Site: Poston-Lick Wet 8	Rater(s): Tim Walters	Date: Jul 2015

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
2	0.3 to < 3 acres (012 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)

Approximated.
0.009 acre within corridor

Metric 2. Upland buffers and surrounding land use.

9 (max 14 pts.) | 11 (subtotal)

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 perimeter (7)
4	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)
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)

Metric 3. Hydrology.

13 (max 30 pts.) | 24 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
5	Recovered (7)
x	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	ditch		point source (nonstormwater)
	tile	x	filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

13 (max 20 pts.) | 37 (subtotal)

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)

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

	Excellent (7)
	Very good (6)
	Good (5)
4	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)
6	Recovered (6)
	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

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

37
subtotal this page

Site: Poston-Lick Wet 8	Rater(s): Tim Walters	Date: Jul 2015

37
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 37 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

5 max 20 pts. | 42 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 7/22/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP18

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [X]	Depth (inches):
Water Table Present?	Yes [ ]	No [X]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [X]	Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP18

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Panicum clandestinum	15		FAC
2. Impatiens capensis	40	yes	OBL
3. Scirpus cyperinus	20	yes	FACW
4. Verbesina alternifolia	10		FACW
5. Carex vulpinoidea	10		FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP18

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2						Clay loam	
3-14	10YR 4/1		10YR 5/6	35			Loamy clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 9	Rater(s): Tim Walters	Date: Jul 2015

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
0.016 acre within corridor

Metric 2. Upland buffers and surrounding land use.

9 (max 14 pts.) | 10 (subtotal)

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 perimeter (7)
4	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)
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)

Metric 3. Hydrology.

11 (max 30 pts.) | 21 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	ditch		point source (nonstormwater)
x	tile	x	filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 28 (subtotal)

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

	None or none apparent (4)
	Recovered (3)
2	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)
2	Poor to fair (2)
	Poor (1)

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

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

Check all disturbances observed

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

28
subtotal this page

Site: Poston-Lick Wet 9	Rater(s): Tim Walters	Date: Jul 2015

28
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 28 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 31 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 7/22/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP22

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [X] Water Marks (B1)
- [X] Sediment Deposits (B2)
- [X] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [X] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [X] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [X] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [X] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches):

Water Table Present? Yes [ ] No [X] Depth (inches):

Saturation Present? (includes capillary fringe) Yes [ ] No [X] Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP22

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Viburnum lentago	20	yes	FACW
2. Salix exigua	40	yes	OBL
3. Acer saccharinum	5		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Leersia oryzoides	45	yes	OBL
2. Eupatorium perfolatum	10	yes	FACW
3. Lobelia cardinalis	5		FACW
4. Scirpus cyperinus	10	yes	FACW
5. Impatiens capensis	10	yes	FACW
6. Bidens frondosa	10	yes	OBL
7. Alisma subcordatum	5		OBL
8.			
9.			
10.			
11.			
12.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP22

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/1		10YR 5/6	5			Sandy clay loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 10	Rater(s): Tim Walters	Date: Jul 2015

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
3	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
0.406 acre within corridor

Metric 2. Upland buffers and surrounding land use.

12 (max 14 pts.) | 15 (subtotal)

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 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)
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)

Metric 3. Hydrology.

24 (max 30 pts.) | 39 (subtotal)

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

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

3b. Connectivity. Score all that apply.

1	100 year floodplain (1)
	Between stream/lake and other human use (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)
2	0.4 to 0.7m (15.7 to 27.6in) (2)
	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

4	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.

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

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

16.5 (max 20 pts.) | 55.5 (subtotal)

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

4	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)
5	Good (5)
	Moderately good (4)
	Fair (3)
	Poor to fair (2)
	Poor (1)

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

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

55.5
subtotal this page

Site: Poston-Lick Wet 10	Rater(s): Tim Walters	Date: Jul 2015

55.5
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 55.5 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

14 max 20 pts. | 69.5 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
3	Shrub
2	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
3	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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

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

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 11	Rater(s): Tim Walters	Date: Jul 2015

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
0.011 acre within corridor

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 5 (subtotal)

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 perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
1	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), 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)

Metric 3. Hydrology.

11 (max 30 pts.) | 16 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	ditch		point source (nonstormwater)
x	tile	x	filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 23 (subtotal)

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

	None or none apparent (4)
	Recovered (3)
2	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)
2	Poor to fair (2)
	Poor (1)

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

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

Check all disturbances observed

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

23
subtotal this page

Site: Poston-Lick Wet 11	Rater(s): Tim Walters	Date: Jul 2015

23
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 23 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 26 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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

26 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 9/2/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP26

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [x] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [X]	Depth (inches):
Water Table Present?	Yes [ ]	No [X]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [X]	Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP26

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Echinochloa muricata	15		FACW
2. Kummerowia stipulacea	30	yes	FACU;
3. Eupatorium perfoliatum	10		FACW
4. Scirpus hattorianus	15		OBL
5. Juncus anthelatus	5		FACW
6. Microstegium vimineum	25	yes	FAC
7. Alisma subcordatum	5		OBL
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP26

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/4		10YR 5/8	30			Silty loam	
4-13	10YR 5/1		10YR 4/6	20			clay loam	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 12	Rater(s): Tim Walters	Date: Jul 2015

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
0.013 acre within corridor

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 5 (subtotal)

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

in road

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), 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)

Metric 3. Hydrology.

11 (max 30 pts.) | 16 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	ditch		point source (nonstormwater)
	tile	x	filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 23 (subtotal)

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

	None or none apparent (4)
	Recovered (3)
2	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)
2	Poor to fair (2)
	Poor (1)

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

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

Check all disturbances observed

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

23
subtotal this page

Site: Poston-Lick Wet 12	Rater(s): Tim Walters	Date: Jul 2015

23
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 23 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

4 max 20 pts. | 27 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 9/2/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP29

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [X] Sediment Deposits (B2)
- [X] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [X] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [X] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [X] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [X] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches):

Water Table Present? Yes [ ] No [X] Depth (inches):

Saturation Present? (includes capillary fringe) Yes [ ] No [X] Depth (inches):

Wetland Hydrology Present? **Yes** [X] **No** [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP29

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Cephalanthus occidentalis	10	yes	OBL
2. Alnus glutinosa	5	yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Euthamia graminifolia	20	yes	FAC
2. Vernonia gigantea	10		FACU;
3. Rubus allegheniensis	5		FACU
4. Solidago canadenis	5		FACU
5. Polygonum punctatum	15	yes	OBL
6. Elymus virginicus	10		FACW
7. Carex vulpinoidea	10		FACW
8. Onoclea sensibilis	15	yes	OBL
9.			
10.			
11.			
12.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes [x] No [ ]

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP29

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2		10YR 5/8	5			Silty loam	
			10YR 4/1	5				

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 13	Rater(s): Tim Walters	Date: Jul 2015

Metric 1. Wetland Area (size).

4 (max 6 pts.) | 4 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
4	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
2.832 acre within corridor

Metric 2. Upland buffers and surrounding land use.

10 (max 14 pts.) | 14 (subtotal)

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 perimeter (7)
5	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)
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)

Metric 3. Hydrology.

30 (max 30 pts.) | 44 (subtotal)

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

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

3b. Connectivity. Score all that apply.

1	100 year floodplain (1)
	Between stream/lake and other human use (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.

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

on/saturation. Score one or dbl check.

4	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.

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

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

16.5 (max 20 pts.) | 60.5 (subtotal)

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

4	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)
5	Good (5)
	Moderately good (4)
	Fair (3)
	Poor to fair (2)
	Poor (1)

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

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

60.5
subtotal this page

Site: Poston-Lick Wet 13	Rater(s): Tim Walters	Date: Jul 2015

60.5
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 60.5 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

16 max 20 pts. | 76.5 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
3	Emergent
3	Shrub
2	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
4	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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

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

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/6/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP31

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [X] Sediment Deposits (B2)
- [X] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [X] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [X] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [X] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [X] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches):

Water Table Present? Yes [ ] No [X] Depth (inches):

Saturation Present? (includes capillary fringe) Yes [ ] No [X] Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP31

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Scirpus hattorianus	80	yes	OBL
2. Aster lanceolatus	5		FACW
3. Panicum clandestinum	15		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP31

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2		10YR 5/8	5			Silty loam	
			10YR 4/1	5				

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 14	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
0.009 acre within corridor

Metric 2. Upland buffers and surrounding land use.

3 (max 14 pts.) | 3 (subtotal)

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 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)
0	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

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

in road

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	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)

Metric 3. Hydrology.

7 (max 30 pts.) | 10 (subtotal)

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

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile	X	filling/grading
	dike	X	road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

8 (max 20 pts.) | 18 (subtotal)

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

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

Check all disturbances observed

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

18
subtotal this page

last revised 1 February 2001 jim

Site: Poston-Lick Wet 14	Rater(s): Tim Walters	Date: Oct 2015

18
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 18 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

4 max 20 pts. | 22 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
1	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

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

22 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/6/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP32

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [x] Sediment Deposits (B2)
- [x] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [x] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [X]	Depth (inches):
Water Table Present?	Yes [ ]	No [X]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [X]	Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP32

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Echinochloa muricata	30	yes	FACW
2. Carex vulpinoidea	20	yes	FACW
3. Juncus effusus	5		OBL
4. Scirpus hattorianus	10		OBL
5. Polygonum punctatum	5		OBL
6. Polygonum aviculare	10		UPL
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP32

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2		10YR 5/8	5			Silty loam	
			10YR 4/1	5				

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 15	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
3	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
1.078 acre within corridor

Metric 2. Upland buffers and surrounding land use.

3 (max 14 pts.) | 6 (subtotal)

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 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)
0	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), 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)

Metric 3. Hydrology.

10 (max 30 pts.) | 16 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	ditch		point source (nonstormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

9.5 (max 20 pts.) | 25.5 (subtotal)

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

	None or none apparent (4)
	Recovered (3)
2	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)
3	Fair (3)
	Poor to fair (2)
	Poor (1)

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

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

Check all disturbances observed

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

25.5
subtotal this page

Site: Poston-Lick Wet 15	Rater(s): Tim Walters	Date: Oct 2015

25.5
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 25.5 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

7 max 20 pts. | 32.5 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
1	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
1	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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

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

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/6/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP33

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [X] Sediment Deposits (B2)
- [X] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [X] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [X] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [X] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [X] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches):

Water Table Present? Yes [ ] No [X] Depth (inches):

Saturation Present? (includes capillary fringe) Yes [ ] No [X] Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP33

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Carex stricta	60	yes	OBL
2. Onoclea sensibilis	10		OBL
3. Rosa multiflora	10		FACU
4. Carex vulpinoidea	15		FACW
5. Phalaris arundinacea	5		FACW
6. Aster lanceolatus	5		FACW
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP33

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/1		10YR 5/6	5			Silty loam	
4-12	10YR 5/1		10YR 5/6	5			Silty loam	
			10YR 4/6	5				

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 16	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
3	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
2.089 acre within corridor

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 7 (subtotal)

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 perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
1	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), 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)

Metric 3. Hydrology.

11 (max 30 pts.) | 18 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

x	ditch		point source (nonstormwater)
	tile		filling/grading
	dike		road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

9.5 (max 20 pts.) | 27.5 (subtotal)

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

	None or none apparent (4)
	Recovered (3)
2	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)
3	Fair (3)
	Poor to fair (2)
	Poor (1)

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

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

Check all disturbances observed

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

27.5
subtotal this page

Site: Poston-Lick Wet 16	Rater(s): Tim Walters	Date: Oct 2015

27.5
subtotal first page

0 (max 10 pts.) | 27.5 (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)

6 (max 20 pts.) | 33.5 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
1	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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 categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/6/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP34

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [x] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [X]	Depth (inches):
Water Table Present?	Yes [ ]	No [X]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [ ]	No [X]	Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP34

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Leersia oryzoides	20	yes	OBL
2. Onoclea sensibilis	25	yes	OBL
3. Aster punicea	20		OBL
4. Cinna arundinacea	10		FACW
5. Boehmeria cylindrica	5		FACW
6. Carex vulpinoidea	10		FACW
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP34

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/1		10YR 5/6	5			Silty loam	
4-12	10YR 5/1		10YR 5/6	10			Silty loam	
			10YR 5/8	5				

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 17	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
2	0.3 to < 3 acres (012 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)

Approximated.
0.244 acre within corridor

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 13 (subtotal)

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 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)
x	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
4	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

14.5 (max 30 pts.) | 27.5 (subtotal)

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

on/saturation. Score one or dbl check.

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

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

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

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

12.5 (max 20 pts.) | 40 (subtotal)

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

4	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)
4	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)
x	Recovered (6)
4.5	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

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

40
subtotal this page

Site: Poston-Lick Wet 17	Rater(s): Tim Walters	Date: Oct 2015

40
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 40 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

7 max 20 pts. | 47 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
2	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
1	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/7/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP35

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [x] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [x] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches):

Water Table Present? Yes [ ] No [X] Depth (inches):

Saturation Present? (includes capillary fringe) Yes [ ] No [X] Depth (inches):

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP35

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Salix exigua	20	yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Scirpus hattorianus	40	yes	OBL
2. Juncus effusus	20	yes	OBL
3. Carex granularis	10		OBL
4. Bidens frondosa	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP35

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1		10YR 5/6	5			Silty clay	
5-12	10YR 5/1		10YR 5/8	5			Silty clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 18	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 to <1.2ha) (2 pts)
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
1	<0.1 acres (0.04ha) (0 pts)

Approximated.
0.051 acre within corridor

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 12 (subtotal)

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 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)
x	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
4	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

11 (max 30 pts.) | 23 (subtotal)

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

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
7	Recovered (7)
	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

8 (max 20 pts.) | 31 (subtotal)

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)

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

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

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

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

Check all disturbances observed

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

31
subtotal this page

Site: Poston-Lick Wet 18	Rater(s): Tim Walters	Date: Oct 2015

31
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 31 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 34 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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 **GRAND TOTAL (max 100 pts)**

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 19	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
	0.3 to < 3 acres (012 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)

Approximated.
0.149 acre within corridor

Metric 2. Upland buffers and surrounding land use.

9 (max 14 pts.) | 10 (subtotal)

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 perimeter (7)
4	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)
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)

Metric 3. Hydrology.

16 (max 30 pts.) | 26 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
2	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)
7	Recovered (7)
	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

10 (max 20 pts.) | 36 (subtotal)

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)

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

	Excellent (7)
	Very good (6)
	Good (5)
4	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

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

36
subtotal this page

Site: Poston-Lick Wet 19	Rater(s): Tim Walters	Date: Oct 2015

36
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 36 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 39 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
	Emergent
2	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
0	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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

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

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/8/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP37

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [X] Saturation (A3)
- [ ] Water Marks (B1)
- [X] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [X] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [X] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [X] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [X]	Depth (inches):
Water Table Present?	Yes [ ]	No [X]	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes [X]	No [ ]	Depth (inches): 10

Wetland Hydrology Present? Yes [X] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP37

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. Salix exigua	10	yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Lysimachia nummularia	60	yes	OBL
2. Polygonum punctatum	15	yes	OBL
3. Aster puniceus	10		OBL
4. Cyperus odoratus	10		OBL
5. Juncus effusus	10		OBL
6. Leersia oryzoides	15	yes	OBL
7. Scirpus hattorianus	5		OBL
8.			
9.			
10.			
11.			
12.			
	125 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP37

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1		10YR 5/8	5			Silty loam	
5-14	10YR 5/1		10YR 5/6	5			Silty clay	

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: Poston-Lick Wet 20	Rater(s): Tim Walters	Date: Oct 2015

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1 ha) (4 pts)
	3 to <10 acres (1.2 to <4 ha) (3 pts)
2	0.3 to < 3 acres (012 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)

Approximated.
0.017 acre within corridor

Metric 2. Upland buffers and surrounding land use.

9 (max 14 pts.) | 11 (subtotal)

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 perimeter (7)
4	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)
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)

Metric 3. Hydrology.

17 (max 30 pts.) | 28 (subtotal)

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

	High pH groundwater (5)
	Other groundwater (3)
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)
	0.4 to 0.7m (15.7 to 27.6in) (2)
1	<0.4m (<15.7in) (1)

on/saturation. Score one or dbl check.

	Semi- to permanently inundated/saturated (4)
3	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)
7	Recovered (7)
	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

	ditch		point source (nonstormwater)
	tile		filling/grading
	dike	x	road bed/RR track
	weir		dredging
	stormwater input		Other:

Metric 4. Habitat Alteration and Development.

9 (max 20 pts.) | 37 (subtotal)

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)

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

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
3	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)
3	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

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

37
subtotal this page

Site: Poston-Lick Wet 20	Rater(s): Tim Walters	Date: Oct 2015

37
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 37 subtotal

Check all that apply and score as indicated.

	Bog (10)
	Fen (10)
	Old growth forest (10)
	Mature forested wetland (5)
	Lake Erie coastal/tributary wetland -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)

Metric 6. Plant communities, interspersion, microtopography.

6 max 20 pts. | 43 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

	Aquatic bed
2	Emergent
2	Shrub
	Forest
	Mudflats
	Open Water
	Other_____

6b. Horizontal (plan view) Interspersion.
Score only one.

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
1	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)
0	Nearly absent <5% cover (0)
	Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegatation 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 in 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

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

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Poston - Lick City/County: Athens Sampling Date: 10/8/2015

Applicant/Owner: AEP State: Ohio Sampling Point: SP38

Investigator(s): Tim Walters, Doug Longpre Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):

Subregion (LRR or MLRA): LRR N126 Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [X] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [X] No [ ]

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [X] No [ ]
Hydric Soil Present?	Yes [X]	No [ ]	
Wetland Hydrology Present?	Yes [X]	No [ ]	

Remarks: Community type:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [x] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches):

Water Table Present? Yes [ ] No [X] Depth (inches):

Saturation Present? (includes capillary fringe) Yes [ ] No [X] Depth (inches):

Wetland Hydrology Present? **Yes** [X] **No** [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: SP38

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. Scirpus hattorianus	60	yes	OBL
2. Phleum pratense	20	yes	FACU
3. Vernonia gigantea	20	yes	FACW
4. Leersia oryzoides	5		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	125 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

APPENDIX D

Agency Correspondences

From:	Ann M. Stevens
Sent:	Monday, April 13, 2015 4:48 PM
To:	'obdrequest@dnr.state.oh.us'
Subject:	Natural Heritage Research, Poston-Lick 138kV Transmission line, Athens, Vinton & Jackson Counties, Ohio
Attachments:	Poston Lick Natural Heritage.pdf; Poston - Lick Location Map.pdf; Poston - Lick.zip

To whom it may concern:

We are requesting a Natural Heritage database research in preparation for an application to the Ohio Power Siting Board for an electrical transmission line Letter of Notification.

I have included a location map and shapefile for use with GIS.

Thank you very much for your assistance. Please feel free to contact me if you have any questions.

Ann M. Stevens, RLA*, PMP
* Michigan, Ohio, Indiana, Pennsylvania & Illinois
Project Manager
Environmental Services & Licensing

O (517) 768-7127
C (517) 879-7471
Deliveries to: 2700 West Argyle Street, Jackson, MI 49202
Mail to: PO Box 1124, Jackson, MI 49204
www.cai-engr.com

COMMONWEALTH ASSOCIATES, INC.
Employee Owned and Managed since 1988

NATURAL HERITAGE DATA REQUEST FORM

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
OHIO NATURAL HERITAGE PROGRAM
2045 MORSE RD., BLDG. G-3
COLUMBUS, OHIO 43229-6693
PHONE: 614-265-6452; EMAIL: obdrequest@dnr.state.oh.us

INSTRUCTIONS:
Please complete both pages of this form, sign and return it to the address or email address above along with: **(1)** a brief letter describing your project, and **(2)** a map detailing the boundaries of your project site. A copy of the pertinent portion of a USGS 7.5 minute topographic map is preferred but other maps are acceptable. Data requests will be competed within approximately 30 days. There is currently no charge for data requests.

WHAT WE PROVIDE: The Natural Heritage Database is the most comprehensive source of information on the location of Ohio's rare species and significant natural features. Records for the following will be provided: plants and animals (state and federal listed species), high quality plant communities, geologic features, breeding animal concentrations and unprotected significant natural areas. We also provide locations for managed areas including federal, state, county, local and non-profit sites, as well as state and national scenic rivers. A minimum one mile radius around the project site will automatically be searched. Because the data is sensitive information, it is our policy to provide only the data needed to complete your project. The information is generally provided without comment on potential impacts to the species and their habitats and therefore does not constitute coordination with ODNR under NEPA, the Fish & Wildlife Coordination Act or the Federal Water Pollution Control Act. If your project requires ODNR coordination, please submit it for a more extensive environmental review by contacting John Kessler in the Office of Real Estate at 614-265-6621 or john.kessler@dnr.state.oh.us

****

Date: 4/13/2015 Company name: Commonwealth Associates, Inc.

Name of person response letter should be addressed to: Mr. ☐ Ms. ☒ Ann M. Stevens

Address: 2700 West Argyle Street
Jackson, Mi 49202

City/State/Zip:

Phone: 517-728-7127 Fax: 517-788-3003

E-mail address: amstevens@cai-engr.com

Project Name: Poston-Lick 138kV Transmission Line

Project Number:

Project Site Address: Linear transmission line project, no address

Project County: Athens, Vinton & Jackson Counties, Ohio

Project City/Township: Lick, Wellston, Clinton, Vinton, Madison, Knox, Waterloo, Dover, York

Project site is located on the following USGS 7.5 minute topographic quad(s):

Nelsonville, The Plains, Mineral, Val Mills, McArthur, Wilkesville, Jackson

Project Latitude and Longitude if available (decimal degrees is preferred):
The Poston Station at the north end of the project is -82.179422/39.382517
The Lick Station at the south end of the project is -82.609188/39.043682

Description of work to be performed at the project site: Re-building an electrical transmission line on existing right of way.

How do you want your data reported? (Both formats provide exactly the same data. The only difference is in the format of our response. The manual search is most appropriate for small scale projects or for those who do not have GIS capabilities. Please choose only one option.)

Printed list and map (manual search) _____ **OR** GIS shapefile (computer search) GIS Shapefile

Additional information you require: Locations of rare plants, and animals, eagle nests, natural areas, and bat habitat within 5 miles of project.

How will the information be used? Project Planning

I certify that data supplied by the Ohio Natural Heritage Program will not be published without crediting the ODNR Division of Wildlife as the source of the material. In addition, I certify that electronic datasets will not be distributed to others without the consent of the Division of Wildlife, Ohio Natural Heritage Program.

Signature 

Date: 4/13/2015

DNR 5203
REV 3/2013

From: DNR obdrequest <obdrequest@dnr.state.oh.us>
Sent: Tuesday, April 14, 2015 9:32 AM
To: Ann M. Stevens
Subject: RE: Natural Heritage Research, Poston-Lick 138kV Transmission line, Athens, Vinton & Jackson Counties, Ohio
Attachments: conservation_sites.dbf; conservation_sites.prj; conservation_sites.sbn; conservation_sites.sbx; conservation_sites.shp; conservation_sites.shx; data.dbf; data.prj; data.sbn; data.sbx; data.shp; data.shp.xml; data.shx; managed_areas.dbf; managed_areas.prj; managed_areas.sbn; managed_areas.sbx; managed_areas.shp; managed_areas.shx; sensitive_species.dbf; sensitive_species.prj; sensitive_species.sbn; sensitive_species.sbx; sensitive_species.shp; sensitive_species.shx; poston-lick letter.pdf

Ann,
Attached please find your response.
Debbie

Debbie Woischke
Ohio Natural Heritage Database
ODNR Division of Wildlife
2045 Morse Rd., G-3
Columbus, OH 43229
Phone: 614-265-6818

Ohio Division of Wildlife
Scott Zody, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

April 14, 2015

Ann Stevens
Commonwealth Associates, Inc.
PO Box 1124
Jackson, MI 49204

Dear Ms. Stevens,

Per your request, I have e-mailed you a set of shapefiles with our Natural Heritage Program data for the Poston-Lick 138 kV Transmission Line Rebuild project, including a one mile radius, in Athens, Vinton and Jackson County, Ohio, and on the Nelsonville, The Plains, Mineral, Vales Mills, McArthur, Mulga and Wellston Quads. This data will not be published or distributed beyond the scope of the project description on the data request form without prior written permission of the Natural Heritage Program.

Records included in the data layer may be for rare and endangered plants and animals, geologic features, high quality plant communities and animal assemblages. Fields included are scientific and common names, state and federal statuses, as well as managed area and date of the most recent observation. State and federal statuses are defined as: E = endangered, T = threatened, P = potentially threatened, SC = species of concern, SI = special interest, FE = federal endangered, FT = federal threatened and A = recently added to inventory, status not yet determined.

In addition to the species given in the data shapefile, there is a record for one or more sensitive species within your project study area. Please be aware that we do not give out specific locations for sensitive species, therefore a generalized location is shown in the sensitive species shapefile.

The managed areas layer includes state, federal and county lands, as well as areas owned by non-profits, museums and other entities. Managed areas are sites under formal protection for their natural resources. Please be aware that this layer may not be complete and we are continually updating it as new information becomes available to us.

The conservation sites layer shows areas deemed by the Natural Heritage Program to be high quality sites not currently under formal protection. They may, for example, harbor one or more rare species, be an outstanding example of a plant community, or have geologically significant features, etc. These sites may be in private ownership and our listing of them does not imply permission for access.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a

statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke
Ohio Natural Heritage Program

From:	Ann M. Stevens
Sent:	Monday, April 13, 2015 2:54 PM
To:	'john.kessler@dnr.state.oh.us'; Tebbe, Sarah (Sarah.Tebbe@dnr.state.oh.us)
Cc:	'Ronald M Howard - AEP (rmhoward@aep.com)'
Subject:	Environmental Review Coordination for Ohio Siting Board application, Poston-Lick 138kV Transmission line, Athens, Vinton & Jackson Counties, Ohio
Attachments:	Poston - Lick.zip; Poston - Lick Location Map.pdf

John:

We are requesting an environmental review by the ODNR in preparation for an application to the Ohio Power Siting Board for an electrical transmission line Letter of Notification.

Our client American Electric Power is proposing to re-build an above ground electric transmission line in, Athens, Vinton and Jackson Counties, Ohio. The project extends approximately 35 miles on existing 100 foot wide right of way. Two segments of the line will be rebuilt while the middle portion now fed by the recently completed Elk line will be abandoned. The portion of line to be rebuilt is approximately 22 miles and extends from the Poston Station to Structure 72 (15 miles) and from Structure 138 to the Lick Station (7 miles). The segment of line between US 50 and State Route 184 (Kisor Road), Structures 72 and 138, will be abandoned (approximately 13 miles). The transmission line right of way has been semi-routinely maintained since construction in 1957 and is primarily clear of trees and woody vegetation. Limited tree clearing will be necessary for construction access and to meet current safety standards. No in-water work is proposed.

The Latitude/Longitude of the Poston Station at the north end of the project is -82.179422/39.382517
The Latitude/Longitude of the Lick Station at the south end of the project is -82.609188/39.043682

We have also requested information from the Ohio Natural Heritage Program, Division of Wildlife, and the US Fish & Wildlife Service. I have included a location map and shapefile for use with GIS.

I recognize that any information provided to the Ohio Department of Natural Resources constitutes a public record subject to disclosure.

Thank you very much for your assistance. Please feel free to contact me if you have any questions.

Ann M. Stevens, RLA, PMP
Project Manager
Environmental Services & Licensing

O (517) 768-7127
C (517) 879-7471
Deliveries to: 2700 West Argyle Street, Jackson, MI 49202
Mail to: PO Box 1124, Jackson, MI 49204
www.cai-engr.com

COMMONWEALTH ASSOCIATES, INC.

EMPLOYEE-OWNED AND MANAGED FOR 25 YEARS

From: Tebbe, Sarah <sarah.tebbe@dnr.state.oh.us>
Sent: Monday, May 18, 2015 1:31 PM
To: Ann M. Stevens
Cc: Kessler, John; 'Sharon Brown' (srbrown@D30043642.purehost.com)
Subject: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments
Attachments: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments.pdf; Approved Herpetologists.pdf

Hi Ann,

Please see the attached comments.

Thanks,

Sarah Tebbe
Office of Real Estate
Ohio Department of Natural Resources
2045 Morse Rd., Columbus, OH 43229-6605
614 -265-6397

Office of Real Estate
Paul R. Baldridge, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

May 18, 2015

Ann M. Stevens
Commonwealth Associates, Inc.
2700 West Argyle Street
Jackson, Michigan 49204

Re: 15-307; Environmental Review Coordination for Ohio Siting Board application, Poston-Lick 138kV Transmission line

Project: The proposed project involves the re-building of approximately 35 miles of an above ground electric transmission line.

Location: The project is located in Athens and Vinton Counties, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data at or within a one mile radius of the project area:

Butterfly-pea (*Clitoria mariana*), P
Bartley's reed grass (*Calamagrostis porteri ssp. insperata*), T
Pedestal rock
Blunt-leaved milkweed (*Asclepias amplexicaulis*), P
Carolina thistle (*Cirsium carolinianum*), T
Mixed mesophytic forest plant community
Buttonbush shrub swamp plant community
Green adder's-mouth (*Malaxis unifolia*), P
Hemlock-hardwood forest plant community
Floodplain forest plant community
Large marsh st. john's-wort (*Triadenum tubulosum*), T
Straw sedge (*Carex straminea*), P
Oak-pine forest plant community
Natural bridge or arch
Mixed emergent marsh plant community
Spotted pondweed (*Potamogeton pulcher*), E

Fringe-tree (*Chionanthus virginicus*), P
Ashy sunflower (*Helianthus mollis*), T
Round-fruited hedge-hyssop (*Gratiola virginiana*), T
Short-fringed sedge (*Carex crinita var. brevicrinis*), T
Eastern box turtle (*Terrapene carolina*), SC
Tennessee pondweed (*Potamogeton tennesseensis*), T
White milkweed (*Asclepias variegate*), P
Dwarf hawthorn (*Crataegus uniflora*), P
Cerulean warbler (*Dendroica cerulean*), SC
Chalky ramalina (*Ramalina pollinaria*), T
Wild kidney bean (*Phaseolus polystachios*), P
Timber rattlesnake (*Crotalus horridus*), E, FSC
Jackson County Line Wildlife Area – ODNR Division of Wildlife
Vinton Furnace State Wildlife Area – ODNR Division of Wildlife
Waterloo Wildlife Area – ODNR Division of Wildlife
Vinton Furnace Experimental Forest – ODNR Division of Forestry
Zaleski State Forest – ODNR Division of Forestry
Wayne National Forest – US Forest Service
Hamley Run Floodplain Forest Conservation Site
Lick Swamp Conservation Site
Little Raccoon Creek Marsh Conservation Site

We are unaware of any animal assemblages, scenic rivers, state nature preserves, state or national parks or national wildlife refuges within the project area. The review was performed on the project area you specified in your request as well as an additional one mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; A = species recently added to state inventory, status not yet determined; X = presumed extirpated in Ohio; FE = federal endangered, FT = federal threatened, FSC = federal species of concern, FC = federal candidate species

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

A portion of the project route crosses Vinton Furnace Wildlife Area. If existing easement documents do not cover the necessary access at Vinton Furnace Wildlife Area, a Right-of-Entry may be needed. Please contact John Sambuco, DOW Federal Lands Coordinator, at 614-265-6613.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as

potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the sheepnose (*Plethobasus cyphyus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the pink mucket (*Lampsilis orbiculata*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the little spectaclecase (*Villosa lienosa*), a state endangered mussel, and the fawnsfoot (Truncilla donaciformis), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact these species.

The project is within the range of the Ohio lamprey (*Ichthyomyzon bdellium*), a state endangered fish. The DOW recommends no in-water work in perennial streams at least April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact this species.

The Natural Heritage Database has records within one mile of the project route for the timber rattlesnake (*Crotalus horridus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the proximity of records, and the potential for suitable habitat to be present along the project route and within the vicinity of the project route, the DOW recommends that a habitat suitability survey be conducted to determine if suitable timber rattlesnake habitat is present along the project route. If suitable habitat is found to be present along the project route, the DOW recommends that a presence/absence survey be conducted. The DOW recommends that habitat suitability surveys and presence/absence surveys be conducted by one of the herpetologists from the provided "Approved Herpetologists" list. The results of any habitat suitability survey and any subsequent presence/absence survey can be submitted to Nathan Reardon, DOW Compliance Coordinator, at Nathan.reardon@dnr.state.oh.us.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat along the project route and within the vicinity of the project route, this project is not likely to impact this species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the black bear (Ursus americanus), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

The project is within the range of the American burying beetle (*Nicrophorus americanus*) a state and federal endangered beetle. Due to the habitat requirements of this species, the project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Forestry: The Division of Forestry offers the following comments.

The proposed project will occur in part on Zaleski and Vinton Furnace State Forests (Vinton County), within an existing ROW. The contractor has stated that they will work with ODNR Division of Forestry state forest staff as the project progresses. ODNR Division of Forestry recommends limiting any tree removal to the existing right-of-way as much as practical and using all available means to limit erosion.

If access or tree removal beyond the existing easement is required, the party involved must request it through the state forest manager. Pursuant to OAC, the chief of the Division of Forestry can waive forest rules through a special use permit. The Division recommends that the applicant work with state forest staff prior to the submission of the application to ensure completeness. A particular focus for this project will be ensuring any access minimally impacts any long-term research projects. Special use permits are for temporary access only; there is no guarantee of any permanent legal access beyond the existing easement. The Division requires that an application be submitted at least 30 days prior to the planned event.

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us

Approved Herpetologist

Kent Bekker
542 Centerfield Drive
Maumee, Ohio 43537
kbekker@gmail.com
419.376.4384

Jeff Davis
625 Crescent Road
Hamilton, Ohio 45013
ohiofrogs@gmail.com
513.868.3154

Gregory Lipps, LLC
1473 County Road 5-2
Delta, Ohio 43515-9657
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419.376.3441

Tim O. Matson
5696 Matson Rd
Geneva, OH 44041
tmatson@cmnh.org
440.417.8196

Ralph Pfingsten
347 Pineview Circle
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440.243.7568

Kristin Stanford
OSU Stone Laboratory
P.O. Box 119
Put-in-Bay, OH 43456
theislandsnakelady@yahoo.com
419.285.1847

Doug Wynn
241 Chase Street, Apt. A3L
Russell's Point, Ohio 43348
Sistrurus@aol.com
614.306.0313

Douglas A. Longpre

From: Douglas A. Longpre
Sent: Wednesday, November 04, 2015 12:02 PM
To: 'Tebbe, Sarah'
Cc: Mark E. Walker
Subject: FW: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments
Attachments: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments.pdf; Approved Herpetologists.pdf

Hi Sarah,

Ann left Commonwealth at the end of May, Mark Walker has taken over as the new Environmental Project Manager, and I am in the process of putting together the T&E Species report to go to the OPSB. In working my way through the documents to be included with the report I noticed that the Office of Real Estate response letter, included in your e-mail to Ann, had the project location as being in Athens and Vinton Counties but not in Jackson County. Our request to the ODNR (4/13/15) included Athens, Vinton, and Jackson Counties and the response from Debbie Woischke (4/14/15), including GIS files and a letter regarding use of the files, covered all three counties. Do you think "Jackson" was accidentally left out of the text? Your letter, as well as the GIS files from NHP, include Lick Swamp, Little Raccoon Creek Marsh, Jackson County Line Wildlife Area, Ashy Sunflower, and Spotted Pondweed - all within Jackson County. Weather it is just a text issue or a review issue would it be possible to get a revised letter that includes Jackson?

Thank you,

Doug

Douglas A. Longpre
Environmental Specialist
Transmission & Distribution Line Engineering
Environmental Services & Licensing

O (517) 796-5752
Deliveries to: 2700 West Argyle Street, Jackson, MI 49202
Mail to: PO Box 1124, Jackson, MI 49204
www.cai-engr.com

COMMONWEALTH ASSOCIATES, INC.
EMPLOYEE OWNED AND MANAGED SINCE 1988

From: Tebbe, Sarah [mailto:sarah.tebbe@dnr.state.oh.us]
Sent: Monday, May 18, 2015 1:31 PM
To: Ann M. Stevens
Cc: Kessler, John; 'Sharon Brown' (srbrown@D30043642.purehost.com)
Subject: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments

Hi Ann,

Please see the attached comments.

Thanks,

Sarah Tebbe
Office of Real Estate
Ohio Department of Natural Resources
2045 Morse Rd., Columbus, OH 43229-6605
614 -265-6397

Douglas A. Longpre

From: sarah.tebbe@dnr.state.oh.us
Sent: Wednesday, November 04, 2015 12:23 PM
To: Douglas A. Longpre
Subject: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments
Attachments: 15-307; CAI - Environmental Review Coordination for Ohio Siting Board application Poston-Lick 138kV Transmission line Comments.pdf

Mr. Longpre,

Attached is the revised comment letter. Sorry for any inconvenience!

Thanks!

Sarah Tebbe
Ohio Department of Natural Resources
Office of Real Estate
2045 Morse Road
Columbus, Ohio 43229
(614) 265-6397

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR JAMES ZEHRINGER, DIRECTOR

Office of Real Estate
Paul R. Baldridge, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

November 4, 2015

Ann M. Stevens
Commonwealth Associates, Inc.
2700 West Argyle Street
Jackson, Michigan 49204

Re: 15-307; Environmental Review Coordination for Ohio Siting Board application, Poston-Lick 138kV Transmission line

Project: The proposed project involves the re-building of approximately 35 miles of an above ground electric transmission line.

Location: The project is located in Athens, Jackson, and Vinton Counties, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data at or within a one mile radius of the project area:

Butterfly-pea (*Clitoria mariana*), P
Bartley's reed grass (*Calamagrostis porteri ssp. insperata*), T
Pedestal rock
Blunt-leaved milkweed (*Asclepias amplexicaulis*), P
Carolina thistle (*Cirsium carolinianum*), T
Mixed mesophytic forest plant community
Buttonbush shrub swamp plant community
Green adder's-mouth (*Malaxis unifolia*), P
Hemlock-hardwood forest plant community
Floodplain forest plant community
Large marsh St. john's-wort (*Triadenum tubulosum*), T
Straw sedge (*Carex straminea*), P
Oak-pine forest plant community
Natural bridge or arch
Mixed emergent marsh plant community
Spotted pondweed (*Potamogeton pulcher*), E

Fringe-tree (*Chionanthus virginicus*), P
Ashy sunflower (*Helianthus mollis*), T
Round-fruited hedge-hyssop (*Gratiola virginiana*), T
Short-fringed sedge (*Carex crinita var. brevicrinis*), T
Eastern box turtle (*Terrapene carolina*), SC
Tennessee pondweed (*Potamogeton tennesseensis*), T
White milkweed (*Asclepias variegate*), P
Dwarf hawthorn (*Crataegus uniflora*), P
Cerulean warbler (*Dendroica cerulean*), SC
Chalky ramalina (*Ramalina pollinaria*), T
Wild kidney bean (*Phaseolus polystachios*), P
Timber rattlesnake (*Crotalus horridus*), E, FSC
Jackson County Line Wildlife Area – ODNR Division of Wildlife
Vinton Furnace State Wildlife Area – ODNR Division of Wildlife
Waterloo Wildlife Area – ODNR Division of Wildlife
Vinton Furnace Experimental Forest – ODNR Division of Forestry
Zaleski State Forest – ODNR Division of Forestry
Wayne National Forest – US Forest Service
Hamley Run Floodplain Forest Conservation Site
Lick Swamp Conservation Site
Little Raccoon Creek Marsh Conservation Site

We are unaware of any animal assemblages, scenic rivers, state nature preserves, state or national parks or national wildlife refuges within the project area. The review was performed on the project area you specified in your request as well as an additional one mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; A = species recently added to state inventory, status not yet determined; X = presumed extirpated in Ohio; FE = federal endangered, FT = federal threatened, FSC = federal species of concern, FC = federal candidate species

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

A portion of the project route crosses Vinton Furnace Wildlife Area. If existing easement documents do not cover the necessary access at Vinton Furnace Wildlife Area, a Right-of-Entry may be needed. Please contact John Sambuco, DOW Federal Lands Coordinator, at 614-265-6613.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as

potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the sheepnose (*Plethobasus cyphyus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the pink mucket (*Lampsilis orbiculata*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the little spectaclecase (*Villosa lienosa*), a state endangered mussel, and the fawnsfoot (Truncilla donaciformis), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact these species.

The project is within the range of the Ohio lamprey (*Ichthyomyzon bdellium*), a state endangered fish. The DOW recommends no in-water work in perennial streams at least April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact this species.

The Natural Heritage Database has records within one mile of the project route for the timber rattlesnake (*Crotalus horridus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the proximity of records, and the potential for suitable habitat to be present along the project route and within the vicinity of the project route, the DOW recommends that a habitat suitability survey be conducted to determine if suitable timber rattlesnake habitat is present along the project route. If suitable habitat is found to be present along the project route, the DOW recommends that a presence/absence survey be conducted. The DOW recommends that habitat suitability surveys and presence/absence surveys be conducted by one of the herpetologists from the provided "Approved Herpetologists" list. The results of any habitat suitability survey and any subsequent presence/absence survey can be submitted to Nathan Reardon, DOW Compliance Coordinator, at Nathan.reardon@dnr.state.oh.us.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat along the project route and within the vicinity of the project route, this project is not likely to impact this species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the black bear (Ursus americanus), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

The project is within the range of the American burying beetle (*Nicrophorus americanus*) a state and federal endangered beetle. Due to the habitat requirements of this species, the project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Forestry: The Division of Forestry offers the following comments.

The proposed project will occur in part on Zaleski and Vinton Furnace State Forests (Vinton County), within an existing ROW. The contractor has stated that they will work with ODNR Division of Forestry state forest staff as the project progresses. ODNR Division of Forestry recommends limiting any tree removal to the existing right-of-way as much as practical and using all available means to limit erosion.

If access or tree removal beyond the existing easement is required, the party involved must request it through the state forest manager. Pursuant to OAC, the chief of the Division of Forestry can waive forest rules through a special use permit. The Division recommends that the applicant work with state forest staff prior to the submission of the application to ensure completeness. A particular focus for this project will be ensuring any access minimally impacts any long-term research projects. Special use permits are for temporary access only; there is no guarantee of any permanent legal access beyond the existing easement. The Division requires that an application be submitted at least 30 days prior to the planned event.

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us

From:	Ann M. Stevens
Sent:	Monday, April 13, 2015 2:33 PM
To:	'ohio@fws.gov'
Cc:	'Ronald M Howard - AEP (rmhoward@aep.com)'
Subject:	Informal consultation for Ohio Siting Board application, Poston-Lick 138kV Transmission line, Athens, Vinton & Jackson Counties, Ohio,
Attachments:	Poston - Lick Location Map.pdf; Poston - Lick.zip
Importance:	High

To Whom it May Concern:

We are requesting an informal consultation in preparation for an application to the Ohio Power Siting Board for an electrical transmission line Letter of Notification. In addition, the locations of documented bat roosts, maternity colonies, and hibernacula within 7 miles of the project area.

Our client American Electric Power is proposing to re-build an above ground electric transmission line in, Athens, Vinton and Jackson Counties, Ohio. The project extends approximately 35 miles on existing 100 foot wide right of way. Two segments of the line will be rebuilt while the middle portion now fed by the recently completed Elk line will be abandoned. The portion of line to be rebuilt is approximately 22 miles and extends from the Poston Station to Structure 72 (15 miles) and from Structure 138 to the Lick Station (7 miles). The segment of line between US 50 and State Route 184 (Kisor Road), Structures 72 and 138, will be abandoned (approximately 13 miles). The transmission line right of way has been semi-routinely maintained since construction in 1957 and is primarily clear of trees and woody vegetation. Limited tree clearing will be necessary for construction access and to meet current safety standards. No in-water work is proposed.

We will also be requesting information from the Ohio DNR. I have included a location map and shapefile for use with GIS.

Based on our review of the USFWS website, Pink mucket (E), Fanshell (E), Snuffbox mussel (E), Sheepnose mussel (E), Running buffalo clover (E), American burying beetle (E), Indiana Bat (E) and Northern Long-Eared Bat (E) are identified as a federal species in Athens, Vinton & Jackson Counties, Ohio.

If this correspondence can be forwarded to the appropriate staff to assist us in facilitating an informal consultation it would be greatly appreciated. Please let me know if the Service needs any additional information on this project. Thank you for your time and attention.

Ann M. Stevens, RLA, PMP
Project Manager
Environmental Services & Licensing

O (517) 768-7127
C (517) 879-7471
Deliveries to: 2700 West Argyle Street, Jackson, MI 49202
Mail to: PO Box 1124, Jackson, MI 49204
www.cai-engr.com

COMMONWEALTH ASSOCIATES, INC.

EMPLOYEE-OWNED AND MANAGED FOR 25 YEARS

From: Zimmermann, Susan <susan_zimmermann@fws.gov>
Sent: Monday, June 08, 2015 3:15 PM
To: Ann M. Stevens
Cc: Jennifer Finfera; Reardon, Nathan; jennifer.norris@dnr.state.oh.us; nathan.jester
Subject: Ohio Power Siting Board Application for Poston-Lick 138 kV Transmission Line
Attachments: 03E15000-2015-TA-1016.pdf

Dear Ms. Stevens,

The USFWS response to the subject project is attached.

Regards,

Susan

--
Susan C. Zimmermann
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, OH 43230
(614) 416-8993 ext. 10
(614) 416-8994 fax
http://www.fws.gov/midwest/Ohio/

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

June 8, 2015

Ms. Ann Stevens
Commonwealth Associates, Inc.
P.O. Box 1124
Jackson, MI 49204

TAILS: 03E15000-2015-TA-1016

Dear Ms. Stevens:

This is in response to your April 13, 2015 letter and additional information regarding the proposed rebuild of a 138kV above ground transmission line. The project will be located in Athens, Jackson, and Vinton Counties. The project area currently consists of a landscape of forested habitat, rural residential development, agricultural fields, and limited commercial development. The existing transmission line route is 35 miles in length. A segment in the middle will be abandoned. At the north end, 15 miles will be rebuilt and at the south end, 7 miles will be rebuilt. The 22 miles of rebuilt line will require some tree removal in the existing right-of-way (ROW).

There are no Federal wildlife refuges, wilderness areas, or Critical Habitat within the vicinity of this project. However, the transmission line does cross through both Zaleski State Forest and Vinton Furnace State Experimental Forest. The U.S. Fish and Wildlife Service (Service) encourages you to coordinate this project with the Nathan Jester of the Ohio Department of Natural Resources (ODNR) Division of Forestry at nathan.jester@dnr.state.oh.us or 740-774-1596.

You have indicated that no in-water work would be required. However, no information was provided on whether wetlands are located along the transmission line route. The Service recommends that impacts to wetlands be avoided and buffers surrounding streams and wetlands be preserved. Streams and wetlands provide valuable habitat for fish and wildlife resources. Buffers of native vegetation surrounding these systems are also important in preserving their wildlife-habitat and water quality-enhancement properties. We recommend that any proposed projects use best construction techniques to minimize erosion. Prevention of non-native, invasive plant establishment is critical in maintaining quality habitats. All disturbed areas should be mulched and re-vegetated with native plants.

Your letter indicates that the 100-foot ROW will require some tree removal. If the ROW must be maintained frequently we encourage the establishment of prairie species. Native prairie species provide valuable foraging and breeding opportunities for bird species that maintained lawn areas lack. Prairie sites can also provide nectar and host plants for native pollinators such as the monarch butterfly. Allowing the ROW to grow between maintenance activities will decrease the impact between the forest interior and the ROW. If the ROW must be mowed on an annual basis

we recommend that it be completed only once per year before March 1 or any time after July 15 to avoid seasons when ground-nesting birds are breeding.

MIGRATORY BIRD COMMENTS:
The project lies within the range of the **bald eagle** (*Haliaeetus leucocephalus*), a species protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Due to the location of eagle nests in the area no significant impacts are expected for this species. Relative to this species, this precludes the need for further action on this project as required by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

LISTED SPECIES COMMENTS:
All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

You have indicated that tree removal will be required to provide construction access and meet current safety standards. The existing ROW has been previously cleared of trees. Some young trees have become established within the ROW and will need to be removed. In addition, in the email dated April 21, 2015 you indicated that some trees that have grown into the edges of the ROW and some hazard trees outside of the ROW would be removed.

The proposed project is in the vicinity of one or more confirmed records of both Indiana bats and northern long-eared bats. Therefore, we recommend that trees ≥3 inches dbh be saved wherever possible. Because the project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat and northern long-eared bat presence in the vicinity of the project has been confirmed, clearing of trees ≥3 inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring surveys are warranted. If no caves or abandoned mines are present and tree removal is unavoidable, we recommend that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure

that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. **Please note that, because Indiana bat and northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.**

This project may require a federal permit if wetlands will be impacted. In addition, it will require permitting from the Ohio Power Siting Board. If there is a federal nexus for the project (federal funding provided, federal permits required to construct, etc.) then no tree clearing on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit to this office a determination of effects to the Indiana bat and northern long-eared bat for our review and concurrence.

The proposed project lies within the range of **running buffalo clover** (*Trifolium stoloniferum*), a federally listed endangered species. This species can be found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails. Running buffalo clover requires periodic disturbance and a somewhat open habitat to successfully flourish, but cannot tolerate full-sun, full-shade, or severe disturbance. If suitable habitat is present, we recommend that surveys for this species be conducted by a trained botanist in May or June when the plant is in flower. More information on the consultation requirements for this species can be obtained at: http://www.fws.gov/midwest/ohio/endangered_rb_clover_workshop.html

The project area lies within the range of the **American burying beetle** (*Nicrophorus americanus*) a federally listed endangered species. This insect is a generalist as far as habitat preference is concerned, meaning that it can be found in grasslands, open woodlands and brushlands. Due to the project location and minimal ground disturbance, significant impacts to this species are not expected.

The proposed project lies within the range of the **fanshell** (*Cyprogenia stegaria*), **sheepnose** (*Plethobasus cyphyus*), **pink mucket pearly mussel** (*Lampsilis abrupta*), and **snuffbox** (*Epioblasma triquetra*) mussel species. You have indicated that no in-water work is required. Therefore, due to the lack of impacts to suitable habitat, no impacts to these mussel species are expected.

PROPOSED AND CANDIDATE SPECIES COMMENTS:

The project lies within the range of the **timber rattlesnake** (*Crotalus horridus horridus*), a federal species of concern and Ohio endangered species. Your proactive efforts to conserve this species now may help avoid the need to list the species under the Endangered Species Act in the future. In Ohio, the timber rattlesnake is restricted to the un-glaciated Allegheny Plateau. Winters are spent in dens usually associated with high, dry ridges. In the fall, timber rattlesnakes return to the same den.

It may be helpful to inquire about timber rattlesnake sightings with local resource agency personnel or reliable local residents. Local herpetologists may have knowledge of historical populations as well as precise knowledge of the habits, and especially the specific, local types of habitats that may contain timber rattlesnakes.

In areas where timber rattlesnakes or their dens are known or likely to exist, clearing, construction, and maintenance activities (mowing, cutting, burning, etc.) should be avoided at least 100 feet from ridges and areas of exposed rock and should be conducted from November 1 to March 1, when timber rattlesnakes are hibernating. In addition, the Service supports the recommendation by ODNR that a habitat suitability survey be conducted for this species.

The proposed project lies within the range of the **eastern hellbender** (*Cryptobranchus a. alleganiensis*), a Federal amphibian species of concern and an Ohio endangered species. The eastern hellbender is a salamander that inhabits perennial streams with large, flat rocks. You have indicated that no in-water work is required. Therefore, due to the lack of impacts to suitable habitat, no impacts to this species are expected.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U.S. Fish and Wildlife Service's Mitigation Policy. Please note that consultation under section 7 of the ESA may be warranted for this project if suitable habitat for federally listed species may be impacted by this project. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

If you have any questions regarding this response or if you need additional information, please contact Jennifer Finfera at Extension 13.

Sincerely,

Dan Everson
Field Supervisor

cc: Nathan Jester, ODNR-DOF
Jennifer Norris, ODNR-DOW
Nathan Reardon, ODNR-DOW

Summary: Letter of Notification Part 13 of 13 electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company