lon: 84.774494° W

[SPAA001_002N] facing north downstream



[SPAA001_003W] facing west across bank

Waterbody Data Sheet

Survey Description					
Project Name: AEP Allen Station		Waterbody Name: Mercia Ditch		Waterbody ID: SPAB003	Date: 7/14/15
State: OH	County: Paulding	Company: SCI Engineering	Crew Member Initials: ME/JM	Photo ID(s): 1s, 2n, 3w	
Tract Number(s): 0328S-00500		Milepost Entry: -	Milepost Exit: -	Associated Wetland ID(s): N/A	
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____					
Physical Attributes					
Stream Classification: (check one) ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Connecting swale ^a					
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☒ Stream ☐ Drainage Ditch ☐ Other: _____					
OHWM Width: 6 ft. Height: 1 ft.		OHWM Indicator: (check all that apply) ☒ Clear line on bank ☐ Shelving ☐ Wrested vegetation ☐ Scouring ☐ Water staining ☐ Bent, matted, or missing vegetation ☒ Wrack line ☒ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 20 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 6 ft.		Depth of Water at Centerline: (Approx.) 1 ft.	
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) 0.01 fps		Bank height Right: 6 ft. Left: 6 ft.	
				Bank slope Right: 70 degrees Left: 70 degrees	
Qualitative Attributes					
Water Appearance: (check one) ☐ No water ☐ Clear ☒ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☐ Other: _____					
Substrate: (check all that apply) ☐ Bedrock ☐ Gravel ☐ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____					
% of Substrate: _____ % _____ % _____ % 100 % _____ % _____ %					
Width of Riparian Zone: 20 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☐ Shrubs: _____ ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.			
Dominant Bank Vegetation: (list) Typha angustifolia, Juncus effusus, Carex vulpinoidea, Schoenoplectus acutus					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) submerged vegetation, overhanging vegetation					
Aquatic Organisms Observed: (list) Northern Leopard frogs					
Invasive and/or T&E Species Observed: (list) N/A					
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated					
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☐ Other: _____					
Stream Quality ^b : (check one) ☐ High ☐ Moderate ☒ Low					

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

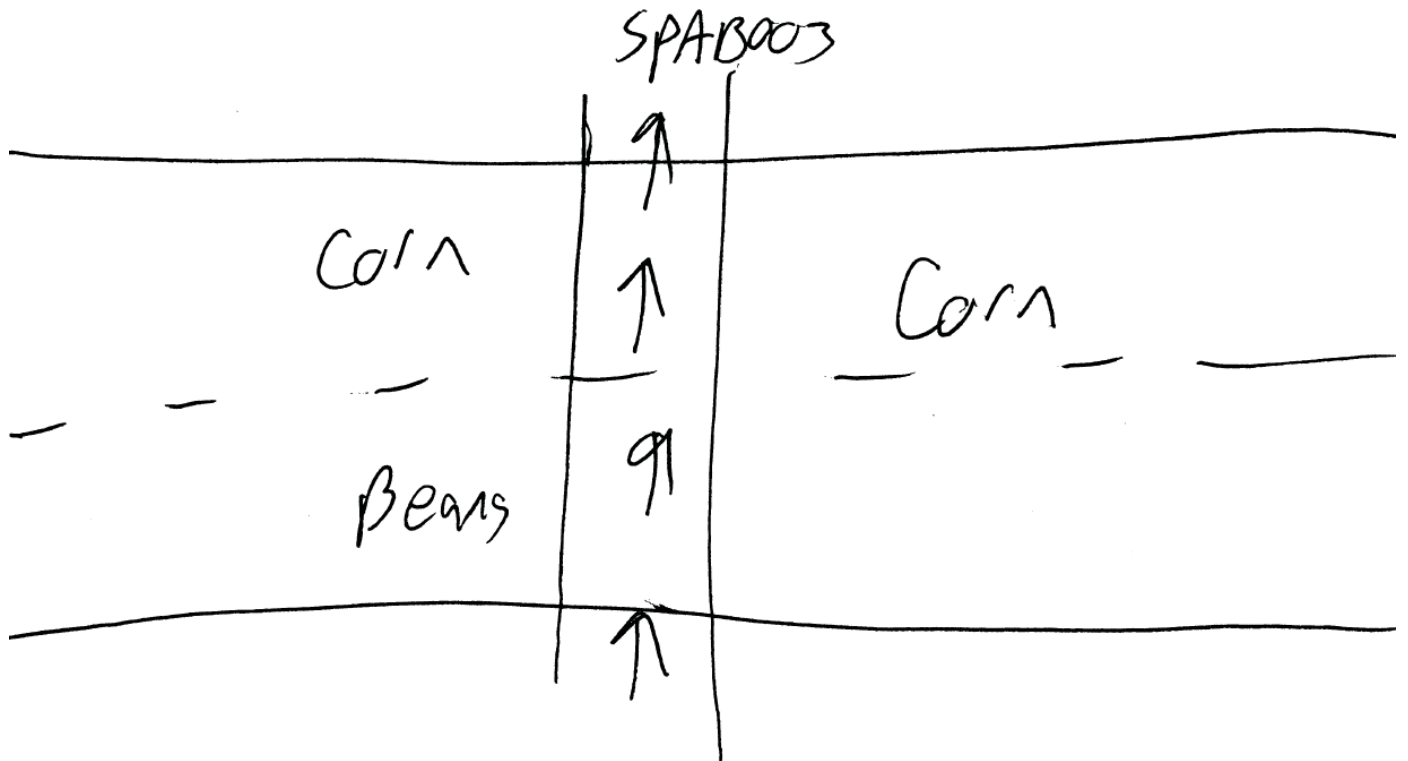
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Waterbody ID:

SPAB003

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, and survey area/corridor if applicable.



Notes

Ephemeral stream that flows S to N across ROW. High water level due to heavy recent rain events.

Stream & Location: SPAB003

RM: N/A Date: 7 / 14 / 15

Mercia Ditch

Scorers Full Name & Affiliation: Mark Eldridge / SCI Engineering

River Code: N/A - STORET #: N/A Lat./ Long.: 41.01783 184.76491 Office verified location ☒1] SUBSTRATE Check ONLY Two substrate TYPE BOXES;
estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
☐ BLDR /SLABS [10]	☐ POOL RIFFLE	☐ HARDPAN [4]	☐ POOL RIFFLE	☐ LIMESTONE [1]	☐ SILT	☐ HEAVY [-2]	Substrate 3 Maximum 20
☐ BOULDER [9]		☐ DETRITUS [3]		☒ TILLS [1]		☐ MODERATE [-1]	
☐ COBBLE [8]		☐ MUCK [2]		☐ WETLANDS [0]		☒ NORMAL [0]	
☐ GRAVEL [7]		☒ SILT [2]		☐ HARDPAN [0]		☐ FREE [1]	
☐ SAND [6]		☐ ARTIFICIAL [0]		☐ SANDSTONE [0]		☐ EXTENSIVE [-2]	
☐ BEDROCK [5]				☐ RIP/RAP [0]		☐ MODERATE [-1]	
NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]				LACUSTURINE [0]		☒ NORMAL [0]	
Comments				SHALE [-1]		☐ NONE [1]	
				COAL FINES [-2]			

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

0 UNDERCUT BANKS [1]	0 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]	☐ EXTENSIVE >75% [11]
1 OVERHANGING VEGETATION [1]	0 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]	☐ MODERATE 25-75% [7]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]	☐ SPARSE 5-<25% [3]
0 ROOTMATS [1]			☒ NEARLY ABSENT <5% [1]

Comments

Cover
Maximum 20
2

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☒ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☒ MODERATE [2]
☐ LOW [2]	☒ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☒ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel
Maximum 20
12

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION		RIPARIAN WIDTH		FLOOD PLAIN QUALITY			
☒ NONE / LITTLE [3]	☐ WIDE > 50m [4]	☐ FOREST, SWAMP [3]	☐ CONSERVATION TILLAGE [1]				
☐ MODERATE [2]	☐ MODERATE 10-50m [3]	☐ SHRUB OR OLD FIELD [2]	☐ URBAN OR INDUSTRIAL [0]				
☐ HEAVY / SEVERE [1]	☐ NARROW 5-10m [2]	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐ MINING / CONSTRUCTION [0]				
	☒ VERY NARROW < 5m [1]	☐ FENCED PASTURE [1]					
	☐ NONE [0]	☒ OPEN PASTURE, ROWCROP [0]					

Comments

Indicate predominant land use(s)
past 100m riparian.Riparian
Maximum 10
4

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

- ☐ > 1m [6]
☐ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☒ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

- ☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Comments

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)Pool /
Current
Maximum 12
2Indicate for functional riffles; Best areas must be large enough to support a population
of riffle-obligate species:

Check ONE (Or 2 & average).

☒ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☐ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle /
Run
Maximum 8
16] GRADIENT (N/A ft/mi) ☒ VERY LOW - LOW [2-4]
DRAINAGE AREA (mi²) ☐ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]%POOL: %GLIDE:
%RUN: 100 %RIFFLE: Gradient
Maximum 10
3

A] SAMPLED REACH

Check ALL that apply

METHOD

☐ BOAT
☐ WADE
☐ L. LINE
☒ OTHER

STAGE

1st -sample pass- 2nd
☐ HIGH
☐ UP
☒ NORMAL
☐ LOW
☐ DRY

DISTANCE

☐ 0.5 Km
☐ 0.2 Km
☐ 0.15 Km
☐ 0.12 Km
☒ OTHER
33
meters

CLARITY

1st --sample pass-- 2nd
☒ < 20 cm
☐ 20-<40 cm
☐ 40-70 cm
☐ > 70 cm/ CTB
☐ SECCHI DEPTH

CANOPY

☒ > 85%- OPEN
☐ 55%-<85%
☐ 30%-<55%
☐ 10%-<30%
☐ <10%- CLOSED

Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.
Ephemeral stream that flows south to north across ROW. High water level due to heavy recent rains.

B] AESTHETICS

☐ NUISANCE ALGAE
☐ INVASIVE MACROPHYTES
☐ EXCESS TURBIDITY
☐ DISCOLORATION
☐ FOAM / SCUM
☐ OIL SHEEN
☐ TRASH / LITTER
☐ NUISANCE ODOR
☐ SLUDGE DEPOSITS
☐ CSOs/SSOs/OUTFALLS

C] RECREATION

AREA DEPTH
POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

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

Circle some & COMMENT

E] ISSUES

WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / ~~IRRIGATION~~ / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H₂O / ~~TILE~~ / H₂O TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

☐ $\bar{x}$ width
☐ $\bar{x}$ depth
☐ max. depth
☐ $\bar{x}$ bankfull width
☐ bankfull $\bar{x}$ depth
☐ W/D ratio
☐ bankfull max. depth
☐ floodprone x² width
☐ entrench. ratio
Legacy Tree:

Stream Drawing:

See Waterbody Dataform



[SPAB003_001N DOWN] facing north downstream



[SPAB003_002S UP] facing south upstream



[SPAB003_003E ACROSS] facing east across bank

Waterbody Data Sheet

Survey Description							
Project Name: AEP Allen Station		Waterbody Name: Shilts Ditch		Waterbody ID: SPAB004		Date: 7/14/15	
State: OH	County: Paulding	Company: SCI Engineering		Crew Member Initials: ME/JM	Photo ID(s): 1n, 2s, 3e		
Tract Number(s): 0328S-00500, 0328S-00302		Milepost Entry: -	Milepost Exit: -	Associated Wetland ID(s): WPAB006			
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____							
Physical Attributes							
Stream Classification: (check one) ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Connecting swale ^a							
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☒ Stream ☐ Drainage Ditch ☐ Other: _____							
OHWM Width: 5 ft. Height: 1 ft.		OHWM Indicator: (check all that apply) ☒ Clear line on bank ☐ Shelving ☒ Wrested vegetation ☐ Scouring ☐ Water staining ☒ Bent, matted, or missing vegetation ☒ Wrack line ☒ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change					
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 12 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 5 ft.		Depth of Water at Centerline: (Approx.) 1 ft.			
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) 0.01 fps		Bank height Right: 5 ft. Left: 5 ft.		Bank slope Right: 70 degrees Left: 70 degrees	
Qualitative Attributes							
Water Appearance: (check one) ☐ No water ☐ Clear ☒ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☐ Other: _____							
Substrate: (check all that apply) ☐ Bedrock ☐ Gravel ☐ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____							
% of Substrate: _____ % _____ % _____ % 100 % _____ % _____ %							
Width of Riparian Zone: 20 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☐ Shrubs: _____ ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.					
Dominant Bank Vegetation: (list) Carex vulpinoidea, Schoenoplectus acutus, Daucus carota, Festuca arudinacea							
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) overhanging vegetation							
Aquatic Organisms Observed: (list) N/A							
Invasive and/or T&E Species Observed: (list) Daucus carota							
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated							
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☐ Other: _____							
Stream Quality ^b : (check one) ☐ High ☐ Moderate ☒ Low							

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

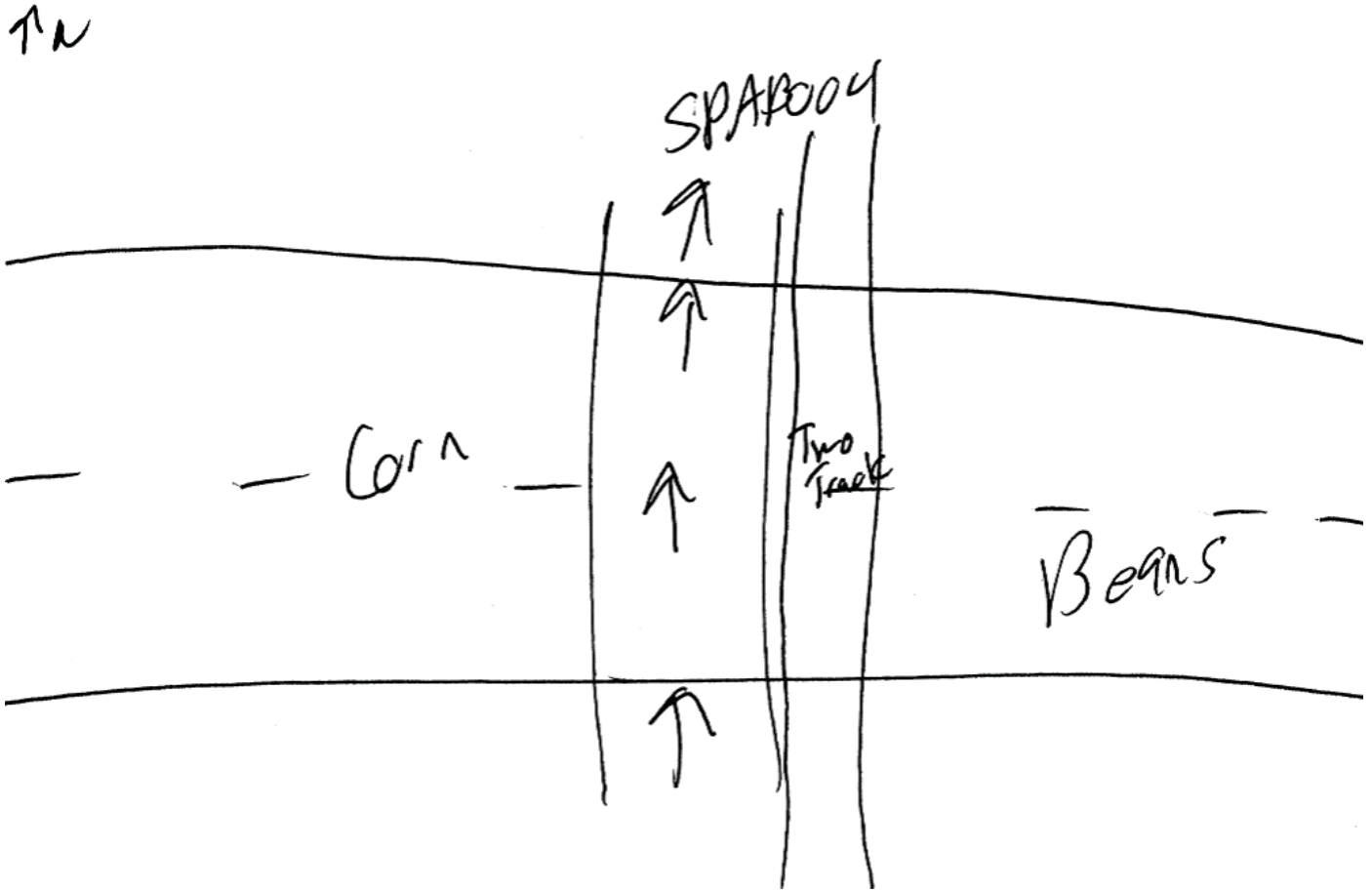
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Waterbody ID:

SPAB004

Waterbody Sketch

Include north arrow, centerline, distance from centerline, photo locations, and survey area/corridor if applicable.



Notes

Ephemeral stream that flows S to N across ROW. A two-track road runs parallel to the stream. Water level due to heavy recent rain events.

Stream & Location: SPAB004 Shilts Ditch

RM: N/A Date: 7 / 14 / 15

Scorers Full Name & Affiliation: Mark Eldridge / SCI Engineering

River Code: N/A - STORET #: N/A Lat./ Long.: 41.017842 184.76020

Office verified location ☒1] SUBSTRATE Check ONLY Two substrate TYPE BOXES;
estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
☐ BLDR /SLABS [10]	☐ POOL	☐ HARDPAN [4]	☐ POOL	☐ LIMESTONE [1]	☐ SILT	☐ HEAVY [-2]	Substrate 3 Maximum 20
☐ BOULDER [9]	☐ RIFFLE	☐ DETRITUS [3]	☐ RIFFLE	☒ TILLS [1]	☐ WETLANDS [0]	☐ MODERATE [-1]	
☐ COBBLE [8]		☐ MUCK [2]		☐ SANDSTONE [0]	☐ RIP/RAP [0]	☒ NORMAL [0]	
☐ GRAVEL [7]		☒ SILT [2]		☐ LACUSTURINE [0]	☐ SHALE [-1]	☐ FREE [1]	
☐ SAND [6]		☐ ARTIFICIAL [0]		☐ COAL FINES [-2]	☐ EMBEDDEDNESS	☐ EXTENSIVE [-2]	
☐ BEDROCK [5]						☐ MODERATE [-1]	
(Score natural substrates; ignore sludge from point-sources)						☒ NORMAL [0]	
NUMBER OF BEST TYPES: ☐ 4 or more [2]						☐ NONE [1]	
☒ 3 or less [0]							

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 & average)

☐ UNDERCUT BANKS [1]	☐ POOLS > 70cm [2]	☐ OXBOWS, BACKWATERS [1]	☐ EXTENSIVE >75% [11]
☐ OVERHANGING VEGETATION [1]	☐ ROOTWADS [1]	☐ AQUATIC MACROPHYTES [1]	☐ MODERATE 25-75% [7]
☐ SHALLOWS (IN SLOW WATER) [1]	☐ BOULDERS [1]	☐ LOGS OR WOODY DEBRIS [1]	☐ SPARSE 5-<25% [3]
☐ ROOTMATS [1]			☒ NEARLY ABSENT <5% [1]

Comments

Cover

Maximum 20

2

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☒ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☒ MODERATE [2]
☐ LOW [2]	☒ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☒ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel

Maximum 20

12

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION	RIPIARIAN WIDTH	FLOOD PLAIN QUALITY	
☒ NONE / LITTLE [3]	☐ WIDE > 50m [4]	☐ FOREST, SWAMP [3]	☐ CONSERVATION TILLAGE [1]
☐ MODERATE [2]	☐ MODERATE 10-50m [3]	☐ SHRUB OR OLD FIELD [2]	☐ URBAN OR INDUSTRIAL [0]
☐ HEAVY / SEVERE [1]	☐ NARROW 5-10m [2]	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐ MINING / CONSTRUCTION [0]
	☒ VERY NARROW < 5m [1]	☐ FENCED PASTURE [1]	
	☐ NONE [0]	☒ OPEN PASTURE, ROWCROP [0]	

Comments

Indicate predominant land use(s)
past 100m riparian.

Riparian

Maximum 10

4

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

- ☐ > 1m [6]
☐ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☒ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

- ☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Comments

Pool / Current

Maximum 12

2

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

☒ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☒ BEST AREAS < 5cm [metric=0]		☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☒ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle / Run

Maximum 8

0

6] GRADIENT (N/A ft/mi) ☒ VERY LOW - LOW [2-4]
DRAINAGE AREA (mi²) ☐ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]%POOL: %GLIDE:

Gradient

Maximum 10

4

%RUN: 100 %RIFFLE:

Waterbody Data Sheet

Survey Description				
Project Name: AEP Allen Station		Waterbody Name: Unnamed Tributary to West Fork Ditch		Waterbody ID: SPAA003
State: OH		County: Paulding	Company: SCI Engineering	Crew Member Initials: JS/ TC
Photo ID(s): 001 up 002 down 003 across				
Tract Number(s): 0327S-00101		Milepost Entry: n/a	Milepost Exit: n/a	Associated Wetland ID(s): None
Survey Type: (check one) ☒ Centerline ☐ Re-Route ☐ Access Road ☐ Other: _____				
Physical Attributes				
Stream Classification: (check one) ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Connecting swale ^a				
Waterbody Type: (check one) ☐ Lake ☐ Pond: (define) _____ ☐ River ☐ Stream ☒ Drainage Ditch ☐ Other: _____				
OHWM Width: 2 ft. Height: .5 ft.		OHWM Indicator: (check all that apply) ☐ Clear line on bank ☐ Shelving ☐ Wrested vegetation ☐ Scouring ☐ Water staining ☒ Bent, matted, or missing vegetation ☐ Wrack line ☐ Litter and debris ☐ Abrupt plant community change ☐ Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank at Centerline: 30 ft.		Width of Waterbody - Water Edge to Water Edge at Centerline: 5 ft.		Depth of Water at Centerline: (Approx.) 2 ft.
Sinuosity: (check one) ☒ Straight ☐ Meandering		Water velocity: (Approx.) .5 fps		Bank height Right: 6 ft. Left: 6 ft.
Bank slope Right: 75 degrees Left: 60 degrees				
Qualitative Attributes				
Water Appearance: (check one) ☐ No water ☐ Clear ☒ Turbid ☐ Sheen on surface ☐ Surface scum ☐ Algal mats ☐ Other: _____				
Substrate: (check all that apply) ☐ Bedrock ☐ Gravel ☐ Sand ☒ Silt/clay ☐ Organic ☐ Other: _____				
% of Substrate: _____ % _____ % _____ % 100 % _____ % _____ %				
Width of Riparian Zone: 10 ft.		Vegetative Layers: (check all that apply) ☐ Trees: _____ ☐ Shrubs: _____ ☒ Herbs Avg. DBH of Dominants: (approx.) _____ in. _____ in.		
Dominant Bank Vegetation: (list) Schedonorus pratensis				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): (list) In-stream vegetation				
Aquatic Organisms Observed: (list) None				
Invasive and/or T&E Species Observed: (list) Cirsium arvense				
Tributary is: (check one) ☐ Natural ☐ Artificial, man-made ☒ Manipulated				
Disturbances: (check all that apply) ☐ Livestock access ☐ Manure in waterbody ☐ Waste discharge pipes ☐ Other: _____				
Stream Quality ^b : (check one) ☐ High ☒ Moderate ☐ Low				

^a **Connecting swales** are water features that do not meet the definition of a waterbody (not an ephemeral waterbody) in that there is not a defined bed, bank, and ordinary high water mark, however, it is a water conveyance feature that is characterized by flow volume, frequency, and duration to make it more than just an erosional feature and connects two potential waters of the U.S. and thereby may be subject to Section 404 permitting.

^b **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

2/26/2016 4:21:32 PM

in

Case No(s). 16-0074-EL-BLN

Summary: Letter of Notification AEP Transco LON for Timber Switch-Haviland Project
electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company