

Site: Imp. 4 Fringe (Adamsville)	Rater(s): Von Demarest	Date: 09/13/10
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1	1
max 6 pts.	subtotal

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)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

12	13
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

18	31
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (non-stormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input checked="" type="checkbox"/> other_mining

13	44
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

Check all disturbances observed	
<input type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

44
subtotal this page

Site: Imp. 4 Fringe (Adamsville)	Rater(s): Von Demarest	Date: 09/13/10
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44
subtotal first page

0	44
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

7	51
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. Horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0 Vegetated hummocks/tussucks
- 1 Coarse woody debris >15cm (6in)
- 0 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	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

51

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		check answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input type="checkbox"/> NO <input type="checkbox"/>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="checkbox"/> NO <input type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If yes, Category 3
Question 11. Relict Wet Prairies	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	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	18	
	Metric 4. Habitat	13	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersed, microtopography	7	
	TOTAL SCORE	51	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Use Attainability Analysis

(for waters without a use designation pursuant to OAC § 3745-1-07 and subject to an individual 401 water quality certification in accordance with ORC § 6111.30(A)(3))

SITE NAME/LOCATION Adamsville _____

SITE NUMBER Stream 17 (Ephemeral) RIVER BASIN _____

LENGTH OF STREAM REACH (ft) 656 LAT 40.0167114 LONG -81.972512 (at downstream point of reach)

DATE 08/27/10 ANALYST JCD

Assessment of Factors Affecting Attainment of Use (Physical Habitat, Biological, Chemical, Economic)

Physical Habitat

1. DRAINAGE AREA (acres and/or sq. mi.) _____

2. STREAM CHANNEL MODIFICATIONS: Yes No

If Yes, explain: _____

3. Substrate

TYPE		PERCENT
BLDR SLABS		_____
BOULDER (>256 mm)		_____
BEDROCK		_____
COBBLE (65-256 mm)		10
GRAVEL (2-64 mm)		10
SAND (<2 mm)		_____

TYPE		PERCENT
SILT		_____
LEAF PACK/WOODY DEBRIS		20
FINE DETRITUS		_____
CLAY or HARDPAN		60
MUCK		_____
ARTIFICIAL		_____

4. Maximum Pool Depth (cm) _____

5. Average Bank Full Width (M) 0.8

6. RIPARIAN ZONE AND FLOODPLAIN QUALITY (NOTE: River Left (L) and Right ® as looking downstream)

RIPARIAN WIDTH (Per Bank)				FLOODPLAIN QUALITY Canopy (% open): _____ (Most Predominant Per Bank)				
L	R		L	R		L	R	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Wide >10m	<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

7. FLOW

Baseline Information:

Base Flow Conditions? Yes No

Quantity: _____

Date of last precipitation: _____

Elevated Turbidity? Yes No

Flow Regime (at the time of evaluation):

- Ephemeral Intermittent Perennial
 Stream flowing Moist channels Subsurface flow w/isolated pools Dry channel, no water

8. SINUOSITY (Number of bends per reach evaluated) (Check ONLY one box):

- None (0-1) Moderate (1-3) High (>3)

9. STREAM GRADIENT ESTIMATE

- Flat (0.5 ft/100 ft) (Flat-Moderate) Moderate (2 ft/100 ft) Moderate-Severe Severe (10 ft/100 ft)(>3)

Biological

- 1. Fish Observed** Yes No If Yes, were vouchers collected? Yes No

Species _____

- Macroinvertebrates Observed** Yes No If Yes, were vouchers collected? Yes No

Species _____

Chemical

- 1. Field Measurements:** Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____
Conductivity (µmhos/cm) _____

- 2. Grab Sample:** Taken Yes No (If yes, list results below)

Results: _____

Economic

Describe: N/A

Conclusions

Based on review of this assessment of factors affecting the attainment of use and in accordance with Biological Criteria for the Protection of Aquatic Life: Vol. II., Users Manual for Biological Field Assessment of Ohio Surface Waters, Section 8, Guidelines for Biological Criteria Use and Application (1987, as amended) for determining which aquatic life use designation applies to any given water body and knowledge of what this physical habitat will biologically support, the use designation defined in OAC 3745-1-07(B) that this water body is capable of attaining is: LRW

Use Attainability Analysis

(for waters without a use designation pursuant to OAC § 3745-1-07 and subject to an individual 401 water quality certification in accordance with ORC § 6111.30(A)(3))

SITE NAME/LOCATION Adamsville _____

SITE NUMBER Stream 19 RIVER BASIN _____

LENGTH OF STREAM REACH (ft) 405 LAT 40.019280 LONG -81.97189 (at downstream point of reach)

DATE 08/27/10 ANALYST JCD

Assessment of Factors Affecting Attainment of Use (Physical Habitat, Biological, Chemical, Economic)

Physical Habitat

1. DRAINAGE AREA (acres and/or sq. mi.) _____

2. STREAM CHANNEL MODIFICATIONS: Yes No

If Yes, explain: _____

3. Substrate

TYPE	PERCENT	TYPE	PERCENT
BLDR SLABS	_____	SILT	_____
BOULDER (>256 mm)	_____	LEAF PACK/WOODY DEBRIS	40
BEDROCK	10	FINE DETRITUS	_____
COBBLE (65-256 mm)	_____	CLAY or HARDPAN	30
GRAVEL (2-64 mm)	10	MUCK	_____
SAND (<2 mm)	10	ARTIFICIAL	_____

4. Maximum Pool Depth (cm) _____

5. Average Bank Full Width (M) 0.9

6. RIPARIAN ZONE AND FLOODPLAIN QUALITY (NOTE: River Left (L) and Right ® as looking downstream)

RIPARIAN WIDTH (Per Bank)				FLOODPLAIN QUALITY Canopy (% open): _____ (Most Predominant Per Bank)					
L	R			L	R				
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Wide >10m		<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m		<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	None		<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

7. FLOW

Baseline Information:

Base Flow Conditions? Yes No

Quantity: _____

Date of last precipitation: _____

Elevated Turbidity? Yes No

Use Attainability Analysis

(for waters without a use designation pursuant to OAC § 3745-1-07 and subject to an individual 401 water quality certification in accordance with ORC § 6111.30(A)(3))

SITE NAME/LOCATION Adamsville _____

SITE NUMBER Stream 20 RIVER BASIN _____

LENGTH OF STREAM REACH (ft) 319 LAT 40.017996 LONG -81.971657 (at downstream point of reach)

DATE 08/27/10 ANALYST JCD

Assessment of Factors Affecting Attainment of Use (Physical Habitat, Biological, Chemical, Economic)

Physical Habitat

1. DRAINAGE AREA (acres and/or sq. mi.) _____

2. STREAM CHANNEL MODIFICATIONS: Yes No

If Yes, explain: _____

3. Substrate

TYPE	PERCENT	TYPE	PERCENT
BLDR SLABS	_____	SILT	_____
BOULDER (>256 mm)	_____	LEAF PACK/WOODY DEBRIS	40
BEDROCK	_____	FINE DETRITUS	_____
COBBLE (65-256 mm)	_____	CLAY or HARDPAN	40
GRAVEL (2-64 mm)	15	MUCK	_____
SAND (<2 mm)	5	ARTIFICIAL	_____

4. Maximum Pool Depth (cm) _____

5. Average Bank Full Width (M) 0.8

6. RIPARIAN ZONE AND FLOODPLAIN QUALITY (NOTE: River Left (L) and Right (R) as looking downstream)

RIPARIAN WIDTH (Per Bank)				FLOODPLAIN QUALITY Canopy (% open): _____ (Most Predominant Per Bank)				
L	R		L	R		L	R	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Wide >10m	<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

7. FLOW

Baseline Information:

Base Flow Conditions? Yes No

Date of last precipitation: _____

Quantity: _____

Elevated Turbidity? Yes No

Flow Regime (at the time of evaluation):

- Ephemeral Intermittent Perennial
 Stream flowing Moist channels Subsurface flow w/isolated pools Dry channel, no water

8. SINUOSITY (Number of bends per reach evaluated) (Check ONLY one box):

- None (0-1) Moderate (1-3) High (>3)

9. STREAM GRADIENT ESTIMATE

- Flat (0.5 ft/100 ft) (Flat-Moderate) Moderate (2 ft/100 ft) Moderate-Severe Severe (10 ft/100 ft)(>3)

Biological

1. Fish Observed Yes No If Yes, were vouchers collected? Yes No

Species _____

Macroinvertebrates Observed Yes No If Yes, were vouchers collected? Yes No

Species _____

Chemical

1. Field Measurements: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____
Conductivity (µmhos/cm) _____

2. Grab Sample: Taken Yes No (If yes, list results below)

Results: _____

Economic

Describe: N/A

Conclusions

Based on review of this assessment of factors affecting the attainment of use and in accordance with Biological Criteria for the Protection of Aquatic Life: Vol. II., Users Manual for Biological Field Assessment of Ohio Surface Waters, Section 8, Guidelines for Biological Criteria Use and Application (1987, as amended) for determining which aquatic life use designation applies to any given water body and knowledge of what this physical habitat will biologically support, the use designation defined in OAC 3745-1-07(B) that this water body is capable of attaining is: LRW

Use Attainability Analysis

(for waters without a use designation pursuant to OAC § 3745-1-07 and subject to an individual 401 water quality certification in accordance with ORC § 6111.30(A)(3))

SITE NAME/LOCATION Adamsville _____

SITE NUMBER Stream 22 (Ephemeral) RIVER BASIN _____

LENGTH OF STREAM REACH (ft) 355 LAT 40.01432 LONG -81.96697 (at downstream point of reach)

DATE 08/22/11 ANALYST JCD

Assessment of Factors Affecting Attainment of Use (Physical Habitat, Biological, Chemical, Economic)

Physical Habitat

1. DRAINAGE AREA (acres and/or sq. mi.) _____

2. STREAM CHANNEL MODIFICATIONS: Yes No

If Yes, explain: _____

3. Substrate

TYPE	PERCENT	TYPE	PERCENT
BLDR SLABS	_____	SILT	_____
BOULDER (>256 mm)	10	LEAF PACK/WOODY DEBRIS	10
BEDROCK	10	FINE DETRITUS	_____
COBBLE (65-256 mm)	20	CLAY or HARDPAN	_____
GRAVEL (2-64 mm)	25	MUCK	_____
SAND (<2 mm)	25	ARTIFICIAL	_____

4. Maximum Pool Depth (cm) _____

5. Average Bank Full Width (M) 0.5

6. RIPARIAN ZONE AND FLOODPLAIN QUALITY (NOTE: River Left (L) and Right ® as looking downstream)

RIPARIAN WIDTH (Per Bank)				FLOODPLAIN QUALITY Canopy (% open): _____ (Most Predominant Per Bank)				
L	R		L	R		L	R	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Wide >10m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m	<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

7. FLOW

Baseline Information:

Base Flow Conditions? Yes No

Quantity: _____

Date of last precipitation: _____

Elevated Turbidity? Yes No

Flow Regime (at the time of evaluation):

- Ephemeral Intermittent Perennial
 Stream flowing Moist channels Subsurface flow w/isolated pools Dry channel, no water

8. SINUOSITY (Number of bends per reach evaluated) (Check ONLY one box):

- None (0-1) Moderate (1-3) High (>3)

9. STREAM GRADIENT ESTIMATE

- Flat (0.5 ft/100 ft) (Flat-Moderate) Moderate (2 ft/100 ft) Moderate-Severe Severe (10 ft/100 ft)(>3)

Biological

- 1. Fish Observed** Yes No If Yes, were vouchers collected? Yes No

Species _____

- Macroinvertebrates Observed** Yes No If Yes, were vouchers collected? Yes No

Species _____

Chemical

- 1. Field Measurements:** Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____
Conductivity (µmhos/cm) _____

- 2. Grab Sample:** Taken Yes No (If yes, list results below)

Results: _____

Economic

Describe: N/A

Conclusions

Based on review of this assessment of factors affecting the attainment of use and in accordance with Biological Criteria for the Protection of Aquatic Life: Vol. II., Users Manual for Biological Field Assessment of Ohio Surface Waters, Section 8, Guidelines for Biological Criteria Use and Application (1987, as amended) for determining which aquatic life use designation applies to any given water body and knowledge of what this physical habitat will biologically support, the use designation defined in OAC 3745-1-07(B) that this water body is capable of attaining is: LRW

Use Attainability Analysis

(for waters without a use designation pursuant to OAC § 3745-1-07 and subject to an individual 401 water quality certification in accordance with ORC § 6111.30(A)(3))

SITE NAME/LOCATION Adamsville _____

SITE NUMBER Stream 22 (Perennial) RIVER BASIN _____

LENGTH OF STREAM REACH (ft) 1,564 LAT 40.019211 LONG -81.96256 (at downstream point of reach)

DATE 09/08/10 ANALYST JCD

Assessment of Factors Affecting Attainment of Use (Physical Habitat, Biological, Chemical, Economic)

Physical Habitat

1. DRAINAGE AREA (acres and/or sq. mi.) _____

2. STREAM CHANNEL MODIFICATIONS: Yes No

If Yes, explain: _____

3. Substrate

TYPE		PERCENT		TYPE		PERCENT
BLDR SLABS				SILT		
BOULDER (>256 mm)		10		LEAF PACK/WOODY DEBRIS		10
BEDROCK		10		FINE DETRITUS		
COBBLE (65-256 mm)		20		CLAY or HARDPAN		
GRAVEL (2-64 mm)		25		MUCK		
SAND (<2 mm)		25		ARTIFICIAL		

4. Maximum Pool Depth (cm) 8

5. Average Bank Full Width (M) 1.4

6. RIPARIAN ZONE AND FLOODPLAIN QUALITY (NOTE: River Left (L) and Right ® as looking downstream)

RIPARIAN WIDTH (Per Bank)				FLOODPLAIN QUALITY Canopy (% open): _____ (Most Predominant Per Bank)				
L	R			L	R			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Wide >10m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m	<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

7. FLOW

Baseline Information:

Base Flow Conditions? Yes No

Quantity: _____

Date of last precipitation: _____

Elevated Turbidity? Yes No

