Background Information

Date:	8/26/2010
Affiliation:	Flickinger Group, Inc.
Address:	2680 West Market Street, Suite 200, Fairlawn OH 44333
Phone Number:	(330) 865-0688
e-mail address:	llf1820@sbcglobal.net
Prepared by:	Laura Sayre
Site:	Seasons Road Commerce Center
Client:	John A Shutsa and Associates
Wetland Information:	

Vegetation Communit(ies):

W-A) Cattail marsh
W-B) Swamp forest, isolated; Cattail marsh
W-C) Swamp forest, isolated; Mixed emergent marsh
W-D) Swamp forest, isolated; Mixed emergent marsh
W-E) Swamp forest, isolated; Mixed emergent marsh
W-F) Shrub swamp, isolated; Mixed emergent marsh
W-G) Shrub swamp, isolated; Emergent, sedge-grass community (dominance of *Phragmites australis*)
W-H) Shrub swamp, isolated; Mixed emergent marsh
W-I) Shrub swamp, isolated; Cattail marsh
W-J) Shrub swamp, riparian; Swamp forest, riparian; mixed emergent marsh
W-K) Swamp forest, riparian
W-L) Swamp forest, riparian
W-M) Cattail marsh
W-N) Shrub swamp, isolated; Mixed emergent marsh
W-O) Shrub swamp, isolated; Mixed emergent marsh

HGM Class(es):

W-A) Isolated depression, open, mineral soils
W-B1) Isolated depression, open, organic soils
W-B2) Isolated depression, open, organic soils
W-C) Isolated depression, open, organic soils
W-D) Isolated depression, open, organic soils
W-E) Isolated depression, open, mineral soils
W-F) Isolated depression, open, mineral soils
W-G) Isolated depression, open, mineral soils
W-H) Isolated depression, open, mineral soils
W-I) Isolated depression, open, mineral soils
W-J) Isolated depression, open, mineral soils
W-K) Isolated depression, open, mineral soils
W-L) Isolated depression, open, mineral soils
W-M) Isolated depression, closed, mineral soils
W-N) Isolated depression, open, mineral soils
W-O) Isolated depression, open, mineral soils

Wetland Label	Wetland Acreage	Latitude(dd nad83)	Longitude dd nad83)
W-A	0.015	41.2060203	81.4693604
W-B	0.066	41.2057791	81.4693604
W-C	6.438	41.2041943	81.4683618
W-D	0.123	41.2056758	81.4674993
W-E	1.399	41.2050901	81.4657744
W-F	1.311	41.2037464	81.4650936
W-G	3.890	41.2050555	81.4615530
W-H	5.698	41.2070194	81.4649573
W-I	1.319	41.2070537	81.4620521
W-J	6.736	41.2075360	81.4601455
W-K	0.359	41.2091895	81.4586473
W-L	0.270	41.2094996	81.4591012
W-M	0.003	41.2090174	81.4610987
W-N	0.712	41.2097411	81.4646394
W-O	0.539	41.2092932	81.4688612

USGS Quad Name: Hudson
County: Summit
Township/City: Hudson
Hydrologic Unit Code: 0411002
Site Visit(s):1/25/10, 3/17/10, 3/18/10, 8/10/10, 8/26/10
National Wetland Inventory Map: Hudson Quad; PFOIW, POWZ, R2OWZ, Pssi/emY
Soil Survey: Sheet #13
Delineation report/map: Provided
ODNR Info: There are no dedicated state nature preserves or unique ecological sites, etc. at the project area.
USFWS Info: Indiana bat (E), bald eagle, (SC), and Northern monkshood (T).
Sketch/Map: See delineation and plant community map for wetland location, relationship with other surface waters and vegetation zones.

W-A 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10

subtotal	max6pts	**Wetland:**	A, 0.015 acres
0	0		

Final Score	**Category**
23	1

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
4	4

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
1		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
3		LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
13	9

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

		None or none apparent (12)
	7	Recovered (7)
5	3	Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike		dirt road
	weir		dredging
	stormwater input		other - culvert

subtotal	max20pts
23	10

Metric 4. Habitat alteration and development.

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

		None or none apparent (4)
2.5	3	Recovered (3)
	2	Recovering (2)
		Recent or no recovery (1)

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

		None or none apparent (9)
4.5	6	Recovered (6)
	3	Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

X	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting		dredging
X	woody debris removal		farming
	toxic pollutants		nutrient enrichment

23

Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	A, 0.015 acres	

23

Subtotal1st page

23	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

23	0
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
1	Shrub
	Forest
	Mudflats
	Open water
	Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

	High (5)
	Moderately high (4)
0	Moderate (3)
	Moderately low (2)
	Low (1)
0	None (o)

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

23.0 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland A - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	0		
	Metric 2.	Buffers and surrounding land use	4		
	Metric 3.	Hydrology	9		
	Metric 4.	Habitat	10		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	0		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**23**		**Category 1**

Wetland A - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to determine if teh 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?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed 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 within the "*gray zone*" for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 1

*W-B*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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	B, 0.066 acres
0	0		

Final Score	Category
34	1 or 2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
3	3

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
	1	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
	2	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	1	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
15	12

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike		dirt road
	weir		dredging
	stormwater input		other

subtotal	max20pts
30	15

Metric 4. Habitat alteration and development.

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

	4	None or none apparent (4)
3.5	3	Recovered (3)
		Recovering (2)
		Recent or no recovery (1)

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

	9	None or none apparent (9)
7.5	6	Recovered (6)
		Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

X	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

30

Subtotal this page

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ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	B, 0.066 acres	

30

Subtotal1st page

30	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

34	4
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	2	Emergent
2	0	Shrub
		Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
0		Moderate (3)
		Moderately low (2)
		Low (1)
	0	None (o)

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

34.0 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland B - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	0		
	Metric 2.	Buffers and surrounding land use	3		
	Metric 3.	Hydrology	12		
	Metric 4.	Habitat	15		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	4		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**34**		**Category 1 or 2**

a

Wetland B - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to determine if teh 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?	If 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 dexcribed 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 within the "*gray zone*" for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-C 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

Wetland:	C, 6.438+ acres

Final Score	Category
40	MOD 2

subtotal	max6pts
3	3

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
7	4

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
1		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
3		LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
18	11

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

		None or none apparent (12)
	7	Recovered (7)
5	3	Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

X	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
	weir	X	dredging
	stormwater input	X	other culvert

subtotal	max20pts
29	11

Metric 4. Habitat alteration and development.

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

		None or none apparent (4)
2.5	3	Recovered (3)
	2	Recovering (2)
		Recent or no recovery (1)

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

		None or none apparent (9)
4.5	6	Recovered (6)
	3	Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

X	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting	X	dredging
X	woody debris removal		farming
	toxic pollutants		nutrient enrichment

Subtotal this page
29

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	C, 6.438+ acres	

29

Subtotal1st page

29	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

40	11
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	2	Emergent
5	1	Shrub
	2	Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
2		Moderate (3)
	2	Moderately low (2)
		Low (1)
		None (o)

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

		Vegetated hummocks/tussocks
	2	Coarse woody debris > 15cm (6in)
5	1	Standing dead >25cm (10in) dbh
	2	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

40.0 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland C - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	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	4		
	Metric 3.	Hydrology	11		
	Metric 4.	Habitat	11		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	11		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**40**		**Modified 2**

a

Wetland C - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to determine if teh 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?	If 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 dexcribed 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 within the "*gray zone*" for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-D 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10

1	1	**Wetland:**	D, 0.123 acres
subtotal	max6pts		

40	MOD 2
Final Score	**Category**

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

8	7	**Metric 2. Upland buffers and surrounding land use.**
subtotal	max14pts	

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
4	4	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
3		LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

21	13	**Metric 3. Hydrology.**
subtota	max30pts	

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike		dirt road
	weir		dredging
	stormwater input		other - culvert

32	11	**Metric 4. Habitat alteration and development.**
subtotal	max20pts	

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

		None or none apparent (4)
2.5	3	Recovered (3)
	2	Recovering (2)
		Recent or no recovery (1)

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

		None or none apparent (9)
4.5	6	Recovered (6)
	3	Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

X	mowing	X	shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting		dredging
X	woody debris removal		farming
	toxic pollutants		nutrient enrichment

32

Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	D, 0.123 acres	

32

Subtotal1st page

32	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

40	8
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	0	Emergent
2		Shrub
	2	Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
1		Moderate (3)
		Moderately low (2)
	1	Low (1)
		None (o)

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

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

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

		Vegetated hummocks/tussocks
	3	Coarse woody debris > 15cm (6in)
4	0	Standing dead >25cm (10in) dbh
	1	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

40.0 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland D - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	1		
	Metric 2.	Buffers and surrounding land use	7		
	Metric 3.	Hydrology	13		
	Metric 4.	Habitat	11		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	8		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**40**		**Modified 2**

a

Wetland D - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to determine if teh 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?	If 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 dexcribed 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 within the "*gray zone*" for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-E 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

Wetland:	E, 1.399 acres

Final Score	Category
33	1 or 2

subtotal	max6pts
2	2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
5	3

Metric 2. Upland buffers and surrounding land use.

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

	WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
1	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
2	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
1	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
14	9

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

	>0.7 (27.6in) (3)
1	04. to 0.7m (15.7 to 27.6in) (2)
1	>0.4m (<15.7in) (1)

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

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

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

	None or none apparent (12)
7	Recovered (7)
5	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

X	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
	weir	X	dredging
	stormwater input	X	other culvert

subtotal	max20pts
26	12

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting	X	dredging
X	woody debris removal		farming
	toxic pollutants		nutrient enrichment

Subtotal this page
26

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	E, 1.399 acres	

26

Subtotal1st page

26	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

33	7
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
3	Shrub
1	Forest
	Mudflats
	Open water
	Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

	High (5)
	Moderately high (4)
2	Moderate (3)
2	Moderately low (2)
	Low (1)
	None (o)

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

	Extensive >75% cover (-5)
-3	Moderate 25-75% cover (-3) - *Phalaris arundinacea*
-3	Sparse 5-25% cover (-1)
	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

	Vegetated hummocks/tussocks
2	Coarse woody debris > 15cm (6in)
5	Standing dead >25cm (10in) dbh
2	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

33.0 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland E - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	2		
	Metric 2.	Buffers and surrounding land use	3		
	Metric 3.	Hydrology	9		
	Metric 4.	Habitat	12		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	7		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**33**		**Category 1 or 2**

a

Wetland E - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to determine if teh 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?	If 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 dexcribed 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 within the "*gray zone*" for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-F 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	F, 1.311 acres
2	2		

Final Score	Category
31	1 or 2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
6	4

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
1		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
3		LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
17	11

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike		dirt road
	weir	X	dredging
	stormwater input		other - culvert

subtotal	max20pts
29	12

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting	X	dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

Subtotal this page
29

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	F, 1.311 acres	

29

Subtotal1st page

29	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

31	2
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	2	Emergent
2	0	Shrub
		Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
1		Moderate (3)
		Moderately low (2)
	1	Low (1)
		None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
		Moderate 25-75% cover (-3)
-1	-1	Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
		Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

31.0 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland F - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	2		
	Metric 2.	Buffers and surrounding land use	4		
	Metric 3.	Hydrology	11		
	Metric 4.	Habitat	12		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	2		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**31**		**Category 1 or 2**

a

Wetland F - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to determine if teh 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?	If 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 dexcribed 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 within the "*gray zone*" for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-G 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.	YES	
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	G, 3.890 acres
3	3		

Final Score	Category
33.5	1 or 2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
10	7

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
4	4	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
3		LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
21	11

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

		None or none apparent (12)
	7	Recovered (7)
5	3	Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

X	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
X	weir		dredging
	stormwater input		other

subtotal	max20pts
32.5	11.5

Metric 4. Habitat alteration and development.

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

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

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

		None or none apparent (9)
4.5	6	Recovered (6)
	3	Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting	X	dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

32.5

Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	G, 3.890 acres	

32.5
Subtotal1st page

32.5	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

33.5	1
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	1	Emergent
3	2	Shrub
		Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
1		Moderate (3)
		Moderately low (2)
	1	Low (1)
		None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
	-3	Moderate 25-75% cover (-3)
-3		Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
		Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

33.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland G - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	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	7		
	Metric 3.	Hydrology	11		
	Metric 4.	Habitat	11.5		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	1		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**33.5**		**Category 1 or 2**

a

Wetland G - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If 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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-H 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10

3	3	**Wetland:**	H, 5.698 acres
subtotal	max6pts		

48.5	2
Final Score	**Category**

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

8	5
subtotal	max14pts

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
1		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
4	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

21	13
subtota	max30pts

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
	weir		dredging
	stormwater input	X	other- culvert

38.5	17.5
subtotal	max20pts

Metric 4. Habitat alteration and development.

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

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

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

	9	None or none apparent (9)
7.5	6	Recovered (6)
		Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

38.5
Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	H, 5.698 acres	

38.5
Subtotal1st page

38.5	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

48.5	10
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	2	Emergent
5	2	Shrub
	1	Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
3	3	Moderate (3)
		Moderately low (2)
		Low (1)
		None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
		Moderate 25-75% cover (-3)
1		Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
	1	Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

48.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland H - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	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	5		
	Metric 3.	Hydrology	13		
	Metric 4.	Habitat	17.5		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	10		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**48.5**		**Category 2**

a

Wetland H - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-H 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

Wetland:	I, 1.319 acrea

Final Score	Category
27.5	1

subtotal	max6pts	Metric 1. Wetland Area (size).
2	2	

Select one size class and assign score.

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

subtotal	max14pts	Metric 2. Upland buffers and surrounding land use.
7	5	

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
	1	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	1	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
4	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts	Metric 3. Hydrology.
17	10	

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

		None or none apparent (12)
	7	Recovered (7)
5	3	Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
	weir		dredging
	stormwater input	X	other- culvert

subtotal	max20pts	Metric 4. Habitat alteration and development.
27.5	10.5	

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

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

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

		None or none apparent (9)
4.5	6	Recovered (6)
	3	Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

27.5

Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	I, 1.319 acrea	

27.5
Subtotal1st page

27.5	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

27.5	0
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	1	Emergent
2	1	Shrub
		Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
1		Moderate (3)
		Moderately low (2)
	1	Low (1)
		None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
	-3	Moderate 25-75% cover (-3)
-3		Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
		Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

27.5 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland I - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	2		
	Metric 2.	Buffers and surrounding land use	5		
	Metric 3.	Hydrology	10		
	Metric 4.	Habitat	10.5		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	0		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**27.5**		**Category 1**

a

Wetland I - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 1

W-J 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.	YES	
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	J, 6.736 acres
3	3		

Final Score	Category
55	2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
15	12

Metric 2. Upland buffers and surrounding land use.

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

	7	WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
7		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
5	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
		MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
30	15

Metric 3. Hydrology.

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

		High pH groundwater (5)
		Other groundwater (3)
4	1	Precipitation (1)
	3	Seasonal/Intermittent surface water (3)
		Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

		None or none apparent (12)
	7	Recovered (7)
5	3	Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

X	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike		dirt road
X	weir	X	dredging
	stormwater input	X	other- paths, culvert

subtotal	max20pts
45	15

Metric 4. Habitat alteration and development.

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

		None or none apparent (4)
2.5	3	Recovered (3)
	2	Recovering (2)
		Recent or no recovery (1)

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

	9	None or none apparent (9)
7.5	6	Recovered (6)
		Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

Subtotal this page
45

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	J, 6.736 acres	

45

Subtotal1st page

45	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

55	10
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	3	Emergent
4	1	Shrub
	0	Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
1		Moderate (3)
		Moderately low (2)
	1	Low (1)
		None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
		Moderate 25-75% cover (-3)
-1	-1	Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
		Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

		Vegetated hummocks/tussocks
	2	Coarse woody debris > 15cm (6in)
6	2	Standing dead >25cm (10in) dbh
	2	Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

55.0 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland J - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	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	12		
	Metric 3.	Hydrology	15		
	Metric 4.	Habitat	15		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	10		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**55**		**Category 2**

a

Wetland J - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-K 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

Wetland:	K, 0.359 acres

Final Score	Category
54	2

subtotal	max6pts	Metric 1. Wetland Area (size).
2	2	

Select one size class and assign score.

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

subtotal	max14pts	Metric 2. Upland buffers and surrounding land use.
14	12	

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

	7	WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
7		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
5	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
		MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts	Metric 3. Hydrology.
28.5	14.5	

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

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

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

	12	None or none apparent (12)
	7	Recovered (7)
9.5		Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		dirt road
	weir		dredging
	stormwater input	X	other- ATV path

subtotal	max20pts	Metric 4. Habitat alteration and development.
45	16.5	

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

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

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

	9	None or none apparent (9)
7.5	6	Recovered (6)
		Recovering (3)
		Recent or no recovery (1)

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

Subtotal this page
45

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	K, 0.359 acres	

45

Subtotal1st page

45	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

54	9
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	2	Emergent
4	0	Shrub
	2	Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
0		Moderate (3)
		Moderately low (2)
		Low (1)
	0	None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
		Moderate 25-75% cover (-3)
1		Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
	1	Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

		Vegetated hummocks/tussocks
	2	Coarse woody debris > 15cm (6in)
4	2	Standing dead >25cm (10in) dbh
		Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

54.0 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland K - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	2		
	Metric 2.	Buffers and surrounding land use	12		
	Metric 3.	Hydrology	14.5		
	Metric 4.	Habitat	16.5		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	9		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**54**		**Category 2**

a

Wetland K - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-K 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	L, 0.270 acrea
1	1		

Final Score	Category
51	2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
13	12

Metric 2. Upland buffers and surrounding land use.

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

	7	WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
7		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
5	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
		MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
27.5	14.5

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

		100 year floodplain (1)
		Between stream/lake and other human use (1)
2	1	Part of wetland/upland (e.g. forest), complex (1)
	1	Part of riparian or upland corridor (1)

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

	12	None or none apparent (12)
	7	Recovered (7)
9.5		Recovering (3)
		Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (non stormwater)
	tile		filling/grading
	dike		dirt road
	weir		dredging
	stormwater input	X	other- path

subtotal	max20pts
45	17.5

Metric 4. Habitat alteration and development.

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

	4	None or none apparent (4)
3.5	3	Recovered (3)
		Recovering (2)
		Recent or no recovery (1)

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

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

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

45

Subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	L, 0.270 acrea	

45

Subtotal1st page

45	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

51	6
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	0	Emergent
2		Shrub
	2	Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
0		Moderate (3)
		Moderately low (2)
		Low (1)
	0	None (o)

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

		Extensive >75% cover (-5) - *Phalaris arundinacea*
		Moderate 25-75% cover (-3)
1		Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
	1	Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

		Vegetated hummocks/tussocks
	2	Coarse woody debris > 15cm (6in)
3	1	Standing dead >25cm (10in) dbh
		Amphibian breeding pools

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

51.0 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland L - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	1		
	Metric 2.	Buffers and surrounding land use	12		
	Metric 3.	Hydrology	14.5		
	Metric 4.	Habitat	17.5		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	6		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**51**		**Category 2**

a

Wetland L - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-M 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

Wetland:	M, 0.003 acres

Final Score	Category
25.5	1

subtotal	max6pts
0	0

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
7	7

Metric 2. Upland buffers and surrounding land use.

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

	WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
4	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
	NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
3	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
17	10

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

	>0.7 (27.6in) (3)
1	04. to 0.7m (15.7 to 27.6in) (2)
	>0.4m (<15.7in) (1)

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

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

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

	None or none apparent (12)
7	Recovered (7)
5	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
	weir		dredging
	stormwater input		other

subtotal	max20pts
27.5	10.5

Metric 4. Habitat alteration and development.

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

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

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

	None or none apparent (9)
4.5	Recovered (6)
3	Recovering (3)
	Recent or no recovery (1)

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting		dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

27.5

Subtotal this page

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ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	M, 0.003 acres	

27.5
Subtotal1st page

27.5	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

25.5	-2
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

		Aquatic bed
	1	Emergent
1		Shrub
		Forest
		Mudflats
		Open water
		Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

		High (5)
		Moderately high (4)
1		Moderate (3)
		Moderately low (2)
	1	Low (1)
		None (o)

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

	-5	Extensive >75% cover (-5) - *Phalaris arundinacea*
		Moderate 25-75% cover (-3)
-5		Sparse 5-25% cover (-1)
		Nearly absent <5% cover (0)
		Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

25.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland M - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	0		
	Metric 2.	Buffers and surrounding land use	7		
	Metric 3.	Hydrology	10		
	Metric 4.	Habitat	10.5		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	-2		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**25.5**		**Category 1**

a

Wetland M - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 1

W-N 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	N, 0.712 acres
2	2		

Final Score	Category
42	MOD 2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
10	8

Metric 2. Upland buffers and surrounding land use.

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

		WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
4	4	MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
4	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
26	16

Metric 3. Hydrology.

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

		High pH groundwater (5)
		Other groundwater (3)
4	1	Precipitation (1)
	3	Seasonal/Intermittent surface water (3)
		Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

	ditch		point source (non stormwater)
	tile	X	filling/grading
	dike	X	dirt road
	weir		dredging
	stormwater input	X	other- culvert

subtotal	max20pts
39	13

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
X	clearcutting		sedimentation
	selective cutting		dredging
X	woody debris removal		farming
	toxic pollutants		nutrient enrichment

39

Subtotal this page

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ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	N, 0.712 acres	

39

Subtotal1st page

39	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

42	3
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
3	Shrub
0	Forest
1	Mudflats
	Open water
	Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

	High (5)
	Moderately high (4)
2	Moderate (3)
	Moderately low (2)
2	Low (1)
	None (o)

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

	Extensive >75% cover (-5) - *Phalaris arundinacea*
	Moderate 25-75% cover (-3)
-3	Sparse 5-25% cover (-1)
-3	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

42.0 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

Comments:

Wetland N - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	2		
	Metric 2.	Buffers and surrounding land use	8		
	Metric 3.	Hydrology	16		
	Metric 4.	Habitat	13		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	3		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**42**		**Modified 2**

a

Wetland N - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If 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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If YES, Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	**YES**	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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2

W-O 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 Unit 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 mitigation site, conservation site, etc.	YES	
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.		NA
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.	YES	
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 boundaries unless they coincide with areas where the hydrologic regime changes	YES	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately		NA
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.		NA

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	Rater(s):	Laura Sayre	Date:	8/26/10

subtotal	max6pts	Wetland:	O, 0.539 acres
2	2		

Final Score	Category
47	2

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

subtotal	max14pts
13	11

Metric 2. Upland buffers and surrounding land use.

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

	7	WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)
7		MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)
		NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)
		VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (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)
4	5	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	3	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
		HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

subtota	max30pts
27	14

Metric 3. Hydrology.

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

		High pH groundwater (5)
		Other groundwater (3)
4	1	Precipitation (1)
	3	Seasonal/Intermittent surface water (3)
		Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

		>0.7 (27.6in) (3)
1		04. to 0.7m (15.7 to 27.6in) (2)
	1	>0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

X	ditch		point source (non stormwater)
	tile		filling/grading
	dike		dirt road
	weir	X	dredging
X	stormwater input	X	other- retention

subtotal	max20pts
44	17

Metric 4. Habitat alteration and development.

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

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

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

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

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

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

Check all disturbances observed

	mowing		shrub/sapling removal
	grazing		herbaceous/aquatic bed removal
	clearcutting		sedimentation
	selective cutting	X	dredging
	woody debris removal		farming
	toxic pollutants		nutrient enrichment

44

Subtotal this page

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ORAM v. 5.0 Field Form Quantitative Rating

Site:	Seasons Road	**Rater(s):**	Laura Sayre	**Date:**	8/26/10
			Wetland:	O, 0.539 acres	

44

Subtotal1st page

44	0
subtotal	max10pts

Metric 5. Special Wetlands

Check all that apply and score as indicated.

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

47	3
subtotal	max20pts

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
3	Shrub
0	Forest
	Mudflats
	Open water
	Other _____

6b. Horizontal (plan view) interspersion.

Select only one.

	High (5)
	Moderately high (4)
1	Moderate (3)
	Moderately low (2)
1	Low (1)
	None (o)

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

	Extensive >75% cover (-5) - *Phalaris arundinacea*
-3	Moderate 25-75% cover (-3)
-3	Sparse 5-25% cover (-1)
	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

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

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

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

Mudflat and Open Water Class Quality	
0	Absent
1	Low 0.1 to 1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

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

47.0 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

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Comments:

Wetland O - ORAM Summary Worksheet

			circle answer or insert score		Result
Narrative Rating	Question:	**Check one:**	**Yes**	**No**	If yes, Category 3
	1	Critical Habitat		**X**	If yes, Category 3
	2	Threatened or Endangered Species		**X**	If yes, Category 3
	3	High Quality Natural Wetland		**X**	If yes, Category 3
	4	Significant bird habitat		**X**	If yes, Category 3
	5	Category 1 Wetlands		**X**	If yes, Category 1
	6	Bogs		**X**	If yes, Category 3
	7	Fens		**X**	If yes, Category 3
	8a	Old Growth Forest		**X**	If yes, Category 3
	8b	Mature forested wetlands		**X**	Category 3; may also be 1 or 2
	9a	Lake Erie coastal and tributary wetlands; if **No** continue on to Question #10		**X**	
	9b	Lake Erie Wetlands - Restrocted			If yes, evaluate for Category 3; may also be 1 or 2
	9c	Are Lake Erie water levels the wetlands primary hydrological influence?			
	9d	Lake Erie Wetlands - Unrestrocted			If yes, Category 3
	9e	Lake Erie Wetlands - Unrestrocted with invasive plants			Category 3; may also be 1 or 2
	10	Oak Openings		**X**	If yes, Category 3
	11	Relict Wet Prairies		**X**	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1.	Size	2		
	Metric 2.	Buffers and surrounding land use	11		
	Metric 3.	Hydrology	14		
	Metric 4.	Habitat	17		
	Metric 5.	Special Wetland Communities	0		
	Metric 6.	Plant communities, interspersion, microtopography	3		
	Total Score	Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	**47**		**2**

a

Wetland O - Wetland Categorization Worksheet

Choices	Yes	No	**Evaluationg 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	If 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 37451-1-54(C) and biological and/or functional assessments to determine
Dud tiy abswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 93, 11	If YES Wetland should be evaluated for possible Category 3 wetland	**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 b
Did you answer "Yes" to Narrative rating No 5	If YES, Wetland is categorized as a Category 1 wetland	**NO**	Is quantitative rating score greater than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 37451-1-54(C) and biological and/or functional assessments to det
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	If YES, Wetland is assigned to the appropriate category based on the scoring range	**YES**	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 dexcribed in OAC Rule 3745-1-54(C) can be used to clarify or chang
Does the quantitative score fall within the "*gray zone* " for Category 1 or 2 or Category 2 or 3 wetlands?	If 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 nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrat
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 funct	If YES, Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	**NO** Wetland is assigned to category as determined by the ORAM	Wetland may be undercategorized using this method, but still exhibit one or more superior functions. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(2) and (3)are controlling, and the under-categorization should be corrected.

Final Category

Category 2