	Site: ∨	V-7	Rater(s):	Dixon/Mitch	Date: 11/6/2018
,	3	3	Metric 1. Wetland Area (size		
	max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) X 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)		
	2	5	Metric 2. Upland buffers and	d surrounding land use).
	max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one WIDE. Buffers average 50m (164ft) or mo MEDIUM. Buffers average 25m to <50m (X NARROW. Buffers average 10m to <25m VERY NARROW. Buffers average <10m 2b. Intensity of surrounding land use. Select one of VERY LOW. 2nd growth or older forest, p LOW. Old field (>10 years), shrub land, you MODERATELY HIGH. Residential, fenced X HIGH. Urban, industrial, open pasture, rou	ore around wetland perimeter (7) (82 to <164ft) around wetland perimeter (4) In (32ft to <82ft) around wetland perimeter ((<32ft) around wetland perimeter (0) In double check and average. Invariation or savannah, wildlife area, etc. (7) In oung second growth forest. (5) In d pasture, park, conservation tillage, new fa	1)
,	11	16	Metric 3. Hydrology.		
	max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5 3c. Maximum water depth. Select only one and ass >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score	X Part of wetland Part of riparian 5) 3d. Duration inundation/s sign score. Semi- to perma Regularly inun X Seasonally inun Seasonally sat re one or double check and average.	plain (1) m/lake and other human use (1) l/upland (e.g. forest), complex (1) or upland corridor (1) caturation. Score one or dbl check anently inundated/saturated (4) dated/saturated (3)
	-		- <u> </u>	point source (r X filling/grading road bed/RR tr dredging water input other	·
	12	28	Metric 4. Habitat Alteration	and Development.	
	max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double che None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) Very good (6) Good (5) X Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	gn score.	
			4c. Habitat alteration. Score one or double check at	nd average. sturbances observed	
		28 btotal this pa	Recovered (6) Recovering (3) Recent or no recovery (1) age Recovered (6) mowin grazing clearct selecti woody toxic p	g shrub/sapling r g herbaceous/ac	uatic bed removal
	last revised	reprua	ary ZUU i jjiii		

## Substitution Section Section	Site: V	V-7		Rater(s):	Dixo	n/Mitch	Date : 11/6/2018
## Metric 5. Special Wetlands. Social State So			1				
Metric 5. Special Wetlands. Check all that apply and score as indicated. Sog (10) Fen (10) Cld growth forest (10) Cld growth forest (10) Clake Eric cosstability-tutary wetland-amestricted hydrology (10) Lake Eric cosstability-tutary wetland-estricted hydrology (10) Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Prairies (10) Relict W		28					
Check all that apply and score as indicated. Sog (10)	su	ıbtotal first pa] ge				
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1 Standing dead >25cm (10in) dbh Amphibian breeding pools Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality 3 Present in moderate or greater amounts and of highest quality						· ·	acres)
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						, , , , , , , , , , , , , , , , , , , ,	
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			O Amphibian breeding pools	Micr			
of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Present in moderate or greater amounts and of highest quality							more common
quality or in small amounts of highest quality 3 Present in moderate or greater amounts and of highest quality					•	of marginal quality	
3 Present in moderate or greater amounts and of highest quality					2		_
		1			3	Present in moderate or greater ar	
	41					and of highest quality	

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	3	
_	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	5	
	Metric 6. Plant communities, interspersion, microtopography	8	
	TOTAL SCORE	41	Category based on score breakpoints

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 less than the Category 2 scoring threshold (excluding 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 overcategorized by the ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	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?	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 moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not 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	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.	

	Fin	al Category	
Choose one	Category 1	(Category 2)	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization				
Version 5.0	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:		
. vaiiio.	Dixon/Mitch	
	T JIXOH/IVIIIGH	

Date: 11/6/2018

Affiliation: Smart Services, Inc.

Address: 88 W. Church Street, Newark, OH 43055

Phone Number: 740.345.4700

e-mail address: kdixon@smartservices-inc.com

Name of Wetland: W-8

Vegetation Communit(ies): Scrub-Shrub

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

See Attached

Lat/Long or UTM Coordinate Lat	:38°54'55.84"N Long: 84° 2'21.09"W	
USGS Quad Name		Bethel
County		Clermont
Township		Tate
Section and Subsection		
Hydrologic Unit Code		050902021201
Site Visit		
National Wetland Inventory Map		
Ohio Wetland Inventory Map		
Soil Survey		
Delineation report/map		

Name of Wetland: W-8					
Wetland Size (acres, hectares):	23.0 acres				
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.					
See attached					
Comments, Narrative Discussion, Justification of Category Changes:					
Score fell into transitional zone (30-34.9) and was moved up to	category 2				
Final score : 32 Category:	2				

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.	Х	
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.	Х	
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.	Х	
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.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		Х
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.	Х	

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	YES Wetland should be evaluated for possible Category 3 status	(NO) Go to Question 2
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	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
		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	YES	(NO)
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		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 Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or	YES Wetland is a Category 1 wetland	NO Go to Question 6
	no vegetation?	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	YES	NO
-	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%?	Wetland is a Category 3 wetland Go to Question 8a	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
	Lates Frie assets and tribute mountained as leather well and at	Go to Question 9a	(NO)
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	YES	NO
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	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.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
		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	YES	NO
	characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within	Wetland is a Category 3 wetland.	Go to Question 11
	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.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	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.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative	Complete Quantitative Rating
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis	7 00		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

	_			
4 4	Metric 1. Wetland A	rea (size).		
max 6 pts. subtotal	Select one size class and assign score >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 X 10 to <25 acres (4 to <10.1h 3 to <10 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0.4) <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) na) (4 pts) (3 pts) 2ha) (2pts)		
4 8	Metric 2. Upland but	ffers and surroundi	ng land use.	
max 14 pts. subtotal	MEDIUM. Buffers average 2 X NARROW. Buffers average 2 VERY NARROW. Buffers a 2b. Intensity of surrounding land use. VERY LOW. 2nd growth or LOW. Old field (>10 years), X MODERATELY HIGH. Resi	n (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around 10m to <25m (32ft to <82ft) around verage <10m (<32ft) around wetland	rimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) prest. (5) ervation tillage, new fallo	ow field. (3)
11 19	Metric 3. Hydrology	•	()	
max 30 pts. subtotal	3a. Sources of Water. Score all that a High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface Perennial surface water (lake state of the season of the s	ne water (3) e or stream) (5) 3d. ly one and assign score. (2)	X Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat X Seasonally inundat Seasonally satura	in (1) ake and other human use (1) pland (e.g. forest), complex (1) pland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) red/saturated (3) ated (2) ated in upper 30cm (12in) (1) stormwater)
8 27	Metric 4. Habitat Alt	eration and Develo	pment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score one None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)	one and assign score.		
	4c. Habitat alteration. Score one or d None or none apparent (9)	Check all disturbances observed		
27 subtotal this pa		mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging X farming nutrient enrichme	tic bed removal

Site:	W-8		lotor(o).	Divo	n/Mitch	Doto: 44/0/0040
Site.	VV-0		tater(s):	DIXU	i/iviitGi1	Date : 11/6/2018
		1				
	27					
s	ubtotal first pa	age				
		Metric 5. Special We	tlande			
0	27	Decire 3. Opecial We	tjanas.			
max 10 pts.	subtotal	∐ Check all that apply and score as indica	ated.			
		Bog (10)				
		Fen (10)				
		Old growth forest (10) Mature forested wetland (5)				
		Lake Erie coastal/tributary we	etland-unrestric	cted hvdr	ology (10)	
		Lake Erie coastal/tributary we		-		
		Lake Plain Sand Prairies (Oa	ık Openings) (1	10)		
		Relict Wet Prairies (10)	wal threatanad	ar anda.	agared analisa (10)	
		Known occurrence state/fede			. ,	
		Category 1 Wetland. See Qu				
		Metric 6. Plant comr	nunities	inte	erspersion microto	pography.
5	32			,		pograpriyi
max 20 pts.	subtotal	」 6a. Wetland Vegetation Communities.	Vege	etation C	Community Cover Scale	
		Score all present using 0 to 3 scale.		0	Absent or comprises <0.1ha (0.24	
		O Aquatic bed		1	Present and either comprises small	
		0 Emergent 2 Shrub			vegetation and is of moderate q significant part but is of low qua	·
		1 Forest		2	Present and either comprises sign	
		0 Mudflats			vegetation and is of moderate q	
		Open water			part and is of high quality	
		Other6b. horizontal (plan view) Interspersion	1	3	Present and comprises significant vegetation and is of high quality	
		Select only one.	·		vegetation and is of high quality	
		High (5)	Narr	ative De	scription of Vegetation Quality	
		Moderately high(4)		low	Low spp diversity and/or predomin	
		Moderate (3) X Moderately low (2)		mod	Native spp are dominant component	
		Low (1)		mou	although nonnative and/or distu	
		None (0)			can also be present, and specie	es diversity moderate to
		6c. Coverage of invasive plants. Refer			moderately high, but generally v	
		to Table 1 ORAM long form for list. Ador deduct points for coverage		high	threatened or endangered spp A predominance of native species	
		Extensive >75% cover (-5)		ı liği i	and/or disturbance tolerant nativ	•
		Moderate 25-75% cover (-3)			absent, and high spp diversity a	
		Sparse 5-25% cover (-1)			the presence of rare, threatened	d, or endangered spp
		X Nearly absent <5% cover (0) Absent (1)		flat and	Open Water Class Quality	
		6d. Microtopography.	- Indu	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.		1	Low 0.1 to <1ha (0.247 to 2.47 ac	· · · · · · · · · · · · · · · · · · ·
		O Vegetated hummucks/tussuo		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		O Coarse woody debris >15cm Standing dead >25cm (10in)		3	High 4ha (9.88 acres) or more	
		Amphibian breeding pools		otopogr	aphy Cover Scale	
		<u> </u>		0	Absent	
				1	Present very small amounts or if r of marginal quality	nore common
				2	Present in moderate amounts, bu	t not of highest
					quality or in small amounts of hi	•
	7			3	Present in moderate or greater ar	nounts
32					and of highest quality	
-	1					

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	4	
Ū	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	5	
	TOTAL SCORE	32	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one	<u> </u>	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 less than the Category 2 scoring threshold (excluding 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 overcategorized 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?	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 moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not 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	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, loca 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.

	Fin	al Category	
Choose one	Category 1	(Category 2)	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
Version 5.0 Scoring Bo Narrative I Field Form ORAM Su	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:	Dixon/Mitch
Date:	11/6/2018
Affiliati	Smart Services, Inc.
Addres	s: 88 W. Church Street, Newark, OH 43055

Phone Number: 740.345.4700

e-mail address: kdixon@smartservices-inc.com

Name of Wetland: W-9

Vegetation Communit(ies):

Emergent

HGM Class(es): Depressional

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

See Attached

Lat/Long or UTM Coordinate	Lat: 38°55'9.06"N Long: 84° 2'36.27"W	
USGS Quad Name		Bethel
County		Clermont
Township		Tate
Section and Subsection		
Hydrologic Unit Code		050902021201
Site Visit		
National Wetland Inventory Map		
Ohio Wetland Inventory Map		
Soil Survey		
Delineation report/map		

Name of Wetland: W-9		
Wetland Size (acres, hectares):		0.5 acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
See attached maps in WOUS report		
Comments, Narrative Discussion, Justification of Category Changes:		
Wetland is adjacent to 0.3 acre farm pond.		
Welland is adjacent to 0.5 acre farm pond.		
Final score: 18 Categ	jory:	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.	Х	
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.	Х	
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.	Х	
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.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		Х
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.	Х	

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.

ш	Outpation	Cirolo on a	1
#	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 Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, 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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
	Lates Frie assets and tribute mountained as leather well and at	Go to Question 9a	(NO)
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	YES	NO
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	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.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
		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	YES	NO
	characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within	Wetland is a Category 3 wetland.	Go to Question 11
	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.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	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.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative	Complete Quantitative Rating
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Metric 1. Wetland Area (size). Salect one size class and assign score. Solid area (SD 2000) (b) (b) (b) (b) (b) (b) (b) (b) (b) (b	Site: W	-9	Rater(s): Dixon/Mitch Date: 1	1/6/2018
Selectione size class and assign score, 39 acros (2012/2019) (6 pts) 20 to 50 acros (10 to 10 to 50 acros (10 to 50 acro			-	
Solidaria Part Pa	2	2	Metric 1. Wetland Area (size).	
Part 14 p.x. makehold 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 <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (20t to <27m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m (10 to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m (10 to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m (10 to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m (10 to <25m (32t to <62ft) around wetland perimeter (1) NARROW. Buffers average 25m (10 to <25m (32t to <62ft) around wetland perimeter (1) Narrow. Buffers average 25m (10 to <25m (32t to <62ft) around wetland perimeter (1) Narrow. Buffers average 25m (10 to <10 t	max 6 pts.	subtotal	>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) X 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	
WIDE. Buffers average 50m (194ft) or more around wetland perimeter (7) MARROW. Buffers average 20m to -52m (32t to 194ft) around wetland perimeter (1) NARROW. Buffers average 10m to -52m (32t to 194ft) around wetland perimeter (1) VERY NARROW. Buffers average 510m (528) around wetland perimeter (1) VERY NARROW. Buffers average 510m (528) around wetland perimeter (1) VERY NARROW. Buffers average 510m (528) around wetland perimeter (1) VERY NARROW. Buffers average 510m (528) around wetland perimeter (2) VERY NARROW. Buffers average 510m (528) around wetland perimeter (2) VERY NARROW. Buffers average 510m (528) around wetland perimeter (1) VERY NARROW. Buffers average 510m (528) around wetland perimeter (2) VERY NARROW. Buffers average 510m (528) VERY NAR	1	3	Metric 2. Upland buffers and surrounding land use.	
Metric 3. Hydrology. Maximum Subtool Su	max 14 pts.	subtotal	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)	
max 30 pts. subtoted 3a, Sources of Water. Score all that apply. High pH groundwater (3) Yercipitation of wettand/upland (e.g. forest), complex (1) Part of inparian or upland control (1) Part of inparian or upland control (1) Part of wettand/upland (e.g. forest), complex (1) Part of inparian or upland control (1) Part of inparian or upland control (1) Part of inparian or upland control (1) Part of wettand/upland (e.g. forest), complex (1) Part of wettand/upland (1) Part of wettand/u				
High pH groundwater (5)	8	11	metric 3. Trydrology.	
Recovered (7) Recovering (3) Recent or no recovery (1) Italia	max 30 pts.	subtotal	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) X < 0.4m (<15.7in) (1) 100 year floodplain (1) Part of wetland/upland (e.g. for part of riparian or upland corrice. Part of riparian or upland corrice. Semi- to permanently inundated. Regularly inundated/saturated. X Seasonally inundated (2) Seasonally saturated in upper	rest), complex (1) dor (1) e one or dbl check ed/saturated (4) (3)
max 20 pts. subtotal 4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) 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) X Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovering (3) Recovering (3) Recent or no recovery (1) 14 subtotal this page Substrate disturbance. Score one or double check and average. Check all disturbances observed Recovering (3) Recent or no recovery (1) above the fair (2) Recovering (3) Recovering (4) Recovering (4) Recovering (5) Recovering (6) Recovering (7) Recovering (7) Recovering (8) Recovering (8) Recovering (9) Recovering (9) Recovering (1) Recovering (1			Recovered (7) Recovering (3) X Recent or no recovery (1) Recovering (3) A Recent or no recovery (1) Recovering (3) A Recent or no recovery (1) Recovering (3) A Recent or no recovery (1) Recovered (7) A Gitch A Filling/grading A Filling/gradin	
None or none apparent (4) Recovered (3) Recovering (2) X 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) X Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovered (6) Recovering (3) Recent or no recovery (1) 14 subtotal this page None or none apparent (9) Recoverd (1) Recoverd (1) Are the first a page of the page of	3	14	Metric 4. Habitat Alteration and Development.	
4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) 14 subtotal this page None or none apparent (9) Recovered (6) X mowing Shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging woody debris removal toxic pollutants nutrient enrichment	max 20 pts.	subtotal	None or none apparent (4) Recovered (3) Recovering (2) X 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)	
Recovered (6) Recovering (3) Recent or no recovery (1) 14 subtotal this page Recovered (6) Recovering (3) Recent or no recovery (1) X mowing grazing clearcutting selective cutting woody debris removal toxic pollutants X mowing grazing herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment				
	cj.htv.		Recovered (6) Recovering (3) X Recent or no recovery (1) X mowing Grazing Grazing Clearcutting Selective cutting Woody debris removal Toxic pollutants Shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment	/al
last revised 1 February 2001 jjm				

Site:	W-9	Ra	ter(s):	Dixon	/Mitch	Date : 11/6/2018
Oite.	W 2		ter(s).	Біхоп	, which is	Date: 11/0/2016
	14]				
	1 1					
s	ubtotal first pa	age				
0	14	Metric 5. Special Wetl	lands.			
max 10 pts.	subtotal	Check all that apply and score as indicate	ed.			
		Bog (10) Fen (10)				
		Old growth forest (10)				
		Mature forested wetland (5)				
		Lake Erie coastal/tributary wetla		-	. ,	
		Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak)			ogy (5)	
		Relict Wet Prairies (10)	opoliii go) i	(10)		
		Known occurrence state/federa			• , ,	
		Significant migratory songbird/v				
		Category 1 Wetland. See Ques				
4	18	Metric 6. Plant comm	unities	s, inte	erspersion, microto	pograpny.
max 20 pts.	subtotal		Vec	netation (Community Cover Scale	
·		Score all present using 0 to 3 scale.	<u> </u>	0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
		O Aquatic bed		1	Present and either comprises sm	
		1 Emergent 1 Shrub			vegetation and is of moderate of significant part but is of low qua	•
		0 Forest		2	Present and either comprises sign	
		0 Mudflats			vegetation and is of moderate of	
		Open water		-	part and is of high quality	((
		Other6b. horizontal (plan view) Interspersion.		3	Present and comprises significan vegetation and is of high quality	
		Select only one.			Togotation and to or riight quality	
		High (5)	Nar		escription of Vegetation Quality	
		Moderately high(4) Moderate (3)		low	Low spp diversity and/or predomi disturbance tolerant native spec	
		Moderately low (2)		mod	Native spp are dominant compon	
		X Low (1)			although nonnative and/or distu	rbance tolerant native spp
		None (0) 6c. Coverage of invasive plants. Refer			can also be present, and specie	•
		to Table 1 ORAM long form for list. Add			moderately high, but generally threatened or endangered spp	
		or deduct points for coverage		high	A predominance of native species	s, with nonnative spp
		Extensive >75% cover (-5)			and/or disturbance tolerant nati	• •
		Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)			absent, and high spp diversity a the presence of rare, threatener	
		X Nearly absent <5% cover (0)				<u>, 5 11 </u>
		Absent (1) 6d. Microtopography.	Mu	otlat and	Open Water Class Quality Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.		1	Low 0.1 to <1ha (0.247 acres)	cres)
		O Vegetated hummucks/tussucks		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		Coarse woody debris >15cm (6		3	High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10in) db O Amphibian breeding pools		rotopoar	aphy Cover Scale	
		LU I mitimate a sading book		0	Absent	
			_	1	Present very small amounts or if of marginal quality	more common
				2	Present in moderate amounts, bu quality or in small amounts of h	ighest quality
	7			3	Present in moderate or greater ar	nounts
18					and of highest quality	

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	
J	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	
	TOTAL SCORE	18	Category based on score breakpoints

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 overcategorized 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?	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 moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not 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	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, loca 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
_			

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetland 10 Page Form for Wetland Categorization				
Version 5.0	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: Dixon/Mitch
Date: 11/6/2018
Affiliation: Smart Services, Inc.
Address: 88 W. Church Street, Newark, OH 43055
Phone Number: 740.345.4700
e-mail address: kdixon@smartservices-inc.com
Name of Wetland: 1
Vegetation Communit(ies): Emergent
HGM Class(es): Riverine
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

See Attached

Lat/Long or UTM Coordinate	Lat:38°54'50.12"N Long:84° 2'26.75"W	
USGS Quad Name		Bethel
County		Clermont
Township		Tate
Section and Subsection		
Hydrologic Unit Code		050902021201
Site Visit		
National Wetland Inventory Map		
Ohio Wetland Inventory Map		
Soil Survey		
Delineation report/map		

Name of Wetland: W-10	
Wetland Size (acres, hectares):	0.2 acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
See attached	
Comments, Narrative Discussion, Justification of Category Changes:	
Linear emergent wetland between stream and swale	
Final score : 25 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.	Х	
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.	Х	
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.	Х	
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.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		Х
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.	Х	

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.

ш	Outpation	Cirolo on a	1
#	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 Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, 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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
	Lates Frie assets and tribute mountained as leather well and at	Go to Question 9a	(NO)
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	YES	NO
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	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.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
		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	YES	NO
	characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within	Wetland is a Category 3 wetland.	Go to Question 11
	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.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	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.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative	Complete Quantitative Rating
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site:	W-10	Rater(s): Dixon/Mitch Date: 11/6/2018
1	1	Metric 1. Wetland Area (size).
max 6 pts.	subtotal	Select one size class and assign score.
1	2	Metric 2. Upland buffers and surrounding land use.
max 14 pts.	subtotal	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) 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) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)
11	13	Metric 3. Hydrology.
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) X Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select only one and assign score. >0.7 (27.6in) (3) X 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average.
		Recovered (7) X Recovering (3) Recent or no recovery (1) Reconstruction of the content of the c
7	20	Metric 4. Habitat Alteration and Development.
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) X 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) X Poor to fair (2) Poor (1)
		4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed
s	20 subtotal this pa	Recovered (6) X Recovering (3) Recent or no recovery (1) Recent or no
last revised	d 1 Februa	ry 2001 jjm

Site: V	V-10	Rate	r(s):	Dixo	n/Mitch	Date: 11/6/2018
ſ				21,7(0	.,,,,,,,,	<u>I</u>
	20					
L su	btotal first pa	age				
0	20	Metric 5. Special Wetla	nds.			
max 10 pts.	subtotal	Check all that apply and score as indicated. Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland Lake Erie coastal/tributary wetland Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10) Known occurrence state/federal the Significant migratory songbird/wate Category 1 Wetland. See Questio	I-restricte enings) (reatened er fowl ha	ed hydrolo 10) or enda abitat or u	ngered species (10) usage (10)	
5	25	Metric 6. Plant commu	nities	, inte	erspersion, microto	pography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.	Veg	etation (Community Cover Scale	
		Score all present using 0 to 3 scale.		0	Absent or comprises <0.1ha (0.24	
		O Aquatic bed 1 Emergent		1	Present and either comprises small vegetation and is of moderate of	
		1 Shrub			significant part but is of low qua	•
		0 Forest		2	Present and either comprises sign	-
		0 Mudflats			vegetation and is of moderate q	uality or comprises a small
		1 Open water			part and is of high quality	
		Other		3	Present and comprises significant	
		6b. horizontal (plan view) Interspersion.			vegetation and is of high quality	
		Select only one. High (5)	Narı	ative De	escription of Vegetation Quality	
		Moderately high(4)	- Itali	low	Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)			disturbance tolerant native spec	
		Moderately low (2)		mod	Native spp are dominant component	ent of the vegetation,
		X Low (1)			although nonnative and/or distu	* *
		None (0)			can also be present, and specie	•
		6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add			moderately high, but generally w	v/o presence of rare
		or deduct points for coverage		high	threatened or endangered spp A predominance of native species	with nonnative spn
		Extensive >75% cover (-5)		mgn	and/or disturbance tolerant nativ	· · · · · · · · · · · · · · · · · · ·
		Moderate 25-75% cover (-3)			absent, and high spp diversity a	
		Sparse 5-25% cover (-1)			the presence of rare, threatened	
		X Nearly absent <5% cover (0) Absent (1)	Mud	Iflat and	Open Water Class Quality	
		6d. Microtopography.		0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.		1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		O Vegetated hummucks/tussucks		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		Coarse woody debris >15cm (6in)		3	High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10in) dbh	Mic	rotonoar	ranhy Cover Scale	
		O Amphibian breeding pools	IVIICI	Otopogi 0	Absent	
			-	1	Present very small amounts or if r	nore common
					of marginal quality	
				2	Present in moderate amounts, bu	
				3	quality or in small amounts of hi Present in moderate or greater ar	
				5	and of highest quality	nounts
25					1 and or rightoot quality	

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	1	
Ü	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	5	
	TOTAL SCORE	25	Category based on score breakpoints

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 less than the Category 2 scoring threshold (excluding 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 overcategorized 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?	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 moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not 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	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, loca 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.		

	Fin	al Category	
Choose one	Category 1)	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.



Primary Headwater Habitat Evaluation Form

60

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Clermont/Brown County RIVER BASIN Little Miami SITE NUMBER St-A DRAINAGE AREA (mi²) 0.20 200 LAT. 38.91890 LONG. -84.04180 RIVER CODE 305 LENGTH OF STREAM REACH (ft) RIVER MILE DATE 10/30/18 KD/BM **COMMENTS** Stream near pond SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **PERCENT** PERCENT **Points** BLDR SLABS [16 pts] SILT [3 pt] 0% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 10% 0% **Substrate** 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 20% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 15 70% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] (B) Total of Percentages of (A) 0.00% A + B Bldr Slabs, Boulder, Cobble, Bedrock 12 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **TOTAL NUMBER OF SUBSTRATE TYPES:** Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 25 15 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bankfull > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 1.50 20 **AVERAGE BANKFULL WIDTH (meters):** COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) (Per Bank) R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

1.0

1.5

Moderate (2 ft/100 ft)

Moderate to Severe

3.0 >3

Severe (10 ft/100 ft)

2.0

PHWH Form Page - 1

☐ Flat (0.5 ft/100 ft)

0.5

STREAM GRADIENT ESTIMATE

Flat to Moderate

ADDITIONAL STREAM INFORMATION (This Information I	Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI So	core(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Poplar Creek	Distance from Evaluated Stream 0.72
CWH Name;	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDIN	NG THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
SGS Quadrangle Name; Bethel	NRCS Soil Map Page: NRCS Soil Map Stream Order
ounty: Clermont	Township / City:Tate
MISCELLANEOUS	
ase Flow Conditions? (Y/N):_Y Date of last precipita	ation: 10/19/2018 Quantity: 0.09
notograph Information:	
evated Turbidity? (Y/N): N Canopy (% open):	100%
ere samples collected for water chemistry? (Y/N);	(Note lab sample no. or id. and attach results) Lab Number:
eld Measures: Temp (°C) Dissolved Oxygen (n	mg/l)pH (S.U.) Conductivity (µmhos/cm)
the sampling reach representative of the stream (Y/N)	If not, please explain:
dditional comments/description of pollution impacts:	
	s. Voucher collections optional. NOTE; all voucher samples must be labeled with te field data sheets from the Primary Headwater Habitat Assessment Manual)
ish Observed? (Y/N) Voucher? (Y/N) Salam rogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) N omments Regarding Biology:	nanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
	IPTION OF STREAM REACH (This <u>must</u> be completed): Interest for site evaluation and a narrative description of the stream's location
	X X X
LOW →	XXX
	XXX
XXX - EROSION	



N Primary Headwater Habitat Evaluation Form 65 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Clermont/Brown County SITE NUMBER St-B RIVER BASIN Little Miami DRAINAGE AREA (mi²) 0.13

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY 1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32), Add total number of significant substrate types found (Max of 8), Final metric score is sum of boxes A & B. YPE SLDT SLABS [16 pts] 9% PERCENT TYPE SLT [3 pt] 9% PERCENT 9% PE	LENGTH OF STREAM REACH (ft) 200 LAT. 38.92800 LONG84.03400 RIVER CODE 305 RIVER MILE	
STREAM CHANNEL	DATE 10/30/18 SCORER KD/BM COMMENTS Woodlot	
1. SUBSTRATE (Estimate percent of every type of substrate present, Check ONLY two predominant substrate TYPE boxes (Max of 32), Add total number of significant substrate types found (Max of 83). Final metric score is sum of boxes A & B. HEI (Max of 32). Add total number of significant substrate types found (Max of 83). Final metric score is sum of boxes A & B. HEI (Max of 32). Add total number of significant substrate types found (Max of 83). Final metric score is sum of boxes A & B. HEI (Max of 32). Add total number of significant substrate types found (Max of 83). Final metric score is sum of boxes A & B. HEI (Max of 32). Add total number of significant substrate types found (Max of 84). Final metric score is sum of boxes A & B. HEI (Max of 32). Add total number of significant substrate types found (Max of 84). Final metric score is sum of boxes A & B. HEI (Max of 32). Add total number of significant substrate types found for the sum of the	NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. B. TYPE SILT [3 pt]		COVERY
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 2.	(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] PERCENT 17PE 9PERCENT 0% LEAF PACK/WOODY DEBRIS [3 pts] 0% CLAY or HARDPAN [0 pt] 0% MUCK [0 pts]	Metric Points Substrate Max = 40
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 13') [25 pts] COMMENTS AVERAGE BANKFULL WIDTH (meters): 20 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 20 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (-23' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 20 This information pust also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (-23' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 20 This information pust also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (-23' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 20 This information pust also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (-23' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 20 This information pust also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (-23' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 20 Comments AVERAGE BANKFULL WIDTH (meters): 20 This information pust also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (-23' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 20 Dipartite of the pust	Bldr Slabs, Boulder, Cobble, Bedrock Check	A + B
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Wide >10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Crop	evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 5 cm - 10 cm [15 pts] < 5 cm [5 pts]	Max = 30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 20 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Der Bank) L R (Most Predominant per Bank) L R (Der Bank	COMMENTS MAXIMUM POOL DEPTH (centimeters): 28	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop	> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m RIPARIAN VIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Urban or Industrial Open Pasture, Row Crop	COMMENTS AVERAGE BANKFULL WIDTH (meters): 2.00	20
Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field VV Narrow <5m Mature Forest, Wetland Conservation Tillage Urban or Industrial Open Pasture, Row Crop	RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
Narrow <5m Residential, Park, New Field J	Wide >10m	
COMMENTS	None Residential, Park, New Field Mining or Construction	

		RIPARIAN ZONE AND FLOODPI	LAIN QUAL	_ITY ☆NOTE: R	iver Left (L) and R	ight (R) as l e	ooking downstream 🕻
		RIPARIAN WIDTH	<u>FLOODF</u>	PLAIN QUALITY			
	<u>L</u> R	_ (Per Bank)	<u>L</u> R	(Most Predominant	per Bank)	<u>L R</u>	
		Wide >10m		Mature Forest, Wet	land		Conservation Tillage
		Moderate 5-10m	VV	Immature Forest, S Field	hrub or Old		Urban or Industrial
	V	Narrow <5m		Residential, Park, N	New Field		Open Pasture, Row Crop
		None		Fenced Pasture			Mining or Construction
		COMMENTS					
		FLOW REGIME (At Time of Evalue Stream Flowing Subsurface flow with isolated poole COMMENTS_	, ($\overline{\mathbf{v}}$			ools, no flow (Intermittent) ohemeral)
		SINUOSITY (Number of bends per None 0.5	er 61 m (200 1.0 1.5	0 ft) of channe l) (Ch	neck <i>ONLY</i> one bo 2.0 2.5	x):	3.0 >3
FI	STRE at (0.5 ft/	AM GRADIENT ESTIMATE 100 ft) Flat to Moderate	Mode	erate (2 ft/100 ft)	Moderate to	Severe	Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information	Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI S	Score(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Poplar Creek	Distance from Evaluated Stream 2.60
	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream _
MAPPING: ATTACH COPIES OF MAPS, INCLUDI	ING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
JSGS Quadrangle Name: Bethel	NRCS Soil Map Page: NRCS Soil Map Stream Order_
County: Charmont	Township / City:_ Tate
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipit	itation: 0.15 Quantity: 0.15
hotograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open):10%
	(Note lab sample no, or id, and attach results) Lab Number:
field Measures: Temp (°C) Dissolved Oxygen ((mg/l)pH (S.U.) Conductivity (µmhos/cm)
s the sampling reach representative of the stream (Y/N)	If not, please explain:
ID number. Include appropria	ons. Voucher collections optional. NOTE, all voucher samples must be labeled with the ate field data sheets from the Primary Headwater Habitat Assessment Manual) amanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
	RIPTION OF STREAM REACH (This <u>must</u> be completed): Interest for site evaluation and a narrative description of the stream's location
	TAX XX
	V VV
XXX - EROSION FIRST - SEDIMENTATION	XXX

Reset Form

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in

Case No(s). 18-1546-EL-BGN

Summary: Application Appendix G (Part 4 of 5) electronically filed by Mr. Michael J. Settineri on behalf of Nestlewood Solar I LLC