Beatty Road Station Drainage Improvements, Franklin County, Ohio

Ecological Features Inventory Report



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1.0 INTRODUCTION

American Electric Power (AEP) is proposing to improve drainage around the station, install a new fence around the perimeter of the station approximately 20 feet outside the existing station fence (requires an approximately 12-foot wide temporary access road to install the new fence), and complete other station enhancements within the existing station footprint (Figures 1 and 2, Appendix A). The proposed Project study area is located on Beatty Road west of U.S. Route 62 in Grove City, Franklin County, Ohio (Figure 1, Appendix A). The proposed Project study area includes 57.9 acres and was surveyed for wetlands, waterbodies, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on February 23, 2016.

2.0 METHODS

2.1 WETLAND DELINEATION

Prior to conducting field surveys, a desktop review of the Project study area was conducted using U.S. Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) maps, and U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil surveys, and aerial imagery mapping. Stantec completed a wetland delineation in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE 2010). Wetland categories were classified using the Ohio Environmental Protection Agency's (OEPA) Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project study area (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (2002). Functional assessment of streams within the Project study area was based on completion of the OEPA's Headwater Habitat Evaluation Index (HHEI) and/or Qualitative Habitat Evaluation Index (QHEI). The centerline of each stream was identified and surveyed using a handheld sub-meter accuracy GPS unit and mapped with GIS software.

Upland drainage features are also delineated within the project boundary. These features lack a continuously defined bed, bank, and ordinary high water mark. They are shown in Appendix A – Figure 3 and examples are shown in Appendix C.



2.3 RARE SPECIES

Stantec contacted the Ohio Department of Natural Resources (ODNR), and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats within the vicinity of the Project study area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species and their habitats, Stantec walked the proposed Project study area and collected information on existing habitat within the Project study area and the potential for these habitats to be used by these species.

3.0 RESULTS

Stantec completed field surveys on February 23, 2016 for wetlands, waterbodies, and threatened and endangered species or their habitats. Figure 2 shows the delineated wetlands and drainage features identified within the Project study area and Figure 4 shows the habitats identified within the Project study area during rare, threatened, and endangered species habitat assessment surveys (Appendix A). Representative photos of the wetlands, waterbodies, and other habitats identified within the Project study area are included in Appendix C of this report (photo locations are shown on Figure 3 and Figure 4). Completed wetland determination and ORAM data forms are included in Appendix D.

3.1 TERRESTRIAL HABITAT

 Table 1. Vegetation Communities and Land Cover Found within the Beatty Road Station Drainage

 Improvements Project Study Area, Franklin County, Ohio

Vegetative Communities and Land Cover Types within the Project Study Area:	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Acres Within Project Study Area
Agriculture	Active cropland, including turf grass, inactive cropland, orchards, vineyards, or hayfields	No	31.18
Industrial Land	Extreme Disturbance/ Rural Community (dominated by opportunistic invaders or native highly tolerant taxa)	No	23.11
Open Land	Non-forested lands and scrub/shrub wetlands used for open space or pasture	No	3.16
Scrub/shrub	Shrub-dominated habitat, trees may be very scattered and less than 15% of habitat	No	0.46
		Total:	57.91



3.2 WETLANDS

Table 2. Summary of Wetland Resources Found within the Beatty Road Station Drainage Improvements Project Study Area, Franklin County, Ohio

Wetland Name	Photo Numbers	Wetland Classification ¹	ORAM Score	ORAM Category	Delineated Area (acres)	Impacted Area (acres)				
Wetland 1	1	PEM ²	17.5	1	0.16	0.00				
Wetland 2	2	PEM	25	1	1.15	0.03				
Wetland 3	3	PEM	19	1	0.03	0.03				
Wetland 4	4	PEM	27.5	1	0.12	0.00				
Wetland 5	5	PEM	16.5	1	0.05	0.05				
Total	Total 1.51 0.11									
¹ Wetland clas	ssification is b	ased on Cowardir	n et al. 1979.			-				
² PEM = Palust	rine Emerger	nt Wetland								

3.3 STREAMS

No streams were found during field surveys. Upland drainage features are shown on Figure 3 (Appendix A).



3.4 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 3. Summary of Potential Ohio State-Listed Species within the Beatty Road Station Drainage Improvements Project Study Area, Franklin County, Ohio

Common Name	Scientific Name	State ¹ Listing	Known to Franklin County?	Known Within One Mile of Project study area? ²	Habitat Preference	Habitat Observed in Project Study Area?	Impact Assessment	ODNR Comments/ Recommendations
					Butterfly			
Regal Fritillary	Speyeria idalia	E	Yes	No	Occurs in tall grass prairie remnants (Butterflies and Moths of North America 2016).	No	No suitable habitat is present for this species within the Project study area.	No comments.
					Mammals			
Indiana Bat	Myotis sodalis	E	Yes	No	Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007).	Yes	No suitable habitat is present within the grading limits.	lf suitable habitat occurs, cut trees between October 1 and March 31.
Northern Long- eared Bat	Myotis septentrionalis	SC	Yes	No	Roosting habitat and maternity roosts in dead or live trees, snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches, occasional roosting habitat in structures such as barns and sheds, and foraging habitat in upland and lowland woodlots and tree lined corridors (USFWS 2015).	Yes	No suitable habitat is present within the grading limits.	No comments.
Big Brown Bat	Eptesicus fuscus	SC	Yes	No	During warm months, occurs in variety of habitats including near water, foraging over fields, in forest openings and in urban or suburban areas. Roosting sites can include buildings of various types, under bridges, in bat houses, etc. and winter hibernation sites can include mines and caves (ODNR Division of Wildlife 2016b).	Yes	No suitable habitat is present within the grading limits.	No comments.
Silver-haired Bat	Lasionycteris noctivagans	SC	Yes	No	Prefers mature northern forests with ponds and/or streams nearby. They roost in trees year round (ODNR Division of Wildlife 2016t).	Yes	No suitable habitat is present within the grading limits.	No comments.
Eastern Red Bat	Lasiurus borealis	SC	Yes	No	These are solitary roosting bats and roost sites include trees, shrubs, and clusters of weeds in summer months. They can hibernate in trees and tree cavities (ODNR Division of Wildlife 2016g).	Yes	No suitable habitat is present within the grading limits.	No comments.
Hoary Bat	Lasiurus cinereus	SC	Yes	No	Hoary bats roost in the foliage of deciduous and coniferous trees approximately 3-5 m (10- 16 ft) from the ground. The roost positions are open from below but otherwise surrounded by dense foliage (SUNY ESF 2016a).	Yes	No suitable habitat is present within the grading limits.	No comments.
Little Brown Bat	Myotis lucifugus	SC	Yes	No	In the winter months, these bats use caves, mines, etc. for hibernation and in warm months, they use tree cavities, man-made structures, etc. for roosting (ODNR Division of Wildlife 2016i).	Yes	No suitable habitat is present within the grading limits.	No comments.
Tri-colored Bat	Perimyotis subflavus	SC	Yes	No	In the winter months, these bats use caves, mines, etc. for hibernation and in warm months, they use tree cavities, man-made structures such as bridges, barns, sheds, etc. for roosting (ODNR Division of Wildlife 2016x).	Yes	No suitable habitat is present within the grading limits.	No comments.
Woodland Vole	Microtus pinetorum	SC	Yes	No	Occurs in deciduous and mixed forests where soils are loose and covered in thick leaf litter (SUNY ESF 2016b).	No	No suitable habitat is present for this species within the Project study area.	No comments.
Deer Mouse	Peromyscus maniculatus	SC	Yes	No	Occurs in nearly every dry land habitat within its range, very adaptable. They can be found in forests, grasslands, shrub lands, agriculture fields, and deserts (ODNR Division of Wildlife 2016d).	Yes	Some suitable habitat occurs within Project study area. Impacts are possible.	No comments.
Southern Bog Lemming	Synaptomys cooperi	SC	Yes	No	Occurs in low, damp bogs and meadows with heavy vegetative growth (ODNR Division of Wildlife 2016u).	No	No suitable habitat is present for this species within the Project study area.	No comments.



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American Badger	Taxidea taxus	SC	Yes	No	Occurs in grasslands with a preference for short grass areas such as pastures. They burrow in the ground (ODNR Division of Wildlife 2016a).	No	No suitable habitat is present for this species within the Project study area.	No comments.
					Birds			
Sharp-shinned Hawk	Accipiter striatus	SC	Yes	No	Nests are platforms made of twigs and bark; typically located in conifer trees and high off the ground (ODNR Division of Wildlife 2015).	No	No suitable habitat is present for this species within the Project study area.	No comments.
Northern Bobwhite	Colinus virginianus	SC	Yes	No	Northern bobwhite is a forest edge species and historically in Ohio, they lived where woodlands and prairie overlap or in areas of cleared timber (ODNR Division of Wildlife 2016I).	No	No suitable habitat is present for this species within the Project study area.	No comments.
Cerulean Warbler	Dendroica cerulea	SC	Yes	No	Breeding occurs in mature deciduous forests. They prefer large tracts of forests of at least 50-75 acres and oak-hickory forests. They normally avoid small, isolated tracts of forest. They tend to breed in the interior of forests but have also been found near the edge (ODNR Division of Wildlife 2016c).	No	No suitable habitat is present for this species within the Project study area.	No comments.
Prothonotary Warbler	Protonotaria citrea	SC	Yes	No	Nests are built within cavities and inhabit wooded wetlands (ODNR Division of Wildlife 2016p).	No	No suitable habitat is present for this species.	No comments.
Upland Sandpiper	Tartramia longicauda	E	Yes	No	Preferred habitat includes large areas of short grass field for feeding and courtship with interspersed or adjacent taller grasses for nesting and brood cover. Airfields and grazed pastures and grassy fields currently provide the majority suitable habitat in the northeastern U.S. (Natureserve 2016b).	No	No suitable habitat is present for this species within the Project study area.	Avoid grasslands and grazed or ungrazed pastures, especially from April 25-July 31.
					Amphibians			
Eastern Hellbender	Cryptobranchus alleganiensis alleganiensis	E	Yes	No	Found mostly in unglaciated (south and east) Ohio, hellbenders prefer large, swift flowing streams where they hide during the day under large rocks. It typically feeds on crayfish, snails, minnows, insects, and worms (ODNR Division of Wildlife 2016f)	No	No suitable habitat occurs in within Project study area.	No comments.
Midland Mud Salamander	Pseudotriton montanus diastictus	T	Yes	No	This salamander is often observed under large, flat stones. They prefer muddy areas (ODNR Division of Wildlife 2016j)	No	No suitable habitat occurs in within Project study area.	No comments.
Eastern Cricket Frog	Acris creptitans crepitans	SC	Yes	No	This frog inhabits weed-choked permanent ponds and streams (ODNR Division of Wildlife 2016e).	No	No suitable habitat occurs in within Project study area.	No comments.
Four-toed Salamander	Hemidactylium scutatum	SC	Yes	No	This salamander lives close to boggy woodland ponds and swamps where it hides beneath logs, rocks, slabs or bark, and even leaves (ODNR Division of Wildlife 2016h).	No	No suitable habitat occurs in within Project study area.	No comments.
					Mussels			
Fanshell	Cyprogenia stegaria	E	Yes	No	This mussel is found in medium to large streams with gravel substrates and strong current, in both deep and shallow water (NatureServe 2016d).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Butterfly	Ellipsaria lineolata	E	Yes	No	This mussel is found in large rivers and stretches with pronounced current and substrate of course sand and gravel. It can also be found in deep impoundment areas (NatureServe 2016e).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.



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Elephant-ear	Elliptio crassidens crassidens	E	Yes	No	This mussel is found in muddy sand, sand, and rocky substrates in moderate currents. In some areas, it is common in large creeks to rivers with moderate to swift currents primarily on sand and limestone or rock substrates (NatureServe 2016f).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Purple Catspaw	Epioblasma obliquata obliquata	E	Yes	No	This mussel can be found in medium to large rivers with moderate gradient and riffles. Substrates can be sand to gravel (NatureServe 2016g).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Northern Riffleshell	Epioblasma torulosa rangiana	E	Yes	No	Habitat includes riffles and firmly packed substrates of fine to coarse gravel. This mussel needs highly oxygenated water (NatureServe 2016h).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Snuffbox	Epioblasma triquetra	E	Yes	No	Snuffbox is commonly found buried in the substrate. It is found in a wide range of particle sized substrates, however, swift shallow riffles with sand and gravel are where it is typically found (Parmalee and Bogan 1998, Watters et al. 2009).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Ebonyshell	Reginaia (Fusconaia) ebena	E	Yes	No	Inhabits large rivers and prefers swift water and stable sand or gravel shoals. Coarse sand and gravel substrate provides the most suitable habitat. It can occur at depths of 10-15 feet with current associated (NatureServe 2016j).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Long-solid	Fusconaia subrotunda subrotunda	E	Yes	No	Occurs in medium to large rivers in sand and gravel with strong current (NatureServe 2016k).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Sharp-ridged Pocketbook	Lampsilis ovata	E	Yes	No	This mussel is a generalist, occurring in different sized streams/rivers. Typically occurs in moderate to strong current with substrates of gravel and coarse sand (NatureServe 2016n).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Washboard	Megalonaias nervosa	E	Yes	No	Occurs in large rivers, typically in main channel or overbank areas of reservoirs. It is found in areas of slow current with muddy to coarse gravel substrates and water can be up to 50 feet (NatureServe 2016p).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.



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Clubshell	Pleurobema clava	E	Yes	No	The clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). Badra (2001) found the clubshell in gravel/sand substrate, runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams.	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Ohio pigtoe	Pleurobema cordatum	E	Yes	No	Occurs in medium to large rivers directly above riffles of gravel, cobble, and boulder, but occasionally in muddy or sandy or gravel habitats at great depths (NatureServe 2016r).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Rabbitsfoot	Quadrula cylindrica cylindrica	E	Yes	No	The typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Found in medium to large rivers in sand and gravel shoals (NatureServe 2016t).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Wartyback	Quadrula nodulata	E	Yes	No	Occurs in medium to large rivers generally in pools with depths up to 15-18 feet. Substrates include sand and mud (NatureServe 2016u).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Rayed Bean	Villosa fabalis	E	Yes	No	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increase substrate stability (Butler 2002, Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Black Sandshell	Ligumia recta	T	Yes	No	Typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more. Found in sand, gravel, or silt (NatureServe 2016l).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Threehorn Wartyback	Obliquaria reflexa	Т	Yes	No	Habitat includes large rivers with moderately strong current and stable substrate of gravel, sand, and mud (NatureServe 2016q).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.



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Fawnsfoot	Truncilla donaciformis	T	Yes	No	Occurs in medium to large sized streams and rivers at variable depths. Substrates are typically either mud or sand with moderate current (NatureServe 2016x).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Pondhorn	Uniomerus tetralasmus	T	Yes	No	This species typically inhabits the quiet or slow-moving, shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant of poor water conditions and can be found well buried in a substrate of fine silt and/or mud. It has been known to survive for extended periods of time when a pond or slough has temporarily dried up by burying itself deep into the substrate (NatureServe 2016z).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Elktoe	Alasmidonta marginata	SC	Yes	No	Habitat can be any sized streams and it occurs in riffles with swift current and substrates of firmly packed fine to coarse gravel. Water depths are typically shallow of several inches to two feet. It has also been found in cobble (NatureServe 2016a).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Purple Wartyback	Cyclonaias tuberculata	SC	Yes	No	Habitat is typically a gravel/mud bottom and it usually occurs at depths of less than two feet but can be found up to 20 feet in depth. Different forms of this mussel inhabit small to medium sized rivers and the main channel of large rivers (NatureServe 2016c).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Wavy-rayed Lampmussel	Lampsilis fasciola	SC	Yes	No	Mainly found in and around riffle areas of clear, hydrologically stable small to medium sized streams and rivers. It has been found at depths up to one meter and in substrates of gravel and sand stabilized by cobble and boulders (NatureServe 2016m).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Creek Heelsplitter	Lasmigona compressa	SC	Yes	No	Occurs in rivers and streams of various sizes and it can be found in substrates of gravel, sand, or mud (NatureServe 2016o).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Round Pigtoe	Pleurobema sintoxia	SC	Yes	No	Occurs in medium to large rivers in mixed mud, sand, and gravel substrates. It occurs in current at a variety of depths (NatureServe 2016s).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.

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Kidneyshell	Ptychobranchus fasciolaris	SC	Yes	No	Commonly found in small to medium sized rivers. It has also been found in Lake Erie, Lake St. Clair, and Lake Chautauqua. It is found in riffle areas of streams with substrates firmly packed coarse gravel and sand with moderate to swift current (NatureServe 2016v).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Salamander Mussel	Simpsonaias ambigua	SC	Yes	No	Habitat is typically sand or silt under large, flat stones in areas of swift current in medium to large rivers and lakes (NatureServe 2016w).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Deertoe	Truncilla truncata	SC	Yes	No	Habitat is typically fine gravel mixed with sand and mud, but it is a generalist in terms of river size (NatureServe 2016y).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
					Fish			
Spotted Darter	Etheostoma maculatum	E	Yes	No	This fish is found in medium sized rivers and streams. They are typically found in areas of swift current at the top or bottom end of a riffle where there are many very large boulders or flab slabs or rock. They spend most of their time hiding under the upstream edge of these large rocks with their heads sticking out watching for food (ODNR Division of Wildlife 2016v).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Shortnose Gar	Lepisosteus platostomus	E	Yes	No	This fish is found in large rivers and associated overflow ponds and backwaters (ODNR Division of Wildlife 2016s).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Popeye Shiner	Notropis ariommus	E	Yes	No	This fish is found in extremely clear waters in moderate sized streams. These streams usually have slow to moderate flow and many long slow pools (ODNR Division of Wildlife 2016o).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Scioto Madtom	Noturus trautmani	E	Yes	No	Prefers tail end of riffles with sand and gravel substrate (ODNR Division of Wildlife 2016q).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.



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Tippecanoe Darter	Etheostoma Tippecanoe	T	Yes	No	This fish prefers medium to large streams in the Ohio River drainage system and are found in riffles of moderate current with substrate of gravel or cobble sized rocks (ODNR Division of Wildlife 2016w).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Tonguetied Minnow	Exoglossum laurae	T	Yes	No	Habitat includes rocky pools and runs of cool to warm water. They prefer clear creeks and small to medium sized rivers of moderate gradient with unsilted bottoms of gravel, cobble, and/or boulder. Spawning occurs in gravel nests in slow to moderate current (NatureServe 2016h).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Paddlefish	Polyodon spathula	T	Yes	No	This fish is found in the Ohio River and its larger tributaries, preferring sluggish pools and backwater areas (ODNR Division of Wildlife 2016n).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
Muskellunge	Esox masquinongy	SC	Yes	No	Prime habitat for this fish is heavily vegetated lakes or streams with large/long pools with a minimum depth of 3-4 feet and abundant woody structures and large debris (ODNR Division of Wildlife 2016k).	No	No suitable habitat occurs in within Project study area.	No comments.
Northern Brook Lamprey	lchthyomyzon fossor	E	Yes	No	This species requires two different habitat types that are connected by free-flowing water: adults are found in fast flowing clear brooks with either sand or gravel bottom and juvenile/ammocoetes are found in slow moving water, buried in soft substrate of medium to large streams (ODNR Division of Wildlife 2016m).	No	No suitable habitat occurs in within Project study area.	Due to the location and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.
River Redhorse	Moxostoma carinatum eatened; SC= Species	SC	Yes	No	This fish prefers only the largest rivers in the Ohio and Lake Erie drainages and are found in deep pools with moderate current over bedrock or gravel substrates (ODNR Division of Wildlife 2016q).	No	No suitable habitat occurs in within Project study area.	No comments.



Table 4. Summary of Potential Federally Listed Species within the Beatty Road Station Drainage Improvements Project Study Area, Franklin County, Ohio

Common Name	Scientific Name	Federal Listing ¹	Known to Franklin County?	Habitat Preference	Habitat Observed in Project Study Area?	Impact Assessment	USFWS Comments/ Recommendations
Indiana bat	Myotis sodalis	E	Yes	Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007).	Yes	No suitable habitat is present within the grading limits.	Due to the type, size and location of the Project, USFWS does not anticipate adverse effects.
Northern long- eared bat	Myotis septentrionalis	Т	Yes	Roosting habitat and maternity roosts in dead or live trees, snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches, occasional roosting habitat in structures such as barns and sheds, and foraging habitat in upland and lowland woodlots and tree lined corridors (USFWS 2015).	Yes	No suitable habitat is present within the grading limits.	Due to the type, size and location of the Project, USFWS does not anticipate adverse effects.
Scioto Madtom	Noturus trautmani	E	Yes	Prefer tail end of riffles over sand and gravel substrate (ODNR Division of Wildlife 2016q).	No	No suitable habitat occurs within Project study area.	No comments.
Clubshell	Pleurobema clava	E	Yes	The clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). Badra (2001) found the clubshell in gravel/sand substrate, runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams.	No	No suitable habitat occurs within Project study area.	No comments.
Northern Riffleshell	Epioblasma torulosa rangiana	E	Yes	Large streams and small rivers in firm sand of riffle areas; also occurs in Lake Erie (USFWS 2015).	No	No suitable habitat occurs within Project study area.	No comments.
Rabbitsfoot	Quadrula cylindrica cylindrica	Т	Yes	The typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Found in medium to large rivers in sand and gravel shoals (NatureServe 2016d).	No	No suitable habitat occurs within Project study area.	No comments.
Rayed bean	Villosa fabalis	E	Yes	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increase substrate stability (Butler 2002, Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No	No suitable habitat occurs within Project study area.	No comments.
Snuffbox	Epioblasma triquetra	E	Yes	Snuffbox is commonly found buried in the substrate. It is found in a wide range of particle sized substrates, however, swift shallow riffles with sand and gravel are where it is typically found (Parmalee and Bogan 1998, Watters et al. 2009).	No	No suitable habitat occurs within Project study area.	No comments.
E=endangered; T=threatened							

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species or their habitats within the Project study area on February 23, 2016. During the field surveys, five palustrine emergent wetlands totaling approximately 1.51 acres were delineated within the Project study area, however, only 0.11 acre will be impacted by the Project. The five wetlands were classified as Category 1 wetlands. No streams or open water features were determined within the Project study area.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project study area at the time of the fieldwork. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment. The information provided by Stantec to AEP may differ from previous preliminary surveys performed by other firms at the Project location.

The ODNR Natural Heritage Database (Appendix B) is unaware of any unique ecological sites, geological features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, or other protected natural areas within the Project study area or a one-mile radius of it.

The Project study area includes potential roosting habitat for Indiana, northern long-eared, big brown, eastern red, silver-haired, little brown, tri-colored, and hoary bats and deer mice, which are all Ohio-state listed as species of special concern. However, no occurrences of these species are known to occur within Project study area or within a one-mile radius of it, according to correspondence received from the ODNR Natural Heritage Database on March 23, 2016 (Appendix B). If suitable trees must be cut, the ODNR recommends the cutting occur between October 1 and March 31. No occurrences of these species were encountered during the field survey, and no potential roosting habitat is present within the grading limits.

The Project study area also includes potential roosting and foraging habitat for the Indiana and northern long-eared bats, which are federally listed species. However, no potential roosting habitat is present within the grading limits, and the ODNR (Appendix B) has no records of these species within the Project study area or a one-mile radius of it. A request for technical assistance was sent to USFWS on February 24, 2016 and a response was received on March 22, 2016 (Appendix B). Due to the size and location of the Project, USFWS does not anticipate adverse effects to Indiana or northern long-eared bats. USFWS is not aware of federal wilderness areas, wildlife refuges, or designated critical habitat within the Project study area (Appendix B).

ODNR Office of Real Estate and USFWS recommend that impacts to wetlands and other water resources be avoided and/or minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation (Appendix B).



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Appendix A Figures

A.1 FIGURE 1 – PROJECT LOCATION



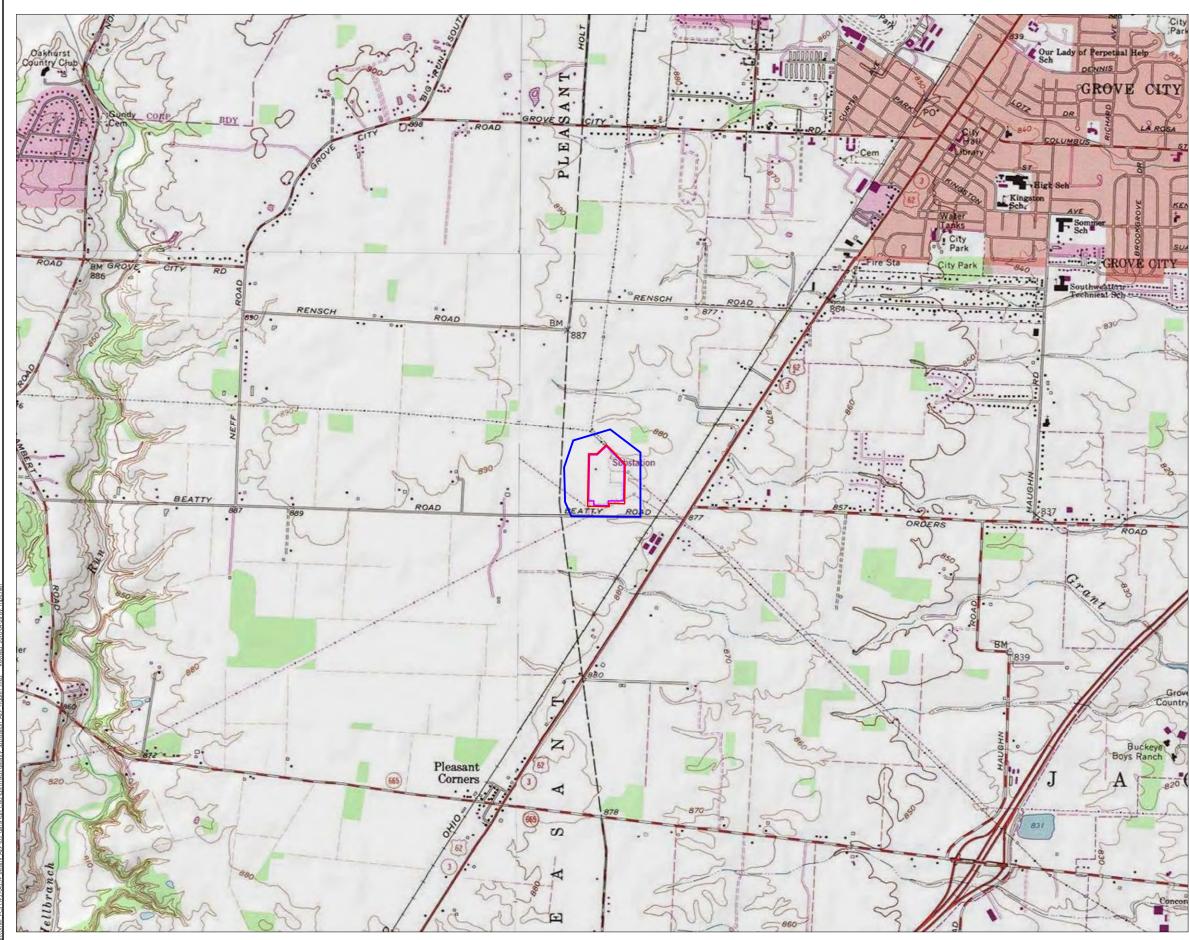




Figure No. 1



Client/Project American Electric Power

Beatty Road Station Drainage Improvements



193704259 Prepared by BT on 2016-02-22 Technical Review by CP on 2016-02-22 Independent Review by DG on 2016-02-25

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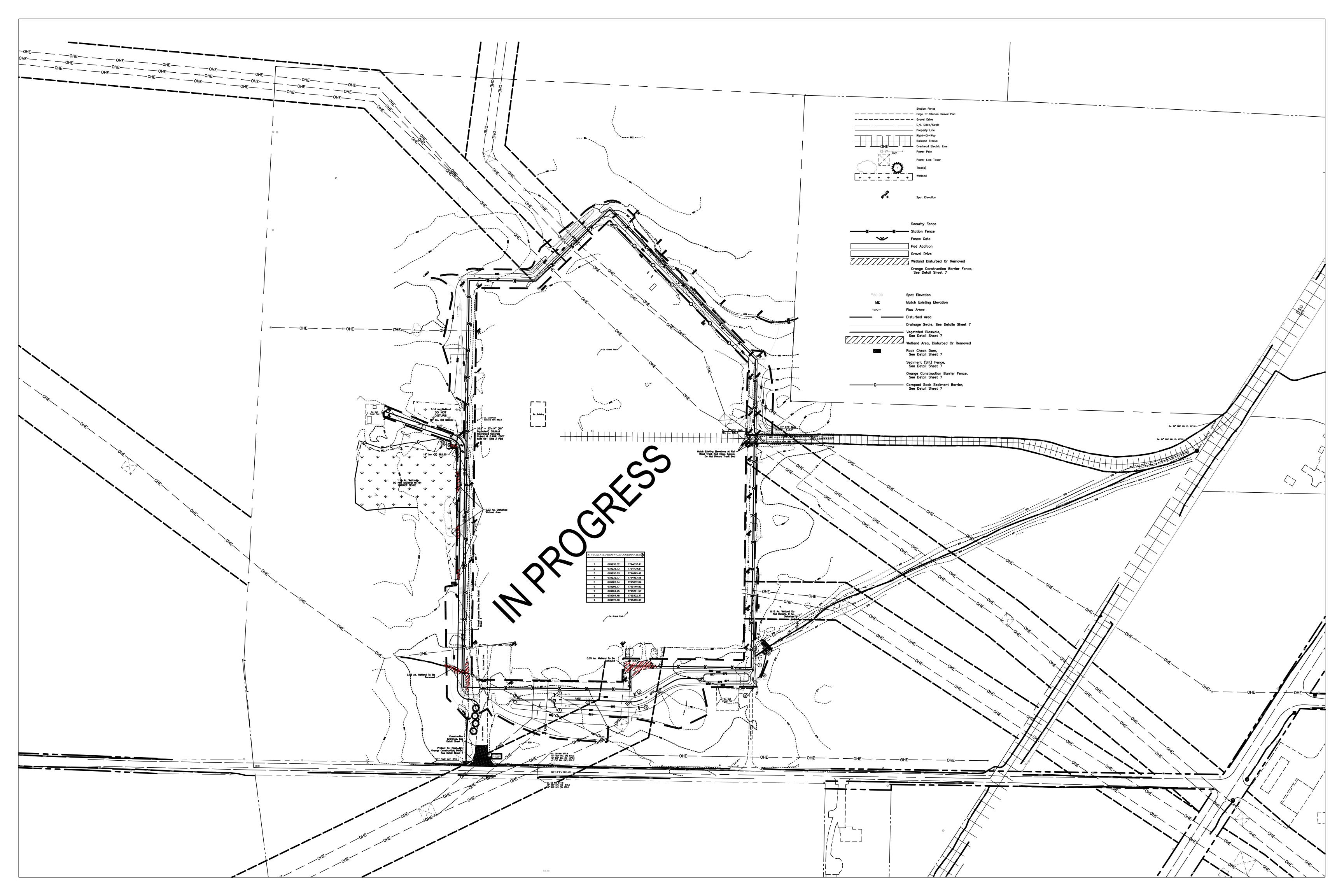
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- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 Data Sources Include: Stantec, AEP, NADS
 Background: USGS 7.5' Topographic Quadrangles



A.2 FIGURE 2 – PROJECT PLANS





A.3 FIGURE 3 – ENVIRONMENTAL FEATURES







Figure No. <u>3</u> Title Wetland and Waterbody **Delineation Map** Client/Project American Electric Power Beatty Road Station Drainage Improvements Project Location Grove City, Franklin County, Ohio 193704259 Prepared by BT on 2016-02-16 Technical Review by CP on 2016-02-16 Independent Review by DG on 2016-02-25 Ν 100 200 Feet 1:2,400 (At original document size of 11x17) <u>Legend</u> Study Area Proposed Fence Boundary Existing Fence Boundary Proposed Grading Extent Culvert Storm Drain • Wetland Deterimination Sample Point Field Delineated Wetland Upland Drainage Feature Photo Location



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 Data Sources Include: Stantec, AEP, NADS
 Orthophotography: Microsoft 2012



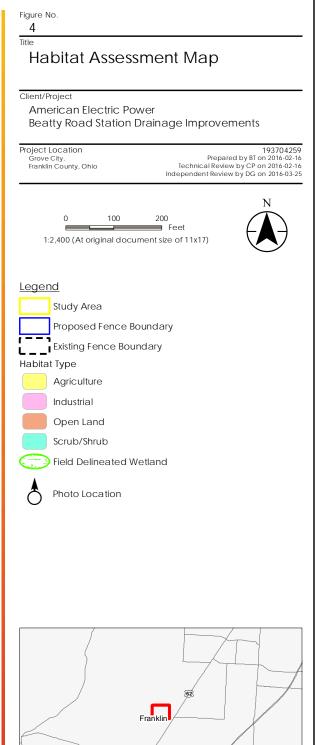
Page 01 of 01

A.4 FIGURE 4 – HABITAT ASSESSMENT











Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 Data Sources Include: Stantec, AEP, NADS
 Orthophotography: Microsoft 2012



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Appendix B Agency Correspondence



Ohio Department of Natural Resources DIVISION OF WILDLIFE DNR 5203 (R0915)



NATURAL HERITAGE DATA REQUEST FORM

ODNR Division of Wildlife Ohio Natural Heritage Program 2045 Morse Rd., Bldg. G-3 Columbus, OH 43229-6693 Phone: 614-265-6818 Email: obdrequest@dnr.state.oh.us

INSTRUCTIONS:

Please complete all the information on both sides of this form, sign (required) and email it to the address given above. Please provide a description of the work to be performed at the project site, and a map detailing your project site boundaries. If you have GIS capabilities or request a GIS response, please also submit a shapefile of your project site (unbuffered). Data requests will be completed within approximately 30 days, usually sooner. There is currently no charge to process requests.

WHAT WE PROVIDE:

As applicable to your project, the Ohio Natural Heritage Database (ONHD) will provide records for state and federally listed plants and animals, high quality plant communities, geologic features, breeding animal concentrations, scenic rivers, protected natural areas (managed areas), and significant unprotected natural areas (conservation sites). A one mile radius around the project site will automatically be searched. Because the ONHD contains sensitive information, it is our policy to provide only the data needed to complete your project.

Please note that this information is 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, the Federal Water Pollution Control Act and other laws. If your project requires ODNR coordination, please submit it for a more extensive environmental review to environmentalreviewrequest@dnr.state.oh.us. Additional information on the environmental review process is available at http://realestate.ohiodnr.gov/environmental-review. If you have questions, please contact John Kessler at 614-265-6621 or john.kessler@dnr.state.oh.us. A ONHD search is included as part of the environmental review process.

Date: 2/24/2016 Company name: Stantec Consulting

Name of person response letter should be addressed to:

Mr. 🗹 Ms. 🗆 Dan Godec

Address: 11687 Lebanon Road

City/State/Zip: Cincinnati/Ohio/45241-2012

Phone: 513-842-8203

E-mail address: daniel.godec@stantec.com

Project Name: Beatty Road Station Fence Installation Project

Project Site Address: 4600 Beatty Road, Grove City, Ohio 43123

Project County: Franklin County

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

West Columbus, Ohio

Project latitude and longitude: Centerpoint - 39.862561°N, -83.118565°W

Description of work to be performed at the project site:

American Electric Power (AEP) is proposing to construct a new fence and access road around the existing Beatty Road Station facility.

How do you want your data reported? (Both formats provide the same data. The manual search is most appropriate for small scale projects or for those without GIS capabilities. With this option we will send you a list of records and a map showing their location. If you request a GIS shapefile, we will send you a shapefile of data layers. You will then need to make your own map and list of data for your report. You must have GIS capabilities. If you choose this option, please email your project shapefile with your request. If you do not make a selection, a manual search will be performed. <u>Please choose only one option below.</u>)

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

Other than the standard data (see "what we provide" at top of form), additional information you require:

Please provide us with a map showing records of state and federally listed plants and animals, high quality plant communities, geologic features, breeding animal concentrations, scenic rivers, protected natural areas (managed areas), and significant unprotected natural areas (conservation sites) within the project area and a one mile radius around it.

How will the information be used?

The information will be included in a rare, threatened and endangered species habitat assessment report that is being prepared for the project. The information will also be used to assist with demonstrating compliance with the Endangered Species Act, if applicable.

The chief of the Division of Wildlife has determined that the release of the ONHD information you have requested could be detrimental to the conservation of a species or unique natural feature. Pursuant to section 1531.04 of the Ohio Revised Code, this information is not subject to section 149.43 of the Revised Code. By signing below, you certify that the data provided will not be disclosed, published, or distributed beyond the scope of your specific project.

	I) A	
Signature _	1 Janiel	J. Goder
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Date: 2/24/2016

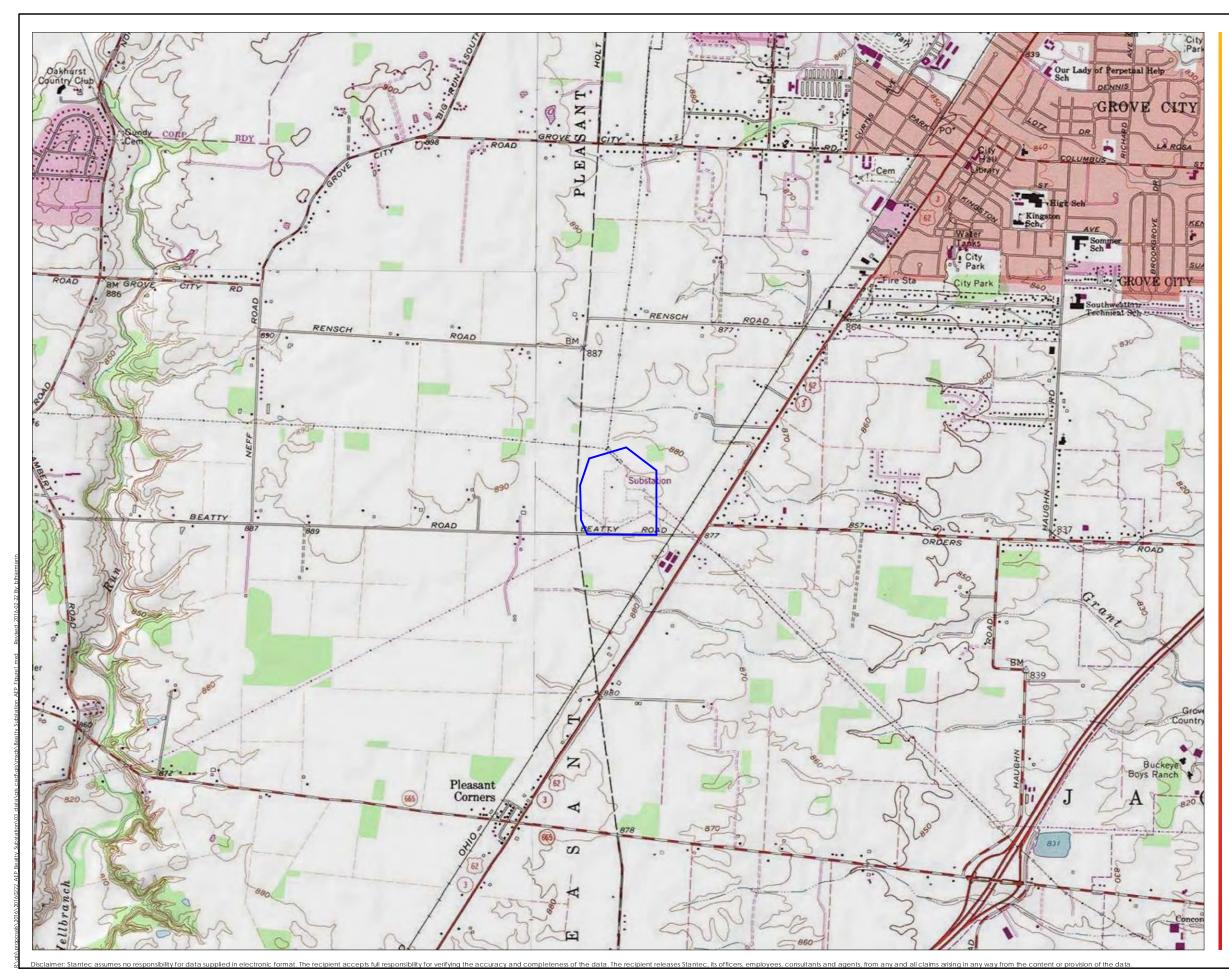


Figure No.



Client/Project American Electric Power Beatty Road Station Safety Fence Project

Project Location Grove City Franklin County, Ohio 193704259 Prepared by BT on 2016-02-22 Technical Review by CP on 2016-02-22 Independent Review by DG on 2016-02-24





Study Area

<u>Legend</u>



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 Data Sources Include: Stantec, AEP, NADS
 Background: USGS 7.5' Topographic Quadrangles



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Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

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

February 24, 2016

Dan Godec Stantec Consulting 11687 Lebanon Rd. Cincinnati, OH 45241

Dear Mr. Godec,

After reviewing the Natural Heritage Database, I find the Division of Wildlife has no records of rare or endangered species in the Beatty Rd. Station Safety Fence Installation project area, including a one mile radius, in Jackson Township, Franklin County, Ohio. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one mile radius of the project area.

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,

Deppie Woischhe

Debbie Woischke Ohio Natural Heritage Database Program

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

March 23, 2016

Jesse Binau Stantec 11687 Lebanon Road Cincinnati OH 45241-2012

Re: 16-147; Request for Environmental Review, Beatty Road Station

Project: The proposed project involves the construction of a new fence and access road surrounding the Beatty Road Station facility.

Location: The proposed project is located in Grove City, Franklin County, 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 no data at or within a one mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas 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.

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

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 (Carva ovata), shellbark hickory (Carva 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 (Ouercus stellata), and white oak (Ouercus alba). Indiana bat roost trees consists of trees that include dead and dving 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 purple cat's paw (*Epioblasma o. obliquata*), a state endangered and federally endangered mussel, the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, the northern riffleshell (*Epioblasma torulosa rangiana*), a state endangered and federally endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel species, the rabbitsfoot (*Quadrula cylindrica cylindrica*), a state endangered and federal candidate mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federal endangered mussel, the long solid (*Fusconaia maculata maculata*), a state endangered mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the pocketbook (*Lampsilis ovata*), a state endangered mussel, the washboard (*Megalonaias nervosa*), a state endangered mussel, the elephant-ear (*Elliptio crassidens crassidens*), a state endangered mussel, the black sandshell (*Ligumia recta*), a state threatened mussel, the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel, the pondhorn (*Uniomerus tetralasmus*), a state threatened 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, this project is not likely to impact these species.

The project is within the range of the Scioto madtom (*Noturus trautmani*), a state endangered and federally endangered fish, the popeye shiner (*Notropis ariommus*), a state endangered fish, the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the spotted darter (*Etheostoma maculatum*), a state endangered fish, the shortnose gar (*Lepisosteus platostomus*), a state endangered fish, the tonguetied minnow (*Exoglossum laurae*), a state threatened fish, the paddlefish (*Polyodon spathula*) a state threatened fish, and the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact these or other aquatic species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, this 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 U.S. Fish & Wildlife Service.

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

Sjollema, Angela

From:	Carter, Kim (Columbus)
Sent:	Tuesday, March 22, 2016 8:50 PM
To:	Sjollema, Angela; Kearns, Michelle
Subject:	FW: AEP Beatty Road Station Fence Installation Project, Franklin Co. OH
Follow Up Flag:	Follow up
Flag Status:	Flagged

See below to update Eco report. Still waiting on ODNR.

Kim Carter

Senior Environmental Scientist Stantec Phone: (614) 643-4357 Cell: (614) 286-8056 Fax: (614) 486-4387 Kim.Carter@stantec.com



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Please consider the environment before printing this email.

From: Binau, Jesse
Sent: Tuesday, March 22, 2016 2:26 PM
To: Carter, Kim (Columbus)
Cc: Godec, Daniel
Subject: FW: AEP Beatty Road Station Fence Installation Project, Franklin Co. OH

Jesse Binau Deputy Environmental Manager Stantec 11687 Lebanon Road Cincinnati OH 45241-2012 Phone: (513) 619-6457 Cell: 513-312-1912 Jesse.Binau@stantec.com



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Please consider the environment before printing this email.
 From: susan_zimmermann@fws.gov [mailto:susan_zimmermann@fws.gov] On Behalf Of Ohio, FW3
 Sent: Tuesday, March 22, 2016 1:13 PM
 To: Binau, Jesse
 Subject: AEP Beatty Road Station Fence Installation Project, Franklin Co. OH



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



TAILS# 03E15000-2016-TA-0821

Dear Mr. Binau,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. We recommend that proposed activities minimize water quality impacts, including fill in streams and wetlands. Best management practices should be utilized to minimize erosion and sedimentation.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees \geq 3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, we do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the U.S. Fish and Wildlife Service (Service) should be initiated to assess any potential impacts.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act (ESA), between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

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.), ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or <u>ohio@fws.gov</u>.

Sincerely,

Dan Everson

Field Supervisor

Appendix C Representative Photographs







Photograph 1. View of Wetland 1. Photograph taken facing southwest.



Photograph 2. View of Wetland 2. Photograph taken facing northeast.





Photograph 3. View of Wetland 3. Photograph taken facing north.



Photograph 4. View of Wetland 4. Photograph taken facing east.





Photograph 5. View of Wetland 5. Photograph taken facing east.



Photograph 6. Representative upland photo. Photograph taken facing west.





Photograph 7. Representative upland drainage feature. Photograph taken facing north.



Photograph 8. Representative upland drainage feature. Photograph taken facing west.





Photograph 9. Representative view of agricultural habitat within the Project. Photograph taken facing west.



Photograph 10. Representative view of trees within the Project. Photograph taken facing southwest.





Photograph 11. Representative view of Beatty Station within the Project. Photograph taken facing north.



Photograph 12. Representative view of industrial habitat on south side of the Project. Photograph taken facing south.





Photograph 13. Representative view of open land habitat within the Project. Photograph taken facing west.



Photograph 14. Representative view of scrub/shrub habitat within the Project. Photograph taken facing northeast.

Appendix D Data Forms

D.1 WETLAND DETERMINATION DATA FORMS





Are Vegetation	American E Nathan No CrB Depression 0.5% drologic cond 0. Soil 0, 500 0, FINDINGS getation Present	Latitude: ditions on the site ty or Hydrology □ sig or Hydrology □ nat sent?	pical for nificantly	Loc <u>this time</u> / disturbe oblemati ☑ Yes	ed?	N Concav -83.119 (If no, expl	WI/WWI Classification: e 911	: none Datum: ☑ Yes □ Inces present? N⊡ Hydric Soils	Present?	Date: County: State: Wetland ID: Sample Point: Community ID: Section: Township: Range: Within A Wetl	SP-NNAS-01 PEM n/a n/a Dir: n/a Ves No
HYDROLOGY Wetland Hydrology Indicators (Check here if indicators are not present []): Primary: B3 - Surface Water B9 - Water-Stained Leaves B6 - Surface Soil Cracks A1 - Surface Water B13 - Aquatic Fauna B10 - Drainage Patterns A3 - Saturation B14 - True Aquatic Plants C2 - Dry-Season Water Table B1 - Water Marks C1 - Hydrogen Sulfide Odor C8 - Crayfish Burrows B2 - Sediment Deposits C3 - Oxidized Rhizospheres on Living Roots C9 - Saturation Visible on Aerial Imagery B3 - Drift Deposits C4 - Presence of Reduced Iron D1 - States Plants B4 - Algal Mat or Crust C6 - Recent Iron Reduction in Tilled Soils D2 - Geomorphic Position B5 - Iron Deposits C7 - Thin Muck Surface D5 - FAC-Neutral Test B7 - Inundation Visible on Aerial Imagery D9 - Gauge or Well Data D5 - FAC-Neutral Test B8 - Sparsely Vegetated Concave Surface Other (Explain in Remarks) D5 - FAC-Neutral Test											Patterns n Water Table urrows Visible on Aerial Imagery Stressed Plants ic Position
Remarks: SOILS	esent? eent? led Data (str Area reciev	Yes No Yes No Yes No eam gauge, monitori yes surface drainage	e from s	0 0 aerial pho urroundii	ng agricu	ltural fiel	d	Wetland Hy	drology Pi N/A	resent? ☑	Yes □ No
Map Unit Name		Crosby silt loam, S									
Top	Bottom	the depth needed to document the in	dicator or confire	n the absence of Matrix		pe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix, CS=	=Covered/Coated Sand Gr ox Features	ains; Location: PL=F	Pore Lining, M=Matrix)	Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)
	<u>3</u>	1	10YR	4/2	100				Type		silt loam
3	12	2	10YR	4/2	90	10YR	4/4	10	C	M	silt loam
12	20	3	101R	4/2	90 80	10YR	4/4	20	C	M	loam
				4/2							
	A1- Histosol A2 - Histic E A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick I S1 - Sandy M	istic en Sulfide d Layers Muck ed Below Dark Surface Dark Surface Muck Mineral Jucky Peat or Peat			S4 - Sand S5 - Sand S6 - Stripj F1 - Loarr F2 - Loarr F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ly Gleyed ly Redox ped Matrix ny Muck M ny Gleyed eted Matrix px Dark Su eted Dark	Matrix s lineral Matrix x rírace Surface		A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	flanganese Mass r Shallow Dark S ain in Remarks) wetland hydrology must b	
Remarks:											



Midwest Region

Project/Site:	Beatty Road Station Project				Wetland ID: Wetland 1 Sample Point: 01
VEGETATION		ive spec	ies.)		
Tree Stratum (PI	ot size: 30 ft radius) Species Name	% Covor	Dominant	Ind.Status	Dominance Test Worksheet
1.				<u>Inu.status</u>	Dominance rest worksheet
2.					Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 40 X 1 = 40
	Total Cover =	0			FACW spp. 20 X 2 = 40
					FAC spp. 10 X 3 = 30
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. 25 X 4 = 100
1.					UPL spp. 0 X 5 = 0
2.					
3.					Total 95 (A) 210 (B)
4.					
5.					Prevalence Index = B/A = 2.211
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					□ Yes □ No Rapid Test for Hydrophytic Vegetation
10.					Yes □ No Dominance Test is > 50%
	Total Cover =	0			Yes □ No Prevalence Index is ≤ 3.0 *
					□ Yes □ No Morphological Adaptations (Explain) *
Herb Stratum (Pie	ot size: 5 ft radius) Scirpus spp.	20	Y	FACW	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
2.	Echinochloa muricata	40	Y	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Apocynum cannabinum	10	N	FAC	present, unless disturbed or problematic.
4.	Schedonorus arundinaceus	15	N	FACU	Definitions of Vegetation Strata:
5.	Symphyotrichum pilosum	10	N	FACU	Deminions of Vegetation official.
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	95			
Woody Vine Strat	rum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present Ves No
4.					
5.					
Damari	Total Cover =	0			
Remarks:	Assume Scirpus spp. Are FACW or wet	ter.			

Additional Remarks:

Vegetation is disturbed by mowing.



| Project/Site: | Beatty Roa | d Station Project | | |

 | | Stantec Project #: | 193704259 | | Date: | 02/23/16 | | | | | | |

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| Applicant: | American E | Electric Power | | |

 | | | | | County: | Franklin | | | | | | |

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| Investigator #1 | 1: Nathan No | land | | Investi | gator #2:

 | Angela | Sjollema | | | State: | Ohio | | | | | | |

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| Soil Unit: | CrB | | | |

 | | WI/WWI Classification | : none | | Wetland ID: | | | | | | | |

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| Landform: | Rise | | | Loc | al Relief:

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| Slope (%): | 2% | Latitude: | | | ongitude:

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 | (If no, expl | ain in remarks) | 🗹 Yes 🗆 | No | Section: | n/a | | | | | | |

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| Are Vegetation | n□, Soil □, | or Hydrology nat | turally pr | oblemati | ic?

 | | I Yes | NC | _ | Range: | n/a Dir: | n/a | | | | | |

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| Hydrophytic V | | | | □ Yes | ⊡ No

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| Wetland Hydro | ology Present | t? | | □ Yes | ⊡ No

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| Remarks: | Sample po | int located in tilled a | agricultur | al field. |

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| | A2 - High Wa A3 - Saturation | | | | B13 - Aqu
B14 - True

 | | | | | B10 - Drainage
C2 - Dry-Seaso | | | | | | | |

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| | B1 - Water M | | | | C1 - Hydr

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C8 - Crayfish Bi | | | | | | | |

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| | B2 - Sedimer | | | |

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| | B3 - Drift De | posits | | | C4 - Pres

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| | B4 - Algal Ma | | | |

 | | eduction in Tilled Soils | | | D2 - Geomorph | | | | | | | |

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| | B5 - Iron Dep | oosits
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S7 - Dark S
F12 - Iron-M
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Midwest Region

Project/Site:	Beatty Road Station Pro	oject				Wetland ID: Wetland 1 Sample Point: 02
VEGETATION	(Species identified in all upp	percase are non-na	tive spec	cies.)		
Tree Stratum (PI	ot size: 30 ft radius)					Deminence Test Workshest
1	<u>Species Name</u>		% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1. 2.						Number of Dominant Species that are OPL EACW/ or EAC: (A)
3.						Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
4.						Total Number of Dominant Species Asrees All Strates 2 (P)
<u> </u>						Total Number of Dominant Species Across All Strata: 3 (B)
6.						Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
7.						
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
<u> </u>						
10.		Total Cover =	0			$\begin{array}{cccc} \text{OBL spp.} & 0 & x & 1 = & 0 \\ \text{FACW spp.} & 0 & x & 2 = & 0 \end{array}$
			0			FACT Spp. $0 \times 3 = 0$
Sopling/Shrub Str	otum (Plot cizo: 15 ft rodius)					FAC spp. 20 x 4 = 80
3apiing/3nrub 3tr	atum (Plot size: 15 ft radius)					UPL spp. 0 $x = 0$
2.						
3.						Total 20 (A) 80 (B)
4.						
5.						Prevalence Index = B/A = 4.000
6.						
7.						
8.						Hydrophytic Vegetation Indicators:
9.						□ Yes □ No Rapid Test for Hydrophytic Vegetation
10.						\Box Yes \Box No Dominance Test is > 50%
10.		Total Cover =	0			\square Yes \square No Prevalence Index is $\leq 3.0^{*}$
			0			
Harb Stratum (Dk	ot size: 5 ft radius)					
	Bromus inermis		10	Y	FACU	☐ Yes
2.	Schedonorus arundinad	20118	5	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Trifolium repens	5603	5	Y	FACU	present, unless disturbed or problematic.
4.						Definitions of Vegetation Strata:
5.						Demittions of Vegetation Strata.
6						
7.						Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
8.						
9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
9. 10.						ft. tall.
11.						
11.						Herb - All herbaceous (non-woody) plants, regardless of size,
12.						and woody plants less than 3.28 ft. tall.
13.						
14.						Woody Vines - All woody vines greater than 3.28 ft. in height.
15.		Total Cause				WOOUS VIIIES - A woody vinds greater man o.zo ra in hoight
		Total Cover =	20			
Weets) (Of						
	um (Plot size: 30 ft radius)					
1.						
2.						
3.						Hydrophytic Vegetation Present Yes No
4. F						
5.		Tatal Origina				
Pomorko		Total Cover =	0			
Remarks:						

Additional Remarks:

Sample point located in tilled agricultural field.



Project/Site: Applicant:		d Station Project Electric Power					Stantec Project #:	193704259)	Date: County:	02/23/16 Franklin
Investigator #*				Investi	gator #2:	Angela	Sjollema			State:	Ohio
Soil Unit:	CrB				0	N	WI/WWI Classification	: none		Wetland ID:	Wetland 2
Landform:	Depressior	1 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		Loc	al Relief:	Concav	e			Sample Point:	SP-NNAS-03
Slope (%):	0.5%	Latitude	39.86	Lo	ongitude:	-83.120	224	Datum	WGS-84	Community ID	PEM
Are climatic/hy	drologic con	ditions on the site ty	pical for	this time	e of year?	(If no, expla	ain in remarks)	⊡ Yes 🗆	No	Section:	n/a
Are Vegetation	n□, Soil □,	or Hydrology 🗆 sig	nificantly	y disturbe	ed?		Are normal circumsta	inces present	?	Township:	n/a
Are Vegetation	n □ , Soil □,	or Hydrology 🗆 na	turally pr	oblemati	ic?		I Yes	NC		Range:	n/a Dir: n/a
SUMMARY OF											
Hydrophytic V	egetation Pre	sent?		☑ Yes	🗆 No			Hydric Soils	Present?		✓ Yes □ No
Wetland Hydro	ology Present	?		☑ Yes	🗆 No			Is This Sam	pling Point	Within A Wetl	and? 🛛 Yes 🔳 No
Remarks:											
HYDROLOGY Wetland Hvd		ators (Check here	if indicat	ors are n	ot preser	nt□):			_		
Primar			in interiout						Secondary:	1	
	A1 - Surface				B9 - Wate					E6 - Surface Se	
	A2 - High Wa	ater Table			B13 - Aqu					B10 - Drainage	
	 A3 - Saturati B1 - Water M 				B14 - Tru C1 - Hydr					C2 - Dry-Seaso C8 - Crayfish B	
	B2 - Sedime						spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						educed Iron				Stressed Plants
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph	
	B5 - Iron Dep	oosits on Visible on Aerial Im			C7 - Thin D9 - Gau				~	D5 - FAC-Neut	ral Test
		Vegetated Concave \$			Other (Ex						
_		, regelated contarter	banaoo		U	plantintte	(indirito)				
Field Observa	ations:										
Surface Wate		🗹 Yes 🔲 No	Depth:	2	(in.)						
Water Table F		⊡ Yes □ No	Depth:		(in.)			Wetland Hy	drology P	resent? 🛛 🗹	Yes 🗆 No
Saturation Pre		⊡ Yes □ No		surface	()						
					()						
Describe Reco											
		earn gauge, moniton	ng well, a	aerial pho	otos, previ	ous inspe	ctions), if available:		N/A		
Remarks:		eam gauge, moniton	ing well, a	aerial pho	otos, previ	ous inspe	ctions), if available:		N/A		
Remarks:	ded Data (Sti	eam gauge, moniton	ing well, a	aerial pho	otos, previ	ous inspe	ctions), if available:		N/A		
Remarks: SOILS	, , , , , , , , , , , , , , , , , , ,			·					N/A		
Remarks: SOILS Map Unit Nam	ne:	Crosby silt loam, S	outhern	Ohio till	plains, 21	to 6% slc	pes				
Remarks: SOILS Map Unit Nam Profile Descr	ie: iption (Describe to	Crosby silt loam, S	outhern	Ohio till m the absence o	plains, 2	to 6% slc	Pes			Pore Lining, M=Matrix)	
Remarks: SOILS Map Unit Nam Profile Descr Top	ne:	Crosby silt loam, S		Ohio till j m the absence o Matrix	plains, 2 f	to 6% slc	pes tion, D=Depletion, RM=Reduced Matrix, CS- Redu	ox Features		1	Texture
Remarks: SOILS Map Unit Nam Profile Descr	ie: iption (Describe to	Crosby silt loam, S		Ohio till m the absence o	plains, 2	to 6% slc	Pes			Pore Lining, M=Matrix)	Texture (e.g. clay, sand, loam)
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0	ne: iption (Describe to Bottom	Crosby silt loam, S the depth needed to document the in Horizon 1		Ohio till j m the absence o Matrix	plains, 2 f	to 6% slc	pes tion, D=Depletion, RM=Reduced Matrix, CS- Redu	ox Features	vrains; Location: PL=	1	
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Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric	ne: iption (Describe to Depth 6 20 20 Soil Field In A1- Histosol A2 - Histic E	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 	outhern dicator or confir Color 10YR 10YR 10YR 	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a	plains, 2 i (indicators.) (Ty % 100 50 30 re not pred \$4 - \$and\$ \$5 - \$and\$	to 6% slc pe: C=Concentra 10YR essent □ ty Gleyed t	pes tion, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- Color (Moist) 5/6): Matrix	ox Features % 20 Indicators	rains: Location: PL= Type C s for Probler A16 - Coas S7 - Dark S	Location M matic Soils ¹ t Prairie Redox urface	(e.g. clay, sand, loam) silt loam silty clay loam
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric	ne: iption (Describe to Depth 6 20 20 c Soil Field II A1- Histosol A2 - Histic E A3 - Black H	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 -	outhern dicator or confir Color 10YR 10YR 10YR 	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a	plains, 2 f (indicators.) (Ty % 100 50 30	to 6% slc pe: C=Concentra 10YR 10YR ssent □ ty Geloya 1 ty Redox	pes tion, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- 	ox Features % 20	rains: Location: PL= Type C s for Probler A16 - Coas \$7 - Dark \$ \$712 - Iron-N	Location M t Prairie Redox urface Manganese Mass	(e.g. clay, sand, loam) silt loam silty clay loam
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric	e: iption (Describe to Depth 6 20 20 Soil Field I A1 - Histosol A2 - Histic E A3 - Black H A4 - Hydroge	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 2 ndicators (check ho pipedon stric en Sulfide	outhern dicator or confir Color 10YR 10YR 10YR 	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a	plains, 2 i 'indicators.) (Ty % 100 50 30	to 6% slc pe: C=Concentra 10YR 10YR -	pes tion, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- 	ox Features % 20 Indicators	rains: Location: PL= Type C s for Probler A16 - Coas: S7 - Dark S F12 - Iron-N TF12 - Very	Location M t Prairie Redox surface Aanganese Mass v Shallow Dark S	(e.g. clay, sand, loam) silt loam silty clay loam
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Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric	iption (Describe to Depth 6 20 20 c Soil Field In A1 - Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 	outhern dicator or confir Color 10YR 10YR 10YR ere if ind	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a C C C C	plains, 2 i 'indicators.) (Ty % 100 50 30	to 6% slc pe: C=Concentra 10YR ty Gleyed I ty Redox ped Matrix py Gleyed Matrix py Gleyed Matrix	pes Ition, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- Color (Moist) 5/6): Matrix (ox Features % 20 Indicators	rains: Location: PL= Type C s for Probler A16 - Coas: S7 - Dark S F12 - Iron-N TF12 - Very	Location M t Prairie Redox surface Aanganese Mass v Shallow Dark S	(e.g. clay, sand, loam) silt loam silty clay loam
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Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric C C C C C C C C C C C C C	e: iption (Describe to Depth 6 20 20 Soil Field II A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm N A11 - Deplet A12 - Thick [A12 - Thick [A13 - Sandy N	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 2 ndicators (check ho pipedon stic en Sulfide 1 Layers Auck ed Below Dark Surface Dark Surface	outhern dicator or confir Color 10YR 10YR 10YR ere if ind	Ohio till j m the absence or Matrix (Moist) 4/3 5/2 5/3 icators a	plains, 2 f (indicators.) (Ty % 100 50 30 <t< td=""><td>to 6% slc pe: C=Concentra 10YR ty Gleyed by Redox ty Redox ty Redox ty Redox ty Redox ty Redox ty Redox ty Slc ty Slc Slc</td><td>pes tion, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- Color (Moist) 5/6): Matrix (rface Surface</td><td>ox Features % 20 Indicators</td><td>rains: Location: PL= Type C s for Probler A16 - Coas S7 - Dark S F12 - Iron-N TF12 - Very Other (Expl</td><td>Location M matic Soils ¹ t Prairie Redox furface Manganese Mass (Shallow Dark S ain in Remarks)</td><td>(e.g. clay, sand, loam) silt loam silty clay loam </td></t<>	to 6% slc pe: C=Concentra 10YR ty Gleyed by Redox ty Redox ty Redox ty Redox ty Redox ty Redox ty Redox ty Slc ty Slc Slc	pes tion, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- Color (Moist) 5/6): Matrix (rface Surface	ox Features % 20 Indicators	rains: Location: PL= Type C s for Probler A16 - Coas S7 - Dark S F12 - Iron-N TF12 - Very Other (Expl	Location M matic Soils ¹ t Prairie Redox furface Manganese Mass (Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam silty clay loam
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Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric C C C C C C C C C C C C C	ne: iption (Describe to Depth 6 20 20 c Soil Field It A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M 53 - 5 cm Mt Type: Soils are si	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 -	outhern dicator or confir Color 10YR 10YR 10YR ere if ind	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a cators a c	Plains, 2 1 (indicators.) (Ty % 100 50 30	to 6% slc pe: C=Concentration 10YR -	pes tion, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- 	ox Features % 20 <u></u> <u></u> <u></u> * *	rains: Location: PL= Type C s for Probler A16 - Coas: S7 - Dark S F12 - Iron-N TF12 - Very Other (Expl	Location M t Prairie Redox furface Manganese Mass / Shallow Dark S ain in Remarks) wetland hydrology must b	(e.g. clay, sand, loam) silt loam silty clay loam ses urface e present, unless disturbed or problematic
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric Restrictive Layer (If Observed)	ne: iption (Describe to Depth 6 20 20 c Soil Field It A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M 53 - 5 cm Mt Type: Soils are si	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 -	outhern dicator or confir Color 10YR 10YR 10YR ere if ind	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a cators a c	Plains, 2 1 (indicators.) (Ty % 100 50 30	to 6% slc pe: C=Concentration 10YR -	pes tion, D=Depletion, RM=Reduced Matrix, CS Reduced Matrix, CS -	ox Features % 20 <u></u> <u></u> <u></u> * *	rains: Location: PL= Type C s for Probler A16 - Coas: S7 - Dark S F12 - Iron-N TF12 - Very Other (Expl	Location M t Prairie Redox furface Manganese Mass / Shallow Dark S ain in Remarks) wetland hydrology must b	(e.g. clay, sand, loam) silt loam silty clay loam ses urface e present, unless disturbed or problematic
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 6 6 NRCS Hydric C C C C C C C C C C C C C	ne: iption (Describe to Depth 6 20 20 c Soil Field It A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M 53 - 5 cm Mt Type: Soils are si	Crosby silt loam, S the depth needed to document the in Horizon 1 2 2 -	outhern dicator or confir Color 10YR 10YR 10YR ere if ind	Ohio till j m the absence o Matrix (Moist) 4/3 5/2 5/3 icators a cators a c	Plains, 2 1 (indicators.) (Ty % 100 50 30	to 6% slc pe: C=Concentration 10YR -	pes tion, D=Depletion, RM=Reduced Matrix, CS Reduced Matrix, CS -	ox Features % 20 <u></u> <u></u> <u></u> * *	rains: Location: PL= Type C s for Probler A16 - Coas: S7 - Dark S F12 - Iron-N TF12 - Very Other (Expl	Location M t Prairie Redox furface Manganese Mass / Shallow Dark S ain in Remarks) wetland hydrology must b	(e.g. clay, sand, loam) silt loam silty clay loam ses urface e present, unless disturbed or problematic



Midwest Region

Project/Site:	Beatty Road Station Project				Wetland ID: Wetland 2 Sample Point: 03
VEGETATION		tive spec	cies.)		
Tree Stratum (Pl	ot size: 30 ft radius) Species Name	0/ Course	Deminent	Ind Ctatus	Dominance Test Worksheet
1.		<u>% Cover</u>	Dominant	Ind.Status	
2.					Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 4 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.					(·)
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 25 X 1 = 25
	Total Cover =	0			FACW spp. 55 x 2 = 110
					FAC spp. 20 X $3 = 60$
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. 0 X 4 = 0
1.					UPL spp. 0 X 5 = 0
2.					
3.					Total <u>100</u> (A) <u>195</u> (B)
4.					
5.					Prevalence Index = B/A = <u>1.950</u>
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes No Rapid Test for Hydrophytic Vegetation
10.					Yes □ No Dominance Test is > 50%
	Total Cover =	0			Yes □ No Prevalence Index is ≤ 3.0 *
					□ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Pi	ot size: 5 ft radius) Carex vulpinoidea	20	Y	FACW	☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
2.	Apocynum cannabinum	20	Y	FAC	* Indicators of hydric soil and wetland hydrology must be
3.	Epilobium coloratum	10	N	OBL	present, unless disturbed or problematic.
4.	Typha latifolia	15	Y	OBL	Definitions of Vegetation Strata:
5.	Scirpus app.	5	N	FACW	
6	Solidago gigantea	15	Y	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Sambucus nigra	10	N	FACW	breast height (DBH), regardless of height.
8.	Persicaria pensylvanica	5	N	FACW	
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	100			
	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present <a>Ves <a>No
4.					
5.					
Pomorko	Total Cover =	0			
Remarks:					



										1	
Project/Site:		ad Station Project					Stantec Project #:	193704259		Date:	02/23/16
Applicant:		Electric Power								County:	Franklin
Investigator #		land		Investi	gator #2:					State:	Ohio
Soil Unit:	CrB						WI/WWI Classification	: none		Wetland ID:	
Landform:	Rise				al Relief:						SP-NNAS-04
Slope (%):	1%		39.86176		ongitude:				WGS-84	Community ID:	UPL
		ditions on the site ty				(If no, expl	ain in remarks)	⊡ Yes 🗆	_No	Section:	n/a
Are Vegetation	n□, Soil □,	or Hydrology 🗆 sig	gnificantly	/ disturb	ed?		Are normal circumsta	ances present	?	Township:	n/a
		or Hydrology na					I Yes	NC		Range:	n/a Dir: n/a
SUMMARY O	F FINDINGS										
Hydrophytic V	egetation Pre	esent?		□ Yes	⊡ No			Hydric Soils	Present?		🗆 Yes 🗵 N
Wetland Hydr				□ Yes	_					Within A Wetl	
Remarks:	0.09) 1 100011								ping ronn		
HYDROLOGY											
									_		
		ators (Check here	if indicat	ors are n	ot preser	nt⊡):					
Primar				_					Secondary:		
	A1 - Surface				B9 - Wate					E6 - Surface So	
	A2 - High Wa A3 - Saturati				B13 - Aqu B14 - Tru					B10 - Drainage C2 - Dry-Seaso	
	B1 - Water N				C1 - Hvdr					C2 - Dry-Seaso C8 - Cravfish B	
	B2 - Sedime						spheres on Living Roots			C9 - Saturation	Visible on Aerial Image
	B3 - Drift De				C4 - Pres	ence of R	educed Iron				Stressed Plants
	3 B4 - Algal Ma				C6 - Rece	ent Iron Re	eduction in Tilled Soils			D2 - Geomorph	ic Position
	B5 - Iron De				C7 - Thin					D5 - FAC-Neuti	ral Test
		ion Visible on Aerial Im			D9 - Gau						
	B8 - Sparsel	y Vegetated Concave	Surface		Other (Ex	plain in Re	emarks)				
	-										
Field Observa											
Surface Wate	r Present?	🗹 Yes 🔲 No	Depth:	0-1	(in.)	snow melt		Wetland Hy		resent?	Yes 🗹 No
Water Table F	Present?	🗆 Yes 🗹 No	Depth:	0	(in.)			wettand my	arology i		
Saturation Pre	esent?	🗆 Yes 🗹 No	Depth:	0	(in.)						
Describe Reco	rded Data (str	eam dauge monitor	ing well a	perial nhc	ntos previ	ous inspe	ctions) if available.		N/A		
			-		-	-	ections), if available:	ia ia naturad	N/A	otor	
Describe Record Remarks:			-		-	-	ections), if available: ddy soils at surface. Thi	is is not used		ator.	
Remarks:			-		-	-		is is not used		ator.	
Remarks: SOILS	Snow melt	on surface, causing	g pooling	of surfa	ce water,	wet mud	ddy soils at surface. Thi	is is not used		ator.	
Remarks: SOILS Map Unit Nam	Snow melt	on surface, causing Crosby silt loam, S	g pooling Southern	of surfa Ohio till	ce water, plains, 2	wet muc	ddy soils at surface. Thi		as an indic		
Remarks: SOILS Map Unit Nam Profile Descr	Snow melt ne: iption (Describe to	on surface, causing Crosby silt loam, S	g pooling Southern	Ohio till	ce water, plains, 2	wet muc	ddy soils at surface. Thi ppes alion, D=Depletion, RM=Reduced Matrix, CS-	=Covered/Coated Sand G	as an indic		
Remarks: SOILS Map Unit Nam	Snow melt	on surface, causing Crosby silt loam, S	g pooling Southern	of surfa Ohio till	ce water, plains, 2 f indicators.) (Ty	wet muc	ddy soils at surface. Thi ppes ation, D=Depletion, RM=Reduced Matrix, CS- Redu	=Covered/Coated Sand G ox Features	as an indic		Texture
Remarks: SOILS Map Unit Nam Profile Descr	Snow melt ne: iption (Describe to	on surface, causing Crosby silt loam, S	g pooling Southern	Ohio till	ce water, plains, 2	wet muc	ddy soils at surface. Thi ppes alion, D=Depletion, RM=Reduced Matrix, CS-	=Covered/Coated Sand G	as an indic		Texture (e.g. clay, sand, loa
Remarks: SOILS Map Unit Nam Profile Descr Top	Snow melt	on surface, causing Crosby silt loam, S	g pooling Southern	Ohio till m the absence or Matrix	ce water, plains, 2 f indicators.) (Ty	wet muc	ddy soils at surface. Thi ppes ation, D=Depletion, RM=Reduced Matrix, CS- Redu	=Covered/Coated Sand G ox Features	as an indic	Pore Lining, M=Matrix)	
Remarks: SOILS Map Unit Nam Profile Descr Top Depth	Snow melt ne: iption (Describe to Bottom Depth	on surface, causing Crosby silt loam, S the depth needed to document the is Horizon	g pooling Southern Indicator or confirm Color	Ohio till m the absence of Matrix (Moist)	ce water, plains, 2 f indicators.) (Ty	wet muc	ddy soils at surface. Thi opes ation, D=Depletion, RM=Reduced Matrix, CS- Redu Color (Moist)	=Covered/Coated Sand G ox Features %	as an indic	Pore Lining, M=Matrix)	(e.g. clay, sand, loa silt loam
Remarks: SOILS Map Unit Narr Profile Descr Top Depth 0 3	Snow melt iption (Describe to Bottom Depth 3 16	on surface, causing Crosby silt loam, S of the depth needed to document the lit Horizon 1 2	Gouthern ndicator or confir Color 10YR 10YR	Ohio till m the absence of Matrix (Moist) 4/2 5/3	ce water, plains, 2 f indicators.) (Ty % 100 50	wet muc to 6% slo pe: C=Concentr	ddy soils at surface. Thi ppes ation, D=Depletion, RM=Reduced Matrix, CS Redu Color (Moist)	=Covered/Coated Sand G ox Features % 	as an indic rains; Location: PL=1 Type 	Pore Lining, M=Matrix)	(e.g. clay, sand, loa silt loam silty clay loam
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0	Snow melt iption (Describe to Bottom Depth 3	on surface, causing Crosby silt loam, S the depth needed to document the in Horizon 1	g pooling Southern Indicator or confirm Color 10YR	Ohio till m the absence of Matrix (Moist) 4/2	ce water, plains, 2 f indicators.) (Ty % 100	wet muc to 6% slo pe: C=Concentr 10YR	ddy soils at surface. Thi opes ation, D=Depletion, RM=Reduced Matrix, CS- Redu Color (Moist) 4/4	=Covered/Coated Sand G ox Features % 10	as an indic	Pore Lining, M=Matrix) Location M	(e.g. clay, sand, loa silt loam
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 3 3 	Snow melt	on surface, causing Crosby silt loam, S the depth needed to document the if Horizon 1 2 2 	Southern ndicator or confirm Color 10YR 10YR 10YR 10YR 	Ohio till m the absence or Matrix (Moist) 4/2 5/3 5/2 	ce water, plains, 2 4 (indicators.) (Ty % 100 50 40 	wet muc to 6% slo pe: C=Concentr 10YR 	ddy soils at surface. Thi ppes ation, D=Depletion, RM=Reduced Matrix, CS- Redu Color (Moist) 4/4 	=Covered/Coated Sand G ox Features % 10 	as an indic	Pore Lining, M=Matrix) Location M	(e.g. clay, sand, loa silt loam silty clay loam silty clay loam
Remarks: SOILS Map Unit Nam Profile Descr Top Depth 0 3 3 	Snow melt	on surface, causing Crosby silt loam, S the depth needed to document the if Horizon 1 2 2 	Southern ndicator or confir Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 4/2 5/3 5/2 	ce water, plains, 2 (indicators) (Ty % 100 50 40 	vet muc to 6% slo 10YR 	ddy soils at surface. Thi ppes ation, D=Depletion, RM=Reduced Matrix, CS- Reduced Matrix, CS- Color (Moist) 4/4 	=Covered/Coated Sand G ox Features % 10 	as an indic	Pore Lining, M=Matrix) Location M	(e.g. clay, sand, loa silt loam silty clay loam silty clay loam
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Midwest Region

Project/Site:	Beatty Road Station Project				Wetland ID: Wetland 2 Sample Point: 04
VEGETATION	(Species identified in all uppercase are non-na	tive spec	cies.)		
Tree Stratum (Pl	ot size: 30 ft radius) Species Name	0/ Courses	Deminant	Ind.Status	Dominance Test Worksheet
1.		<u>% Cover</u>	Dominant	<u>Ind.Status</u>	Dominance rest worksheet
2.					Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 3 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
7.					· · · · · · · · · · · · · · · · · · ·
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					$OBL spp. \qquad 0 \qquad x \ 1 = 0$
	Total Cover =	0			FACW spp. 0 $\times 2 = 0$
					FAC spp. 0 \times 3 = 0
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. 25 x 4 = 100
1.					UPL spp. $0 \times 5 = 0$
2.					
3.					Total 25 (A) 100 (B)
4.					
5.					Prevalence Index = B/A = 4.000
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
	Total Cover =	0			☐ Yes No Prevalence Index is ≤ 3.0 *
					□ Yes
Herb Stratum (Plo	ot size: 5 ft radius)				☐ Yes
1.	Bromus inermis	5	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
2.	Schedonorus arundinaceus	15	Y	FACU	present, unless disturbed or problematic.
3.	Trifolium repens	5	Y	FACU	
4.					Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.					
11.					Hart All borbesserie (assigned) starts recording of the
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.					
14.					Woody Vines - All woody vines greater than 3.28 ft. in height.
15.					WOODY VINES - An woody vines greater than 3.28 ft. In height.
	Total Cover =	25			
MI					
	um (Plot size: 30 ft radius)				
1.					
2. 3.					Hydrophytic Version Present DVes DV
					Hydrophytic Vegetation Present Yes No
4.					
5.	 Total Cover -				
Remarks:	Total Cover =	0			
Kemarka.					



Midwest	Regio
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Applicant: American Electric Power County: Investigator #2: Angela Sjollema Investigator #1: Nathan Noland Investigator #2: Angela Sjollema State: Soil Unit: Ko NWI/WWI Classification: none Wetland ID: Landform: Depression Local Relief: Concave Sample Point: Slope (%): 1% Latitude: 39.86 Longitude: -83.119896 Datum: WGS-84 Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) Image: Point: Section: Are Vegetation I , Soil I , or Hydrology I asignificantly disturbed? Are normal circumstances present? Township: Are Vegetation I , Soil I , or Hydrology I naturally problematic? Image: Point: Yes No SUMMARY OF FINDINGS Summer Summary Point Summer Summary Point Summer Summary Point Summer Summary Point	SP-NNAS-05
Investigator #1: Nathan Noland Investigator #2: Angela Sjollema State: O Soil Unit: Ko NWI/WWI Classification: none Wetland ID: Nample Point: Landform: Depression Local Relief: Concave Sample Point: Sample Point: <td>Ohio Wetland 3 SP-NNAS-05 PEM n/a n/a</td>	Ohio Wetland 3 SP-NNAS-05 PEM n/a n/a
Soil Unit: Ko NWI/WWI Classification: none Wetland ID: Nample Point: Landform: Depression Local Relief: Concave Sample Point:	Wetland 3 SP-NNAS-05 PEM n/a n/a
Landform: Depression Local Relief: Concave Sample Point: S Slope (%): 1% Latitude: 39.86 Longitude: -83.119896 Datum: WGS-84 Community ID: I Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes No Section: m Are Vegetation ☑ , Soil ☑, or Hydrology ☑ significantly disturbed? Are normal circumstances present? Township: m Are Vegetation ☑, Soil ☑, or Hydrology ☑ naturally problematic? ☑ Yes No Range: m SUMMARY OF FINDINGS Yes No	SP-NNAS-05 PEM n/a n/a
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Are Vegetation □ , Soil □, or Hydrology □ naturally problematic? ✓ Yes N□ Range: r SUMMARY OF FINDINGS	
SUMMARY OF FINDINGS	nva Dr: nva
Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Wetland Hydrology Present? Yes No Is This Sampling Point Within A Wetland	
Wetland Hydrology Present? Ves No Is This Sampling Point Within A Wetland Remarks: Vegetation is occaisoinally mowed and soils are most likely affected by agricultural tilling.	and? 🗹 Yes 🔲 No
vertains. Vegetation is occasionally mowed and soils are most inkely anected by agricultural tilling.	
HYDROLOGY	
Wetland Hydrology Indicators (Check here if indicators are not present):	
Primary: Secondary:	il Orealia
□ A1 - Surface Water □ B9 - Water-Stained Leaves □ B6 - Surface Soil □ A2 - High Water Table □ B13 - Aquatic Fauna □ B10 - Drainage P	
A3 - Saturation B14 - True Aquatic Plants C C2 - Dra-Season	
🗆 🛚 🛛 🗠 🖾 🖾 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖾 🖓 🖄	
	visible on Aerial Imagery
B3 - Drift Deposits C4 - Presence of Reduced Iron D1 - Stunted or S B4 - Algal Mat or Crust C6 - Recent Iron Reduction in Tilled Soils D2 - Geomorphic	
□ 54 - Algal Mat of Crust □ C6 - Recent from Reduction in Thied Solis □ D2 - Geomorphic	
□ B7 - Inundation Visible on Aerial Imagery □ D9 - Gauge or Well Data	
□ B8 - Sparsely Vegetated Concave Surface □ Other (Explain in Remarks)	
Field Observations:	
Surface Water Present? Ves No Depth: 0 (in.) Wetland Hydrology Present?	
Water Table Present? Ves No Depth: 20 (in.)	Voc 🗆 No
Saturation Present? Ves No Depth: 0 (in.)	Yes 🗆 No
	Yes 🗆 No
	Yes 🗆 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A	Yes 🗆 No
	Yes 🗆 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks:	Yes 🗆 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: SOILS	Yes 🗆 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: SOILS Map Unit Name: Kokomo silty clay loam, 0 to 2 percent slopes	Yes 🗆 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: SOILS Map Unit Name: Kokomo silty clay loam, 0 to 2 percent slopes Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)	Yes D No
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N/A Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: SOILS SOILS Map Unit Name: Kokomo silty clay loam, 0 to 2 percent slopes Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Deptetion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix) Top Bottom Matrix Redox Features Depth Depth Horizon Color (Moist) % Type	Texture (e.g. clay, sand, loam
N/A Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: SOILS Map Unit Name: Kokomo silty clay loam, 0 to 2 percent slopes Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators), (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Cated Sand Grains; Location: PL=Pore Lining, M=Matrix) Top Bottom Matrix Redox Features Depth Depth Horizon Color (Moist) % Type Location 0 14 1 10YR 3/1 95 10YR 3/4 5 C PL	Texture (e.g. clay, sand, loam loam
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: NIA Remarks: SOILS Map Unit Name: Kokomo silty clay loam, 0 to 2 percent slopes Profile Description (Describe the depth medicator or continue the indicator or continue the indicators, (Typer C-Concentration, D-Deptetion, RM-Reduced Mattix, CS-Converd/Conted Sand Grains; Location: PL-Pere Lining, M-Matrix) Top Bottom Matrix Redox Features 0 14 1 10YR 3/4 5 C PL 14 20 2 10YR 3/4 2 C PL 14 20 2 10YR 3/4 2 C PL 14 20 2 10YR 3/4 2 C PL	Texture (e.g. clay, sand, loam clay
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Midwest Region

Project/Site:	Beatty Road Station Project				Wetland ID: Wetland 3 Sample Point: 05
VEGETATION		ative spec	cies.)		
Tree Stratum (PI	ot size: 30 ft radius)				
	<u>Species Name</u>		Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 70 X 1 = 70
	Total Cover =	0			FACW spp. 5 $x 2 = 10$
					FAC spp. 5 $X 3 = 15$
Sapling/Shrub Str	ratum (Plot size: 15 ft radius)				FACU spp. 15 $x 4 = 60$
1.					UPL spp. 0 $x 5 = 0$
2.					
3.					Total <u>95</u> (A) <u>155</u> (B)
4.					
5.					Prevalence Index = B/A = 1.632
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes IN Rapid Test for Hydrophytic Vegetation
10.					✓ Yes □ No Dominance Test is > 50%
	Total Cover =	0			✓ Yes
					Yes IN Morphological Adaptations (Explain) *
Herb Stratum (Ple	ot size: 5 ft radius)				□ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Typha latifolia	50	Y	OBL	
2.	Epilobium coloratum	20	Y	OBL	 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	Apocynum cannabinum	5	N	FAC	
4.	Solidago altissima	15	N	FACU	Definitions of Vegetation Strata:
5.	Carex spp.	5	Ν	FACW	
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	95			
Woody Vine Strat	tum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present <a>Ves <a>No
4.					
5.					
-	Total Cover =	0			
Remarks:	Assume Carex spp is FACW or wetter.	-			
	••				



D : //01/							<u> </u>	10070 1050			00/00/40	
Project/Site:		d Station Project					Stantec Project #:	193704259		Date:	02/23/16	
Applicant:		Electric Power		Invocti	actor #2.	Angolo	Siellema			County: State:	Franklin Ohio	
Investigator #1 Soil Unit:	CrB	land		Invest	gator #2:		WI/WWI Classification:	2020		Wetland ID:		
Landform:	Rise			Loc	al Relief:			none			SP-NNAS-06	
		Latituda					024	Deturn				
Slope (%):	1% drologio con	<u>Latitude:</u> ditions on the site ty			ongitude:				WGS-84	Community ID:		
Are climatic/ny		ditions on the site ty	pical lor		e or year?	(If no, expl				Section:	n/a	
		or Hydrology 🗆 sig					Are normal circumstar		(Township:	n/a	,
Ŭ		or Hydrology nat	urally pr	opiemat			⊡ Yes	N	_	Range:	n/a Dir:	n/a
SUMMARY OF									-			
Hydrophytic Ve				□ Yes				Hydric Soils			<u> </u>	
Wetland Hydro				□ Yes	🛛 🗹 No			Is This Samp	oling Point	Within A Wetl	and? Yes	⊻ No
Remarks:	vegetation	is occaisoinally mo	wea.									
HYDROLOGY												
		ators (Check here i	f indicat	ors are r	ot preser	nt☑):						
Primary				_	5-0 M.	.			Secondary:			
	A1 - Surface				B9 - Wate B13 - Aqu					E6 - Surface So		
	A3 - Saturati				B13 - Aqu B14 - Tru					B10 - Drainage C2 - Dry-Seaso		
	B1 - Water M				C1 - Hydr					C8 - Cravfish B		
	B2 - Sedime	nt Deposits					spheres on Living Roots				Visible on Aerial I	Imagery
							educed Iron				Stressed Plants	
	B4 - Algal Ma B5 - Iron Der				C6 - Rece C7 - Thin		eduction in Tilled Soils			D2 - Geomorph D5 - FAC-Neutr		
		on Visible on Aerial Ima	nderv		D9 - Gau					D5 - FAC-Neuli	arrest	
		y Vegetated Concave S			Other (Ex							
							,					
Field Observa	tions:											
Surface Water	Present?	🗆 Yes 🗹 No	Depth:	0	(in.)							
Water Table P		□Yes ☑ No	Depth:		(in.)			Wetland Hy	drology P	resent?	Yes 🗵 No	
Saturation Pres	sent?	□Yes ☑ No	Depth:		(in.)							
Deserite Deser				-	()		tions) if such late		N/A			
-	Jed Data (Str	eam gauge, monitori	ng well, a	aenai pric	blos, previ	ous inspe	ections), il available:		IN/A			
Remarks:												
SOILS		0 1 14 1 0	4		1 . 0 .	•						
Map Unit Name		Crosby silt loam, S										
		the depth needed to document the in	dicator or confin			pe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix, CS=		ains; Location: PL=	Pore Lining, M=Matrix)	Tautur	_
Тор	Bottom		<u> </u>	Matrix				ox Features	-		Textur	
Depth	Depth	Horizon		(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, san	
0	3	1	10YR	3/1	100						loam	
3	13	2	10YR	3/1	60	10YR	3/3	5	С	М	loam	
3	13	2	10YR	4/1	30	10YR	4/4	5	С	М	loam	
13	20	3	10YR	3/1	70	10YR	3/2	2	С	М	clay	
13	20	3	10YR	2/1	28						clay	
NRCS Hydric	Soil Field In	ndicators (check he	ere if ind	icators a	re not pre	esent 🗆):			natic Soils ¹		
	A1- Histosol	•			S4 - Sanc		Matrix			Prairie Redox		
					\$5 - Sanc				S7 - Dark S			
					S6 - Strip F1 - Loan					langanese Mass Shallow Dark S		
	, ,				F1 - Loan			_		ain in Remarks)		
					F3 - Deple				2 (Evbi			
	A11 - Deplet	ed Below Dark Surface		4	F6 - Redo	ox Dark Su	Irface					
					F7 - Deple							
					F8 - Redo	x Depres	sions	11-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	4	continue of the other A		las and 1
	<u> సన - స cm Mi</u>	ucky Peat or Peat						indicators of hydrophy	ruc vegetation and v		e present, unless disturbed	or problematic.
Restrictive Layer (If Observed)	Type:			Depth:				Hydric Soil	Present?		Yes 🗆 No	
Remarks:												
Nemarks.												



Midwest Region

Project/Site:	Beatty Road Station Project				Wetland ID: Wetland 3 Sample Point: 06
VEGETATION	(Species identified in all uppercase are not ot size: 30 ft radius)	n-native spec	cies.)		
Thee Stratum (Pr	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
7.					• • • • • • • • •
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.	 Total Cove	r = 0			$\begin{array}{cccc} \text{OBL spp.} & 0 & x & 1 = & 0 \\ \text{FACW spp.} & 5 & x & 2 = & 10 \end{array}$
	Total Cove	1 = 0			FACW spp. 5 $x 2 = 10$ FAC spp. 0 $x 3 = 0$
Sanling/Shrub Str	atum (Plot size: 15 ft radius)				FAC spp. $35 \times 4 = 340$
1.					UPL spp. 10 \times 5 = 50
2.					
3.					Total 100 (A) 400 (B)
4.					
5.					Prevalence Index = B/A = 4.000
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					□ Yes □ No Rapid Test for Hydrophytic Vegetation
10.					□ Yes □ No Dominance Test is > 50%
	Total Cove	r = 0			$\Box Yes \Box No Prevalence Index is \leq 3.0^{*}$
Herb Stratum (Plo	toizo, Eftradiva)				□ Yes ☑ No Morphological Adaptations (Explain) * □ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Dipsacus fullonum	25	Y	FACU	
2.	Daucus carota	10	N	UPL	* Indicators of hydric soil and wetland hydrology must be
3.	Solidago altissima	15	N	FACU	present, unless disturbed or problematic.
4.	Setaria faberi	10	N	FACU	Definitions of Vegetation Strata:
5.	Epilobium coloratum	5	N	FACW	
6	Oenothera biennis	5	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Symphyotrichum pilosum	30	Y	FACU	breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.					
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13. 14.					
14.					Woody Vines - All woody vines greater than 3.28 ft. in height.
15.	Total Cove				
		- 100			
Woody Vine Strat	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present DYes DNo
4.					
5.					
	Total Cove	r = 0			
Remarks:					



Project/Site:	Beatty Roa	d Station Project					Stantec Project #:	193704259		Date:	02/23/16
Applicant:		Electric Power						100101200		County:	Franklin
Investigator #1	Nathan No	land		Investi	gator #2:	Angela	Sjollema			State:	Ohio
Soil Unit:	Ko					N	WI/WWI Classification:	: none		Wetland ID:	
Landform:	Depression	n		Loc	al Relief:	Concav	е			Sample Point:	SP-NNAS-07
Slope (%):	0.5%	Latitude:			ongitude:				WGS-84	Community ID:	PEM
		ditions on the site ty				(If no, expl			_No	Section:	n/a
		or Hydrology 🗆 sig					Are normal circumsta		?	Township:	n/a
		or Hydrology 🗆 na	turally pr	oblemat	c?		⊡ Yes	NC	_	Range:	n/a Dir: n/a
SUMMARY OF									_		
Hydrophytic Ve				⊡ Yes				Hydric Soils			<u> </u>
Wetland Hydro	logy Present	?		⊡ Yes	🗆 No			Is This Sam	pling Point	Within A Wetl	and? 🗹 Yes 🔲 No
Remarks:											
HYDROLOGY						(—)					
		ators (Check here	if indicat	ors are n	ot preser	nt□):			0		
Primary	: A1 - Surface	Water			B9 - Wate	ar-Stained			Secondary:	E6 - Surface So	oil Cracks
	A2 - High Wa				B13 - Aqu					B10 - Drainage	
I	A3 - Saturatio	on			B14 - Tru	e Aquatic	Plants			C2 - Dry-Seaso	on Water Table
	B1 - Water N				C1 - Hydr					C8 - Crayfish B	urrows
	B2 - Sedimer B3 - Drift Der						spheres on Living Roots educed Iron				Visible on Aerial Imagery Stressed Plants
	B3 - Drift Dep B4 - Algal Ma						duction in Tilled Soils			D1 - Stunted or D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neuti	
		on Visible on Aerial Im			D9 - Gau						
	B8 - Sparsely	Vegetated Concave S	Surface		Other (Ex	plain in Re	marks)				
Field Observa											
Surface Water		⊻Yes □ No	Depth:		(in.)			Wetland Hy	droloav Pi	resent? 🗵	Yes 🗆 No
Water Table Pr		☑ Yes □ No	Depth:		(in.)						
Saturation Pres	sent?	🗹 Yes 🛛 No	Depth:	surface	(in.)						
Describe Record	ded Data (str	eam gauge, monitori	ng well, a	aerial pho	tos, previ	ous inspe	ctions), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name	e:	Kokomo silt clay lo	am, 0 to	2 percer	nt slopes						
Profile Descri	otion (Describe to	the depth needed to document the in	dicator or confir	m the absence o	f indicators.) (Ty	pe: C=Concentr	tion, D=Depletion, RM=Reduced Matrix, CS=	=Covered/Coated Sand Gr	ains; Location: PL=F	Pore Lining, M=Matrix)	
Тор	Bottom			Matrix			Red	ox Features			Tautuna
								ox i eatures			Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)
Depth 0	Depth 20	Horizon 1	Color 10YR	(Moist) 5/2	% 85	10YR			Type C	Location M	
				<u>`</u>		10YR 	Color (Moist)	%			(e.g. clay, sand, loam)
0	20	1	10YR	5/2	85		Color (Moist) 5/6	% 15	C	М	(e.g. clay, sand, loam) silt loam
0	20	1	10YR 	5/2	85 		Color (Moist) 5/6 	% 15 	C 	M 	(e.g. clay, sand, loam) silt loam
0 	20 	1 	10YR 	5/2 	85 		Color (Moist) 5/6 	% 15 	C 	M 	(e.g. clay, sand, loam) silt loam
0 	20 	1 	10YR 	5/2 	85 	 	Color (Moist) 5/6 	% 15 	C 	M 	(e.g. clay, sand, loam) silt loam
0 	20 	1 	10YR 	5/2 	85 	 	Color (Moist) 5/6 	% 15 	C 	M 	(e.g. clay, sand, loam) silt loam
0 	20 	1 	10YR 	5/2 	85 	 	Color (Moist) 5/6 	% 15 	C 	M 	(e.g. clay, sand, loam) silt loam
0 	20 	1 	10YR 	5/2 	85 	 	Color (Moist) 5/6 	% 15	C 	M 	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 	1 	10YR 	5/2 icators a	85 	 esent []	Color (Moist) 5/6):	% 15 Indicators	C 6 for Problem	M 	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Ep	1 ndicators (check ho pipedon	10YR 	5/2 licators a	85 re not pre \$4 - Sanc \$5 - Sanc	 esent dy Gleyed	Color (Moist) 5/6): Matrix	% 15 Indicators	C 5 for Problem A16 - Coast \$7 - Dark \$	M natic Soils ¹ Prairie Redox urface	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi	1 ndicators (check he oipedon istic	10YR 	5/2 	85 re not pre S4 - Sanc S5 - Sanc S5 - Sanc	 esent dy Gleyed dy Redox ped Matrix	Color (Moist) 5/6): Matrix	% 15	C 5 for Problem A16 - Coast S7 - Dark S S7 - Dark S	M -	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge	1 ndicators (check he bipedon sistic en Sulfide	10YR 	5/2 icators a	85 re not pre \$5 - Sanc \$5 - Sanc \$5 - Strip F1 - Loan	 esent dy Gleyed dy Redox ped Matrix ny Muck M	Color (Moist) 5/6): Matrix	% 15 Indicators	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Dark S F12 - Iron-N - F12 - Very	M Prairie Redox urface 4anganese Mass y Shallow Dark S	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified	1 ndicators (check hu bipedon istic an Sulfide d Layers	10YR 	5/2 icators a	85 -	 esent □ dy Gleyed dy Redox ped Matrib ny Muck M ny Gleyed	Color (Moist) 5/6): Matrix ineral Matrix	% 15 Indicators	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Dark S F12 - Iron-N - F12 - Very	M -	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M	1 ndicators (check hu bipedon istic an Sulfide d Layers	10YR ere if ind	5/2 iicators a	85 re not pre \$5 - Sanc \$5 - Sanc \$5 - Strip F1 - Loan	 	Color (Moist) 5/6): Matrix (% 15 Indicators	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Dark S F12 - Iron-N - F12 - Very	M Prairie Redox urface 4anganese Mass y Shallow Dark S	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick D	1 ndicators (check he oipedon stic en Sulfide 1 Layers Auck ed Below Dark Surface Dark Surface	10YR ere if ind	5/2 iicators a	85 -	 	Color (Moist) 5/6): Matrix face	% 15 Indicators	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Dark S F12 - Iron-N - F12 - Very	M Prairie Redox urface 4anganese Mass y Shallow Dark S	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	1 ndicators (check ho bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a icators a -	85 S4 - Sanc S5 - Sanc S6 - Strip F1 - Loan F2 - Loan F3 - Depl	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St va Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators	C -	M -	(e.g. clay, sand, loam) silt loam -
0 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	1 ndicators (check he oipedon stic en Sulfide 1 Layers Auck ed Below Dark Surface Dark Surface	10YR ere if ind	5/2 icators a	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St va Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators	C -	M -	(e.g. clay, sand, loam) silt loam
0 NRCS Hydric 	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratified A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M	1 ndicators (check ho bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St va Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Dar	M matic Soils 1 Prairie Redox urface Aanganese Mass s Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam -
0 NRCS Hydric NRCS Hydric Restrictive Layer ((f Observed)	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Depleter A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	1 ndicators (check ho bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a icators a -	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St va Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators of hydrophy	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Dar	M matic Soils 1 Prairie Redox urface Aanganese Mass s Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam Ses urface
0 NRCS Hydric 	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Depleter A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	1 ndicators (check ho bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a icators a -	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St va Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators of hydrophy	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Very Other (Expla	M matic Soils 1 Prairie Redox urface Aanganese Mass s Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam Ses urface
0 NRCS Hydric NRCS Hydric Restrictive Layer ((f Observed)	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Depleter A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	1 ndicators (check hu bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a icators a -	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St va Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators of hydrophy	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Very Other (Expla	M matic Soils 1 Prairie Redox urface Aanganese Mass s Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam Ses urface
0 NRCS Hydric 	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Depleter A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	1 ndicators (check hu bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a icators a -	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St x Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators of hydrophy	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Very Other (Expla	M matic Soils 1 Prairie Redox urface Aanganese Mass s Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam Ses urface
0 NRCS Hydric 	20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Depleter A12 - Thick E S1 - Sandy M S3 - 5 cm Mu	1 ndicators (check hu bipedon istic an Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral	10YR ere if ind	5/2 icators a icators a -	85 -	 esent by Gleyed dy Redox by Redox by Muck M y Gleyed eted Matri xy Dark St x Dark St	Color (Moist) 5/6): Matrix (rface Surface	% 15 Indicators of hydrophy	C 5 for Problem A16 - Coasts \$7 - Dark S \$7 - Very Other (Expla	M matic Soils 1 Prairie Redox urface Aanganese Mass s Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) silt loam Ses urface



Midwest Region

Project/Site:	Beatty Road Station Proje	ct				Wetland ID: Wetland 4 Sample Point: 07
VEGETATION		case are non-nati	ve spec	cies.)		
Tree Stratum (P	ot size: 30 ft radius)					
	Species Name	-		Dominant	Ind.Status	Dominance Test Worksheet
1.	Fraxinus pennsylvanica		5	Y	FACW	
2.						Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)
3.						
4.						Total Number of Dominant Species Across All Strata: <u>3</u> (B)
5.						
6.						Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
7.						
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
10.						OBL spp. 65 X 1 = 65
	Т	otal Cover =	5			FACW spp. 10 $X 2 = 20$
						FAC spp. 25 x 3 = 75
Sapling/Shrub St	ratum (Plot size: 15 ft radius)					FACU spp. 0 $x 4 = 0$
1.						UPL spp. 0 $x 5 = 0$
2.						
3.						Total 100 (A) 160 (B)
4.						
5.						Prevalence Index = B/A = 1.600
6.						
7.						
8.						Hydrophytic Vegetation Indicators:
9.						☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.						✓ Yes □ No Dominance Test is > 50%
	Т	otal Cover =	0			\square Yes \square No Prevalence Index is ≤ 3.0 *
						☐ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Pl	ot size: 5 ft radius)					☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Typha latifolia		10	N	OBL	
2.	Typha angustifolia		15	N	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Echinochloa muricata		40	Y	OBL	present, unless disturbed or problematic.
4.	Panicum virgatum		25	Y	FAC	Definitions of Vegetation Strata:
5.	Carex spp.		5	N	FACW	
6						Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.						breast height (DBH), regardless of height.
8.						
9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
9. 10.						ft. tall.
10.						
						Herb - All herbaceous (non-woody) plants, regardless of size,
12.						and woody plants less than 3.28 ft. tall.
13.						
14.						Woody Vines - All woody vines greater than 3.28 ft. in height.
15.						woody villes - An woody villes greater than 5.20 it. In height.
	Т	otal Cover =	95			
	tum (Plot size: 30 ft radius)					
1.						
2.						
3.						Hydrophytic Vegetation Present <a> Yes <a> No
4.						
5.						
_		otal Cover =	0			
Remarks:	Assume Carex spp. is FA	CW or wetter.				



Midwest Region

Project/Site:		d Station Project					Stantec Project #:	193704259		Date:	02/23/16	
Applicant:		Electric Power				A	0:			County:	Franklin	
Investigator #1:		land		Invest	gator #2:					State:	Ohio	
Soil Unit:	Ko						IWI/WWI Classification	i: none		Wetland ID:		
Landform:	Rise	L = Churcher			al Relief:			Determ			SP-NNAS-08	
Slope (%):	1%	Latitude:			ongitude:				WGS-84	Community ID:		
Are climatic/nyo		ditions on the site ty	pical lor		e or year?	(If no, expl			No	Section:	n/a	
		or Hydrology 🗆 sig					Are normal circumsta			Township:	n/a	- 1-
		or Hydrology 🗆 nat	urally pr	opiemai	C?					Range:	n/a Dir:	n/a
SUMMARY OF								Likudaia Olaila	D			
Hydrophytic Ve				□ Yes	_			Hydric Soils			Yes	
Wetland Hydro Remarks:	logy Present	[?			⊡ No			is this Samp	bling Point	Within A Wetla	and?	
	A1 - Surface A2 - High Wa A3 - Saturati B1 - Water M B2 - Sedimer B3 - Drift De B4 - Algal Ma B5 - Iron Dep B7 - Inundati	ater Table on Marks nt Deposits posits at or Crust	agery		B9 - Wate B13 - Aqu B14 - Tru C1 - Hydr C3 - Oxid C4 - Pres	er-Stained latic Fauna e Aquatic ogen Sulfi ized Rhizo ence of Re ent Iron Re Muck Surf ge or Well	a Plants de Odor spheres on Living Roots educed Iron duction in Tilled Soils face Data			E6 - Surface So E10 - Drainage C2 - Dry-Seaso C8 - Crayfish Bo	Patterns n Water Table urrows Visible on Aerial In Stressed Plants ic Position	nagery
Remarks:	Present? esent? sent?	☐ Yes ☑ No ☐ Yes ☑ No ☐ Yes ☑ No eam gauge, monitori	Depth: Depth: Depth: ng well, a	0 0	(in.) (in.) (in.) ^{otos,} previ	ous inspe	ctions), if available:	Wetland Hy	drology Pi N/A	resent?	Yes 🖸 No	
SOILS												
Map Unit Name		Kokomo silt clay loa										
Profile Descrip	otion (Describe to	the depth needed to document the ind	dicator or confin	m the absence o	f indicators.) (Ty	pe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix, CS		ains; Location: PL=F	Pore Lining, M=Matrix)		
Тор	Bottom			Matrix			Red	ox Features			Texture	
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand	d, Ioam)
0	6	1	10YR	4/2	100						loam	
6	16	2	10YR	4/2	75	10YR	4/6	5	С	М	loam	
6	16	2	10YR	4/1	20						loam	
16	20	3	10YR	4/2	75	10YR	5/6	25	С	М	loam	
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	istic en Sulfide d Layers Juck ed Below Dark Surface Dark Surface			re not pre S4 - Sanc S5 - Sanc S6 - Stripp F1 - Loar F2 - Loar F3 - Deple F6 - Redc F7 - Deple F8 - Redc	ly Gleyed by Redox bed Matrix by Muck M by Gleyed beted Matrix by Dark Su beted Dark	Matrix ineral Matrix < rface Surface		A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	/langanese Mass v Shallow Dark Si ain in Remarks)		or problematic.
Restrictive Layer	Type:			Depth:				Hydric Soil	Present?		Yes 🗆 No	
(If Observed)	. , , , , , ,							,				
Remarks:												

Page 1 of 2



Midwest Region

Project/Site:	Beatty Road Station Project				Wetland ID: Wetland 4 Sample Point: ⁰⁸
VEGETATION	(Species identified in all uppercase are non-na	tive spec	ies.)		
Tree Stratum (P	ot size: 30 ft radius)	~ ~			Deminance Test Worksheet
1	<u>Species Name</u>	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1. 2.					Number of Deminent Species that are OPL EACIN or EAC: (A)
					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata: 4 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)
7.					Decostance budge Washeles (
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					$OBL spp. \underline{\qquad 0 \qquad } x 1 = \underline{\qquad 0 \qquad }$
	Total Cover =	0			FACW spp. 20 X $2 = 40$
					FAC spp. 0 $X 3 = 0$
	ratum (Plot size: 15 ft radius)				FACU spp. 80 x 4 = 320
1.	Lonicera maackii	20	Y	UPL	UPL spp. 20 $X 5 = 100$
2.	Prunus serotina	10	N	FACU	
3.	Cornus amomum	20	Y	FACW	Total <u>120</u> (A) <u>460</u> (B)
4.	Juniperus virginiana	10	Ν	FACU	
5.					Prevalence Index = B/A = 3.833
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes I No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes
	Total Cover =	60			□ Yes \square No Prevalence Index is ≤ 3.0 *
					☐ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Pl	ot size: 5 ft radius)				☐ Yes
1.	Bromus inermis	20	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
2.	Solidago altissima	10	N	FACU	present, unless disturbed or problematic.
3.	Setaria faberi	10	N	FACU	P
4.	Schedonorus arundinaceus	20	Y	FACU	Definitions of Vegetation Strata:
5.					
6				-	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	60			
Woody Vine Stra	tum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present Yes No
4.					
5.					
	Total Cover =	0			
Remarks:	Sample point is edge of harvested agrid	-	field		
. tomanto.	campio point lo cago or narvosted agrit	Januarul			
L					



Project/Site:	Beatty Roa	d Station Project					Stantec Project #:	193704259		Date:	02/23/16
Applicant:		Electric Power						1997 04299		County:	Franklin
Investigator #1				Investi	igator #2:	Angela	Sjollema			State:	Ohio
Soil Unit:	CrB				<u> </u>	N	WI/WWI Classification:	: none		Wetland ID:	Wetland 5
Landform:	Depression	n		Loc	al Relief:	Concav	e			Sample Point:	SP-NNAS-09
Slope (%):	0.5%	Latitude			ongitude:				WGS-84	Community ID:	PEM
		ditions on the site ty				(If no, expl		⊡ Yes □		Section:	n/a
		or Hydrology 🗹 sig					Are normal circumsta		?	Township:	n/a
		or Hydrology 🗆 na	turally pr	oblemat	IC?		⊡ Yes	NC		Range:	n/a Dir: n/a
SUMMARY OF		10		— \/	N.I			Libertaria O sila	D (0)		
Hydrophytic Ve Wetland Hydro	0			☑ Yes	i □ No i □ No			Hydric Soils		Within A Wetl	
Remarks:		created depression	nal area			YISOLA	TED WETLAND.	IS THIS Odill	pling Point	within A weti	
HYDROLOGY		·									
	oloav Indic	ators (Check here	if indicat	ors are r	not preser	nt□):					
Primary	ï	,							Secondary:		
	A1 - Surface				B9 - Wate					E6 - Surface So	
	A2 - High Wa A3 - Saturatio				B13 - Aqu B14 - True					B10 - Drainage C2 - Dry-Seaso	
	B1 - Water N	larks			C1 - Hydr	ogen Sulfi	de Odor			C8 - Crayfish B	urrows
	B2 - Sedimer B3 - Drift Der						spheres on Living Roots				Visible on Aerial Imagery Stressed Plants
	B3 - Drift Dep B4 - Algal Ma						educed Iron eduction in Tilled Soils			D1 - Stunted or D2 - Geomorph	
	B5 - Iron Dep	oosits			C7 - Thin	Muck Sur	face			D5 - FAC-Neuti	
		on Visible on Aerial Im Vegetated Concave S			D9 - Gauo Other (Ex						
	bo - Sparsely	v vegetated Concave	Sunace				(indiks)				
Field Observa	tions:										
Surface Water	Present?	🗹 Yes 🔲 No	Depth:	0-1	(in.)			Matlen al III.	duala av C		
Water Table Pr	resent?	🗆 Yes 🗹 No	Depth:	0	(in.)			Wetland Hy	arology Pl	resent?	Yes 🗆 No
Saturation Pres	sent?	🗆 Yes 🗹 No	Depth:	0	(in.)						
Describe Record	ded Data (str	eam gauge, monitori	ing well, a	aerial pho	otos, previ	ous inspe	ections), if available:		N/A		
Describe Record Remarks:		eam gauge, monitori	-		otos, previ	ous inspe	ections), if available:		N/A		
Remarks:			-		otos, previ	ous inspe	ctions), if available:		N/A		
Remarks: SOILS	Area forme	d due to construction	on of sub	ostation	-	-			N/A		
Remarks: SOILS Map Unit Name	Area forme	d due to construction	on of sub	Ohio till	plain, 2 to	6 perce	nt slopes				
Remarks: SOILS Map Unit Name Profile Descri	Area forme	d due to construction	on of sub	Ohio till	plain, 2 to	6 perce	nt slopes			Pore Lining, M=Matrix)	Toyturo
Remarks: SOILS Map Unit Name Profile Descri Top	Area forme	d due to construction	on of sub	Ohio till m the absence of Matrix	plain, 2 to	6 perce	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redu	ox Features	ains; Location: PL=F	1	Texture
Remarks: SOILS Map Unit Name Profile Descri Top Depth	Area forme	d due to construction Crosby silt loam, S the depth needed to document the in Horizon	contraction of sub couthern ndicator or confir	Ohio till m the absence of Matrix (Moist)	plain, 2 tc	6 perce	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	ox Features %	ains; Location: PL=F	Location	(e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Profile Descri Top Depth 0	Area forme e: ption (Describe to Bottom Depth 3	d due to construction	on of sub outhern dicator or confir Color 10YR	Ohio till m the absence of Matrix (Moist) 5/2	plain, 2 tc of indicators.) (Ty % 90	6 perce pe: C=Concentr 10YR	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 4/3	ox Features % 10	ains; Location: PL=F	Location M	(e.g. clay, sand, loam) clay loam
Remarks: SOILS Map Unit Name Profile Descri Top Depth	Area forme	d due to construction Crosby silt loam, S the depth needed to document the in Horizon	contraction of sub couthern ndicator or confir	Ohio till m the absence of Matrix (Moist)	plain, 2 tc	0 6 perce pe: C=Concentr 10YR 10YR	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	ox Features %	ains; Location: PL=F	Location	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descri Top Depth 0 3	Area forme	due to construction	on of sub outhern dicator or confir Color 10YR 10YR	Ohio till m the absence of Matrix (Moist) 5/2 5/2	plain, 2 tc of indicators.) (Ty % 90 90	6 perce pe: C=Concentr 10YR	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 4/3 4/4	ox Features % 10 10	ains; Location: PL=f	Location M M	(e.g. clay, sand, loam) clay loam
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10	Area forme ption (Describe to Bottom Depth 3 10 14	d due to construction	Color 10YR 10YR	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2	Plain, 2 tc of indicators.) (Ty % 90 90 60	0 6 perce pe: C=Concentr 10YR 10YR 10YR	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4	% 10 10 40	ains; Location: PL=F Type C C C	Location M M M	(e.g. clay, sand, loam) clay loam clay loam clay
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 	Area forme ption (Describe to Bottom Depth 3 10 14 	due to construction	Color 10YR 10YR 10YR	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 	plain, 2 tc of indicators.) (Ty % 90 90 60	0 6 perce perceconcentric 10YR 10YR 10YR 10YR 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4 	% 10 10 40	ains; Location: PL=F C C C 	Location M M 	(e.g. clay, sand, loam) clay loam clay loam clay
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 3 10 	Area forme ption (Describe to Bottom Depth 3 10 14 	Crosby silt loam, S the depth needed to document the in Horizon 1 2 3 	Color 10YR 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 	plain, 2 to of indicators.) (Ty) % 90 90 60	0 6 perce perc=Concentra 10YR 10YR 10YR 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4 	x 10 10 40	ains; Location: PL=F C C C 	Location M M 	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 3 10 	Area forme	Crosby silt loam, S the depth needed to document the in Horizon 1 2 3 	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 	plain, 2 tc vi indicators.) (Ty % 90 90 60 	6 perce perceconcentri 10YR 10YR 10YR 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4 	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	ains; Location: PL=F C C C 	Location M M 	(e.g. clay, sand, loam) clay loam clay loam clay
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 NRCS Hydric	Area forme	Crosby silt loam, S the depth needed to document the in Horizon 1 2 3 	Color Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a	plain, 2 tc findicators.) (Tyj % 90 90 60	0 6 percee perceConcentre 10YR 10YR 10YR 10YR essent □	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4):	ox Features % 10 10 40 Indicators	ains; Location: PL=F Type C C C s for Problem	Location M M natic Soils ¹	(e.g. clay, sand, loam) clay loam clay loam clay
Remarks: SOILS Map Unit Name Profile Descri Top Depth 0 3 10 NRCS Hydric	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol	due to construction	Color Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a	Plain, 2 tc Indicators) (Tyl % 90 90 60 <td>0 6 perce per C=Concentri 10YR 10YR 10YR ssent □ y Gleyed</td> <td>nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4):</td> <td>xx Features % 10 10 40 </td> <td>ains: Location: PL=F C C C 5 for Problem A16 - Coast</td> <td>Location M M natic Soils ¹ Prairie Redox</td> <td>(e.g. clay, sand, loam) clay loam clay loam clay </td>	0 6 perce per C=Concentri 10YR 10YR 10YR ssent □ y Gleyed	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Color (Moist) 4/3 4/4 5/4):	xx Features % 10 10 40	ains: Location: PL=F C C C 5 for Problem A16 - Coast	Location M M natic Soils ¹ Prairie Redox	(e.g. clay, sand, loam) clay loam clay loam clay
Remarks: SOILS Map Unit Name Profile Descri Top Depth 0 3 10 NRCS Hydric	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic Eg	due to construction	Color Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a	Plain, 2 tc #indicators) (Tyr % 90 90 60	0 6 perce pe: C=Concentr 10YR 10YR 10YR essent □ y Gleyed y Redox	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist) 4/3 4/4 5/4): Matrix	ox Features % 10 10 40	ains: Location: PL=F Type C C C for Problem A16 - Coast S7 - Dark S	Location M M t Prairie Redox urface	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descri Top Depth 0 3 10 NRCS Hydric □ □	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge	d due to construction	Color Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a Cators a	plain, 2 tc # indicators.) (Tyr % 90 90 60 <td>6 percee c=Concentr 10YR 10YR 10YR y Gleyed y Redox y Muck M</td> <td>nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix</td> <td>ox Features % 10 10 40 <u></u> <u>Indicators</u> 0 0</td> <td>ains: Location: PL=f Type C C C for Problem A16 - Coast \$7 - Dark S \$7 - Dark S \$7 - Dark S \$7 - Dark S</td> <td>Location M M t Prairie Redox Jurface Janganese Mass v Shallow Dark S</td> <td>(e.g. clay, sand, loam) clay loam clay loam </td>	6 percee c=Concentr 10YR 10YR 10YR y Gleyed y Redox y Muck M	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix	ox Features % 10 10 40 <u></u> <u>Indicators</u> 0 0	ains: Location: PL=f Type C C C for Problem A16 - Coast \$7 - Dark S \$7 - Dark S \$7 - Dark S \$7 - Dark S	Location M M t Prairie Redox Jurface Janganese Mass v Shallow Dark S	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 3 10 NRCS Hydric	Area forme ption (Describe to Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier	d due to construction	Color Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a	Plain, 2 tc # indicators.) (Tyl % 90 90 60	6 perce c-concentr 10YR 10YR 10YR 10YR y Gleyed y Redox bed Matrix ny Muck N ny Gleyed	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Redd Color (Moist) 4/3 4/4 5/4): Matrix ineral Matrix	ox Features % 10 10 40 <u></u> <u>Indicators</u> 0 0	ains: Location: PL=f Type C C C for Problem A16 - Coast \$7 - Dark S \$7 - Dark S \$7 - Dark S \$7 - Dark S	Location M M t t Prairie Redox urface Manganese Mass	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 3 10 NRCS Hydric NRCS Hydric	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic Ef A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a 0 0 0 0 0 0 0 0 0 0 0 0 0	Plain, 2 tc # indicators.) (Ty % 90 90 60 <tr tr=""> <</tr>	6 percee be: C-Concentr 10YR 10YR 10YR y Gleyed y Redox bed Matria y Gleyed y Gleyed	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS= Reduced Matrix, CS= Color (Moist) 4/3 4/4 5/4): Matrix K	ox Features % 10 10 40 <u></u> <u>Indicators</u> 0 0	ains: Location: PL=f Type C C C for Problem A16 - Coast \$7 - Dark S \$7 - Dark S \$7 - Dark S \$7 - Dark S	Location M M t Prairie Redox Jurface Janganese Mass v Shallow Dark S	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 3 10 NRCS Hydric	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic Ef A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	Crosby silt loam, S Crosby silt loam, S the depth needed to document the in Horizon 1 2 3	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 icators a	Plain, 2 tc # indicators.) (Tyl % 90 90 60	6 percee c=Concentr 10YR 10YR 10YR 10YR	nt slopes ation, D=Depletion, RM=Reduced Matrix, CSs Redo Color (Moist) 4/3 4/4 5/4): Matrix k urface	ox Features % 10 10 40 <u></u> <u>Indicators</u> 0 0	ains: Location: PL=f Type C C C for Problem A16 - Coast \$7 - Dark S \$7 - Dark S \$7 - Dark S \$7 - Dark S	Location M M t Prairie Redox Jurface Janganese Mass v Shallow Dark S	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrip Top Depth 0 3 10 NRCS Hydric 0 0 0 0 0 0 0 0 0 0 0 0 0	Area former ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick D S1 - Sandy M	d due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till on the absence of Matrix (Moist) 5/2 5/2 5/2 5/2 5/2 5/2	Plain, 2 tc # Indicators.) (Ty % 90 90 60 <tr tr=""> <tr tr=""> <tr tr=""></tr></tr></tr>	C-Concentr C-Concentr 10YR 10YR 10YR	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface	ox Features % 10 40 <u></u> <u></u> <u></u> <u></u> <u></u>	ains: Location: PL= Type C C 5 for Problem A16 - Coast S7 - Dark S F12 - Iron-M F12 - Very Other (Expla	Location M M natic Soils ¹ t Prairie Redox turface Manganese Mass (Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 NRCS Hydric NRCS Hydric Restrictive Layer	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic E ₁ A3- Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick IC S1 - Sandy M S3 - 5 cm Mt	d due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 icators a Cators a	Plain, 2 tc Indicators.) (Ty) % 90 90 60 <td>C-Concentr C-Concentr 10YR 10YR 10YR </td> <td>nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface</td> <td>ox Features % 10 40 <u></u> <u></u> <u></u> <u></u> <u></u></td> <td>ains: Location: PL=F</td> <td>Location M M M terairie Redox urface Aanganese Mass v Shallow Dark S ain in Remarks)</td> <td>(e.g. clay, sand, loam) clay loam clay loam </td>	C-Concentr C-Concentr 10YR 10YR 10YR	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface	ox Features % 10 40 <u></u> <u></u> <u></u> <u></u> <u></u>	ains: Location: PL=F	Location M M M terairie Redox urface Aanganese Mass v Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 NRCS Hydric NRCS Hydric Restrictive Layer (If Observed)	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic E ₁ A3- Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick IC S1 - Sandy M S3 - 5 cm Mt	due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 icators a Cators a	Plain, 2 tc Indicators.) (Ty) % 90 90 60 <td>C-Concentr C-Concentr 10YR 10YR 10YR </td> <td>nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface</td> <td>Image: oxylamic state in the state</td> <td>ains: Location: PL=F</td> <td>Location M M M terairie Redox urface Aanganese Mass v Shallow Dark S ain in Remarks)</td> <td>(e.g. clay, sand, loam) clay loam clay loam es urface</td>	C-Concentr C-Concentr 10YR 10YR 10YR	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface	Image: oxylamic state in the state	ains: Location: PL=F	Location M M M terairie Redox urface Aanganese Mass v Shallow Dark S ain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam es urface
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 NRCS Hydric NRCS Hydric Restrictive Layer	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic E ₁ A3- Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick IC S1 - Sandy M S3 - 5 cm Mt	due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 icators a Cators a	Plain, 2 tc Indicators.) (Ty) % 90 90 60 <td>C-Concentr C-Concentr 10YR 10YR 10YR </td> <td>nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface</td> <td>Image: oxylamic state in the state</td> <td>ains: Location: PL=F</td> <td>Location M M M to to to to </td> <td>(e.g. clay, sand, loam) clay loam clay loam es urface</td>	C-Concentr C-Concentr 10YR 10YR 10YR	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface	Image: oxylamic state in the state	ains: Location: PL=F	Location M M M to to to to 	(e.g. clay, sand, loam) clay loam clay loam es urface
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 NRCS Hydric NRCS Hydric Restrictive Layer (If Observed)	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic E ₁ A3- Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick IC S1 - Sandy M S3 - 5 cm Mt	due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 icators a Cators a	Plain, 2 tc Indicators.) (Ty) % 90 90 60 <td>C-Concentr C-Concentr 10YR 10YR 10YR </td> <td>nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface</td> <td>Image: oxylamic state in the state</td> <td>ains: Location: PL=F</td> <td>Location M M M to to to to </td> <td>(e.g. clay, sand, loam) clay loam clay loam es urface</td>	C-Concentr C-Concentr 10YR 10YR 10YR	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface	Image: oxylamic state in the state	ains: Location: PL=F	Location M M M to to to to 	(e.g. clay, sand, loam) clay loam clay loam es urface
Remarks: SOILS Map Unit Name Profile Descrij Top Depth 0 3 10 NRCS Hydric NRCS Hydric Restrictive Layer (If Observed)	Area forme ption (Describe to Bottom Depth 3 10 14 Soil Field Ir A1- Histosol A2 - Histic E ₁ A3- Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplett A12 - Thick IC S1 - Sandy M S3 - 5 cm Mt	due to construction	Color Color 10YR 10YR 10YR ere if ind	Ohio till m the absence of Matrix (Moist) 5/2 5/2 5/2 icators a Cators a	Plain, 2 tc Indicators.) (Ty) % 90 90 60 <td>C-Concentr C-Concentr 10YR 10YR 10YR </td> <td>nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface</td> <td>Image: oxylamic state in the state</td> <td>ains: Location: PL=F</td> <td>Location M M M to to to to </td> <td>(e.g. clay, sand, loam) clay loam clay loam es urface</td>	C-Concentr C-Concentr 10YR 10YR 10YR	nt slopes Redo Color (Moist) 4/3 4/4 5/4): Matrix tineral Matrix K riface Surface	Image: oxylamic state in the state	ains: Location: PL=F	Location M M M to to to to 	(e.g. clay, sand, loam) clay loam clay loam es urface



Midwest Region

VecGer Information (Polices: 30 in radius) 1 Second Damage Non-on-on-on-on-on-on-on-on-on-on-on-on-o	Project/Site:	Beatty Road Station Pre	oject				Wetland ID: Wetland 5 Sample Point: 09
Tree Stratum (Pactors: Nume Number of Dominance Test Worksheet 1. -							
Sectore Mane % Come Instance Instance Ominance Test Worksheet 1.			percase are non-na	tive spec	ies.)		
1.	Tree Stratum (P			% Cover	Dominant	Ind Status	Dominance Test Worksheet
2. <t< td=""><td>1.</td><td></td><td>-</td><td></td><td>-</td><td></td><td>bommance rest worksheet</td></t<>	1.		-		-		bommance rest worksheet
3. Tail Number of Dominant Species Across Al Stats							Number of Dominant Species that are OBL. FACW. or FAC: 2 (A)
4 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
6. <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>Total Number of Dominant Species Across All Strata: 2 (B)</td></t<>							Total Number of Dominant Species Across All Strata: 2 (B)
7.							
7.	6.						Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
9. Total Score of Multiply for 10.	7.						
10	8.						Prevalence Index Worksheet
Total Cover = 0 Baping/Shub Stratum (Plot size: 15 ft radius)	9.						Total % Cover of: Multiply by:
Saping/Shub Stratum (Plot size: 15 tradus) -	10.						OBL spp. 0 $x 1 = 0$
Sepling/Strute Stratum (Plot size: 15 ft radius)			Total Cover =	0			FACW spp. 20 X 2 = 40
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$							FAC spp. 5 X 3 = 15
2. <t< td=""><td>Sapling/Shrub St</td><td>ratum (Plot size: 15 ft radius)</td><td></td><td></td><td></td><td></td><td></td></t<>	Sapling/Shrub St	ratum (Plot size: 15 ft radius)					
3							UPL spp. 0 $x 5 = 0$
4. Prevalence index = B/A = 2.200 6. Prevalence index = B/A = 2.200 7. Prevalence index = B/A = 2.200 8. Prevalence index = B/A = 2.200 9.							
5. Prevalence Index = B/A =	-						Total <u>25</u> (A) <u>55</u> (B)
6. 7. 9. 10. 10. Total Cover = 0 Yes No Rapid Test for Hydrophytic Vegetation 10. Yes No Droinance Test 5 > 50% 11. Packera glabella 20 Y FACW Yes No Problem Hydrophytic Vegetation (Explain) * 4. 5. 9. <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
7. 8. 9. 10. Total Cover = 0 Yes No Rapid Test for Hydrophytic Vegetation 10. Yes No Rapid Test for Hydrophytic Vegetation 10. Yes No Rapid Test for Hydrophytic Vegetation 10. Yes No Problem Hydrophytic Vegetation (Explain)* 1. Parkcurn virgatum 5 Y FACW 3. 6 11. 12. <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Prevalence Index = B/A = 2.200</td>	-						Prevalence Index = B/A = 2.200
8. <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
9.							
10							
Total Cover = 0 Herb Stratum (Plot size: 5 ft radius)	-						
Herb Stratum (Plot size: 5 ft radius)	10.		Tatal Osuan				_
Herb Stratum (Plot size: 5 ft radius) Image: 1 ft radius) Image: 2 marker glabella 20 Y FACW 2. Panicum virgatum 5 Y FACW 'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 3. 4. 5. 6. 7. 9. 11.			l otal Cover =	0			
1. Packera glabella 20 Y FACW 2. Panicum virgatum 5 Y FAC 3. 4. 5. 6 7. 8. 9. 11. 12. 13. 14. 15. 14. 15. 14. 15. 3. <t< td=""><td>Lisch Otreture (Di</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Lisch Otreture (Di						
2. Panicum virgatum 5 Y FAC * Indicators of hydric soil and weltand hydrology must be present, unless disturbed or problematic. 3.				20	V	FACW	
3. <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
4. Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height. (DBH), regardless of height. 7. treat height (DBH), regardless than 3 in. (7.6cm) or more in diameter at breast height. (DBH), regardless than 3.28 ft. it all. 9. treat height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall. 10.		· · · · · · · · · · · · · · · · · · ·					present, unless disturbed or problematic.
5. Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 8. breast height (DBH), regardless of height. 9. breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall. 10.	-						Definitions of Vegetation Strata:
6 7. 8. 9. 10. 11. 12. 13. 14. 15. 7. 13. 14. Total Cover = 25 Woody Vines Stratum (Plot size: 30 ft radius) 1. 2. 3. 3. 4. 5.							
7. breast height (DBH), regardless of height. 9. 10.							Tree - Woody plants 3 in (7.6cm) or more in diameter at
9. 10. 11. 11.							breast height (DBH), regardless of height.
10. 11. 12. 13. 14. 15. Total Cover = 25 Woody Vine Stratum (Plot size: 30 ft radius) 1. 3. 3. 4. 5. Total Cover = 0	8.						
10. 11. 12. 13. 14. 15. 15. 16. 17. 17. 1. 1. 2. 3. 4. 5. 5. Total Cover = 0	9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
12. <	10.						ft. tall.
13. Woody Vines - All woody vines greater than 3.28 ft. tall. Woody Vines - All woody vines greater than 3.28 ft. in height.	11.						
13. <	12.						Herb - All herbaceous (non-woody) plants, regardless of size,
15. Woody Vines - All woody vines greater than 3.28 ft. in height. Woody Vine Stratum (Plot size: 30 ft radius)							and woody plants less than 3.20 ft. tall.
Total Cover = 25 Total Cover = 25 Woody Vine Stratum (Plot size: 30 ft radius) 1.							
Woody Vine Stratum (Plot size: 30 ft radius)	15.						Woody Vines - All woody vines greater than 3.28 ft. in height.
1. 2. 3. 4. 5. Total Cover = 0			Total Cover =	25			
1. 2. 3. 4. 5. Total Cover = 0							
2. 3. 4. 5. Total Cover = 0							
3. 4. 5. Total Cover = 0							
4. 5. Total Cover =							
5 Total Cover = 0							Hydrophytic Vegetation Present Ves No
Total Cover = 0							
	5.		Total Caura				
	Pomarka:		i otal Cover =	U			
	Remarks:						



Project/Site:		d Station Project					Stantec Project #:	193704259		Date:	02/23/16	
Applicant:		Electric Power					o: "			County:	Franklin	
Investigator #1		land		Invest	igator #2:					State:	Ohio	
Soil Unit:	CrB						WI/WWI Classification	n: none		Wetland ID:		
Landform:	Rise	مامر بانام ا			al Relief:		4 4 5	Deture			SP-NNAS-10	
Slope (%):	1%	ditions on the site ty	: 39.86068		ongitude:				WGS-84 No	Community ID:	n/a	
Are Vegetetion		or Hydrology	ypical ioi phificantly	uns une	od2	(ii no, expi	Are normal circumsta			Section:		
Are Vegetation		or Hydrology na	grinicanii sturally pr	oblomat	eu ? ic2					Township: Range:	n/a n/a Dir:	n/a
SUMMARY OF			aturany pi	opieniai						Kange.		∏/a
Hydrophytic Ve		sont?			i ⊡ No			Hydric Soils	Procont?		☑ Yes	
Wetland Hydro	0									Within A Wetl		
Remarks:		is regularly mowed						13 THIS OUT				
HYDROLOGY												
	rology Indic	ators (Check here	if indicat	ors are r	not preser	nt⊡):						
Primar				_	-				Secondary:			
	A1 - Surface				B9 - Wate B13 - Aqu					E6 - Surface So E10 - Drainage		
	A3 - Saturatio				B13 - Aqu B14 - True					C2 - Dry-Seaso		
	B1 - Water N	larks			C1 - Hydro	ogen Sulfi	de Odor			C8 - Crayfish B		
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial In	nagery
	B3 - Drift Dep B4 - Algal Ma						educed Iron eduction in Tilled Soils			D1 - Stunted or D2 - Geomorph	Stressed Plants	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neuti		
	B7 - Inundati	on Visible on Aerial Im			D9 - Gaug							
	B8 - Sparsely	Vegetated Concave	Surface		Other (Ex	plain in Re	emarks)					
Field Observa	tions:											
Surface Water	Present?	🗆 Yes 🗹 No	Depth:	0	(in.)			Wetland Hy	drology B	rocont?	lYes ☑ No	
Water Table P	resent?	🗆 Yes 🗹 No	Depth:	0	(in.)			wettanu ny	urology P			
Saturation Pre	sent?	🗆 Yes 🗹 No	Depth:	0	(in.)							
Describe Recor	ded Data (str	eam dauge monitor										
			ing wen, a	aenai pric	Jos, previ	ous inspe	ections), if available:		N/A			
Remarks:	(11	ourri guugo, mormor	ing wen, a	aenai pric	blos, previe	ous inspe	ections), if available:		N/A			
		oam gaago, monitor	ing wen, a	aenai pho	olos, previ	ous inspe	ections), if available:		N/A			
SOILS	×					•			N/A			
SOILS Map Unit Nam	e:	Crosby silt loam, S	Southern	Ohio till	plain, 2 to	6 perce	nt slopes					
SOILS Map Unit Nam Profile Descri	e: ption (Describe to	Crosby silt loam, S	Southern	Ohio till	plain, 2 to	6 perce	nt slopes			≏ore Lining, M=Matrix)		
SOILS Map Unit Nam Profile Descri Top	e: ption (Describe to Bottom	Crosby silt loam, S	Southern	Ohio till m the absence o Matrix	plain, 2 to	6 perce	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red	lox Features	ains; Location: PL=I	T	Texture	
SOILS Map Unit Nam Profile Descri Top Depth	e: ption _{(Describe to} Bottom Depth	Crosby silt loam, S the depth needed to document the i Horizon	Southern Indicator or confir	Ohio till m the absence o Matrix (Moist)	plain, 2 to of indicators.) (Typ %	6 perce	nt slopes aion, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist)	lox Features %	ains; Location: PL=1	Location	(e.g. clay, sand	
SOILS Map Unit Nam Profile Descri Top Depth 0	e: ption _{(Describe to} Bottom Depth 3	Crosby silt loam, S the depth needed to document the i Horizon 1	Southern Indicator or confir Color 10YR	Ohio till m the absence of Matrix (Moist) 4/2	plain, 2 to of indicators.) (Typ % 100	6 perce	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist)	lox Features % 	ains; Location: PL=f	Location 	(e.g. clay, sand loam	d, Ioam)
SOILS Map Unit Nam Profile Descri Top Depth 0 3	e: ption (Describe to Bottom Depth 3 10	Crosby silt loam, S the depth needed to document the i Horizon 1 2	Southern Indicator or confir Color 10YR 10YR	Ohio till m the absence of Matrix (Moist) 4/2 5/2	plain, 2 to of indicators.) (Typ % 100 90	6 perce	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3	lox Features % 10	ains; Location: PL=f Type C	Location M	(e.g. clay, sand loam clay loan	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10	e: ption (Describe to Bottom Depth 3 10 14	Crosby silt loam, S the depth needed to document the i Horizon 1 2 3	Southern Indicator or confir Color 10YR 10YR 10YR	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2	plain, 2 to of indicators.) (Tyr % 100 90 75	6 perce be: C=Concentr 10YR 10YR	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6	lox Features % 10 25	ains: Location: PL=# Type C C	Location M M	(e.g. clay, sand loam clay loan clay loan	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 	e: ption (Describe to Bottom Depth 3 10 14 	Crosby silt loam, S the depth needed to document the i Horizon 1 2 3 	Southern Indicator or confir Color 10YR 10YR 10YR	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2 	plain, 2 to of indicators.) (Tyr % 100 90 75	e 6 perce be: C=Concentr 10YR 10YR 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6 	lox Features % 10 25 	ains; Location: PL=I Type C C 	Location M M 	(e.g. clay, sand loam clay loan clay loan	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 	e: ption (Describe to Bottom Depth 3 10 14 	Crosby silt loam, S the depth needed to document the i Horizon 1 2 3 	Southern Indicator or confir Color 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2 	plain, 2 to of indicators.) (Typ 100 90 75 	e 6 perce per C=Concentra 10YR 10YR 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6 	lox Features % 10 25 	ains; Location: PL=I Type C C 	Location M M 	(e.g. clay, sand loam clay loan clay loan 	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 	e: ption (Describe to Bottom Depth 3 10 14 	Crosby silt loam, S the depth needed to document the is Horizon 1 2 3 	Southern ndicator or confir Color 10YR 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2 	plain, 2 to trindicators.) (Tyy % 100 90 75 	e 6 perce 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6 	lox Features % 10 25 	Type C C 	Location M M 	(e.g. clay, sand loam clay loan clay loan 	d, Ioam) n
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 	e: ption (Describe to Bottom Depth 3 10 14 	Crosby silt loam, S the depth needed to document the is Horizon 1 2 3 	Southern ndicator or confir Color 10YR 10YR 10YR 10YR 	Ohio till m the absence Matrix (Moist) 4/2 5/2 5/2 	plain, 2 to tindicators.) (Tyy % 100 90 75 	6 percee 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6 	lox Features % 10 25 	ains; Location: PL=I Type C C 	Location M M 	(e.g. clay, sand loam clay loan clay loan 	d, Ioam) n
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 	e: ption (Describe to Bottom Depth 3 10 14 	Crosby silt loam, S the depth needed to document the is Horizon 1 2 3 	Southern Indicator or confir Color 10YR 10YR 10YR 10YR 	Ohio till m the absence · Matrix (Moist) 4/2 5/2 5/2 	plain, 2 to trindicators.) (Tyr % 100 90 75 	6 percee or: C=Concentr 10YR 10YR 	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6 	lox Features % 10 25 	Type C C 	Location M M 	(e.g. clay, sand loam clay loan clay loan 	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 NRCS Hydric	e: ption (Describe to Bottom Depth 3 10 14 Soil Field In	Crosby silt loam, S the depth needed to document the i Horizon 1 2 3 	Southern Indicator or confir Color 10YR 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2 icators a	plain, 2 to findicators.) (Tyr % 100 90 75 	6 perce be: C=Concentr 10YR 10YR essent □	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6):	lox Features % 10 25 Indicators	ains; Location: PL=f Type C C for Probler	Location M 	(e.g. clay, sand loam clay loan clay loan 	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 NRCS Hydric	e: ption (Describe to Depth 3 10 14 Soil Field Ir A1- Histosol	Crosby silt loam, S the depth needed to document the i Horizon 1 2 3 ndicators (check h	Southern Indicator or confir Color 10YR 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2 icators a	Plain, 2 to (Indicators.) (Ty % 100 90 75	6 perce be: C=Concentr 10YR 10YR y Gleyed	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6):	lox Features % 10 25 Indicators	ains: Location: PL=I Type C C for Probler A16 - Coasl	Location M matic Soils ¹ Prairie Redox	(e.g. clay, sand loam clay loan clay loan 	d, Ioam) m
SOILS Map Unit Nam Profile Descri Top Depth 0 3 10 NRCS Hydric	e: ption (Describe to Depth 3 10 14 Soil Field In A1- Histosol A2 - Histic Eg	Crosby silt loam, S the depth needed to document the i Horizon 1 2 3 -	Southern Indicator or confir Color 10YR 10YR 10YR 10YR 	Ohio till m the absence of Matrix (Moist) 4/2 5/2 5/2 icators a	plain, 2 to findicators.) (Tyr % 100 90 75 	6 perce be: C=Concentri 10YR 10YR sesent □ y Gleyed y Redox	nt slopes ation, D=Depletion, RM=Reduced Matrix, CS Red Color (Moist) 4/3 5/6): Matrix	lox Features % 10 25 Indicators □	ains: Location: PL=1 Type C C for Probler A16 - Coasi S7 - Dark S	Location M matic Soils ¹ Prairie Redox	(e.g. clay, sand loam clay loan 	d, Ioam) m
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Midwest Region

Project/Site:	Beatty Road Station Pro	oject				Wetland ID: Wetland 5 Sample Point: SP-NNA
VEGETATION Tree Stratum (Pl	(Species identified in all upp ot size: 30 ft radius)	percase are non-na	ative spec	ies.)		
(Species Name		% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.		-				
2.						Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
						Number of Dominant Species that are OBL, FACW, of FAC. [A]
3.						
4.						Total Number of Dominant Species Across All Strata: 2 (B)
5.						
6.						Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
7.						
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
10.						$OBL spp. \qquad 0 \qquad x \ 1 = 0$
10.		Total Cover =	0			
		Total Cover =	0			
						FAC spp. 30 x $3 = 90$
	atum (Plot size: 15 ft radius)					FACU spp. 70 x 4 = 280
1.						UPL spp. 0 X 5 = 0
2.						
3.						Total 100 (A) 370 (B)
4.						
5.						Prevalence Index = B/A = 3.700
6.						
7.						
						Indrankutia Vanatatian Indiaatara.
8.						Hydrophytic Vegetation Indicators:
9.						Yes I No Rapid Test for Hydrophytic Vegetation
10.						✓ Yes ☐ No Dominance Test is > 50%
		Total Cover =	0			✓ Yes
						□ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 5 ft radius)					□ Yes
1.	Schedonorus arundina	ceus	60	Y	FACU	
2.	Poa pratensis		30	Y	FAC	* Indicators of hydric soil and wetland hydrology must be
3.	Lolium perenne		10	N	FACU	present, unless disturbed or problematic.
4.						Definitions of Vagatation Strates
						Definitions of Vegetation Strata:
5.						_
6						Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.						breast height (DBH), regardless of height.
8.						
9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.						ft. tall.
11.						
12.						Herb - All herbaceous (non-woody) plants, regardless of size,
12.						and woody plants less than 3.28 ft. tall.
14.						Wessite Miness All woods sizes grader than 2.00 ft in bright
15.						Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	100			
Woody Vine Strat	um (Plot size: 30 ft radius)					
1.						
2.						
3.						Hydrophytic Vegetation Present DYes DV0
4.						
5.		T / 1 C				
		Total Cover =	0			
Remarks:						

D.2 ORAM DATA FORMS



Wetland 1

WWWAS-01

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

Instructions

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

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

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

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

Background Information

Name: Nathan Noland Date: 2/23/2016 Attiliation: Stanter Consulting Services. Inc. Address: 11687 Lebanon Rd. Cincinnati, OH 45241 Phone Number: 513 - 842 - 8200 e-mail address: nathan. noland @stanter.com Name of Wetland: W-NNAS-01 Wetland 1 Vegetation Communit(les): PEM HGM Class(es): Depression Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Site Location 3 LaVLong or UTM Coordinate 39.862629, -83, 119911 USGS Qued Name West Columbus County Franklin Township Na Section and Subsection N/p Hydrologic Unit Code 05060001 Site Visit NA National Wetland Inventory Map None Ohio Wetland Inventory Map None Soil Survey CrB; Crosby silt loam, Southern Ohio till Plain Z to 6% slopes Delineation report/map See Surisdictional Delineation Report Soil Survey

1

Name of Wetland: W-NNAS-01 Wetland 1 Wetland Size (acres, hectares): 0.16 acre Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Ag Rield SP-NNAS-02 $\mathbf{\dot{o}}$ New Field W-NNAS-01 wh (Ht Ŵ New Field Facility SP-NNAS-01 Dirt Gravel Rd 5-NNA3-01-M Substation W-NNAS-02 Comments, Narrative Discussion, Justification of Category Changes: See Surisdictional Waters Report 17.5 Final score : **Category:** I

Scoring Boundary Worksheet

Wetland 1 W-NNAS-01

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

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

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

Narrative Rating

W-NNAS-01

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

#	Question	Circle one	10
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.55(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland, Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland	(NO) Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 5 YES Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a
8a	"Old Growth Forest." Is the welland a forested welland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

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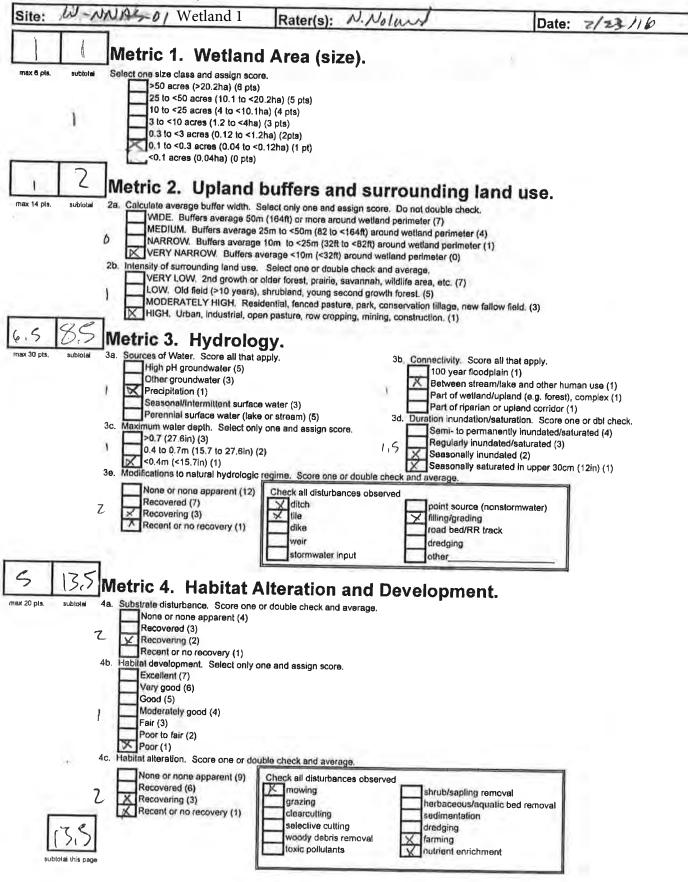
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	(NO)
	50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	10
a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	NO
b	elevation, or along a tributary to Lake Erie that is accessible to fish? Does the wetland's hydrology result from measures designed to	Go to Question 9b	Go to Question 10
50	prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland	YES	NO
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
90	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status	NO Go to Question 10
		Go to Question 10	5
10	Lake Plain Sand Prairies (Oak OpenIngs) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	YES Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	()
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	YES	NO
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wvandot, Crawford, and Marion	Wetland should be evaluated for possible	Complete Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

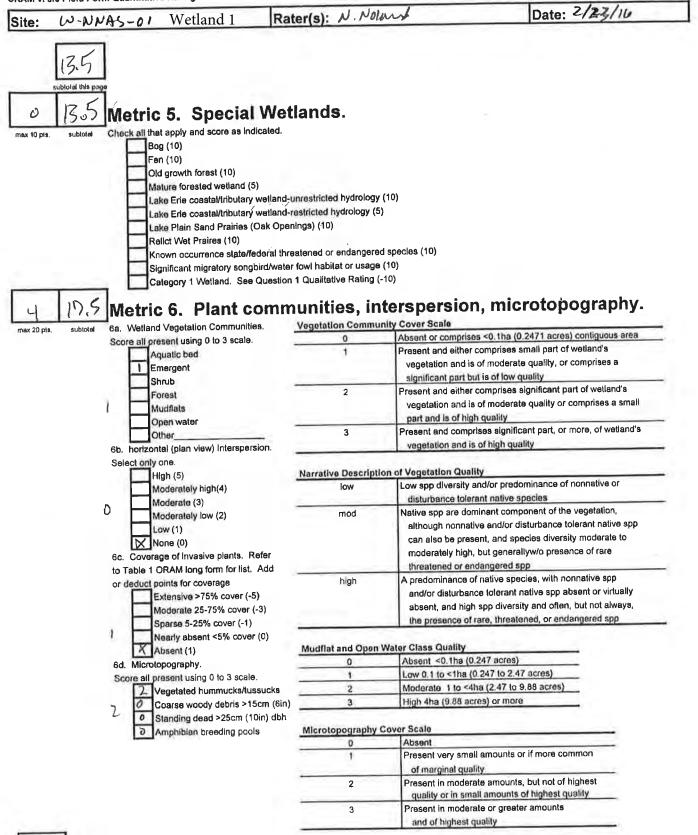
Wetland 1 W-NNAS-01

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

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

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17.5 GRAND TOTAL (max 100 pts)

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

ORAM Summary Worksheet Wetland 1

			W-NNAS-01
		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3,
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES MO	If yes, evaluate for Category 3; may also be 1 or 2,
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	Charles and the second
	Metric 2. Buffers and surrounding land use	1	Mediate and a second of
	Metric 3. Hydrology	6.5	P Annother States
	Metric 4. Habitat	S	A STATE OF THE STA
	Metric 5. Special Wetland Communities	0	and the second
	Metric 6. Plant communities, interspersion, microtopography	4	17 - 10 - 10 - 11 - 11 - 11 - 11 - 11 -
Ľ	TOTAL SCORE	17.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

1.1

W-NNAS-01

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

hoose one / Category 1 Category 2 C	Category	Category 2	/ Category 1	Choose one
hoose one / Category 1 Category 2 C	Catego	Category 2	/ Category 1	Choose one

End of Ohio Rapid Assessment Method for Wetlands.

W-NNAS-02

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

Instructions

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

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

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

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

Background Information

Name: Nathan Noland Date: 2/23/2016 Affiliation: Stantec Consulting Services. Inc. Address: 11687 Lebanon Rd. Cincinnati, OH 45241 Phone Number: 513 - 842 - 8200 Name of Wetland: W-NNAS-02 Wetland 2 e-mail address: Vegetation Communit(ies): PEM HGM Class(es): Depression Location of Wetland: Include map, address, north arrow, landmarks, distances, roads, etc. Site location Bently Rd LavLong or UTM Coordinate 39.861984, -83, 120224 USGS Qued Name West Columbus County Franklin Township Na Section and Subsection N/14 Hydrologic Unit Code 0506 000 / Site Visit NA National Wetland Inventory Map None Ohio Wetland Inventory Map rong Soll Survey CrB; Crosby silt loam, Southern Ohio till Plain, 2-6% clopes Delineation report/map See Surisdictional Delineation Report

1

Name of Wetland: W-NNAS-OZ Wetland 2 Wetland Size (acres, hectares): 1.15 ac Name of Wetland: Wetland Size (acres, hectares): 1,15 ac Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Dirt Grave Ad Freility A N WWWWS-01 W-NNAS-02 S-NNAS-01 substation * SPANNAS-03 × SP.NNAS-04 ţ, Comments, Narrative Discussion, Justification of Category Changes: See Jurisdictional Waters Report Final score : 25 **Category:**

2

Scoring Boundary Worksheet

W-NUMS-02

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

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

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

Narrative Rating

W-NNAS-02

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

#	Question	Circle one	0
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmiles australis,</i> or 2) an acldic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
Z	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

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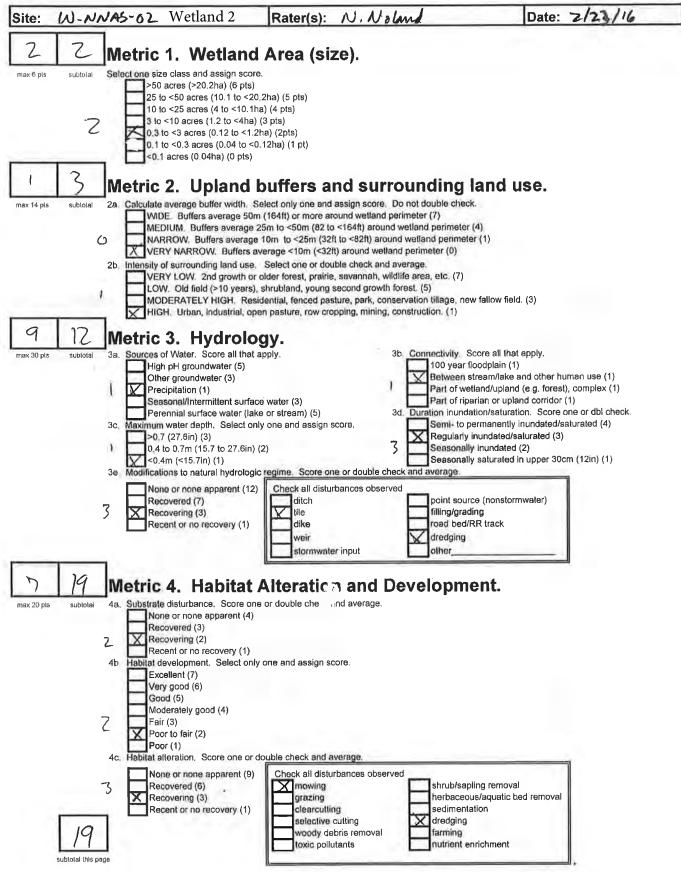
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	(NO)
	50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status:	Go to Question 9a
_		Go to Question 9a	60
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO Go to Question 10
915	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
C	Are Lake Erie water levels the wetland's primary hydrological influence.	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
2.		Go to Question 10	
e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status	NO Go to Question 10
0	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10 YES	NO
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed In Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

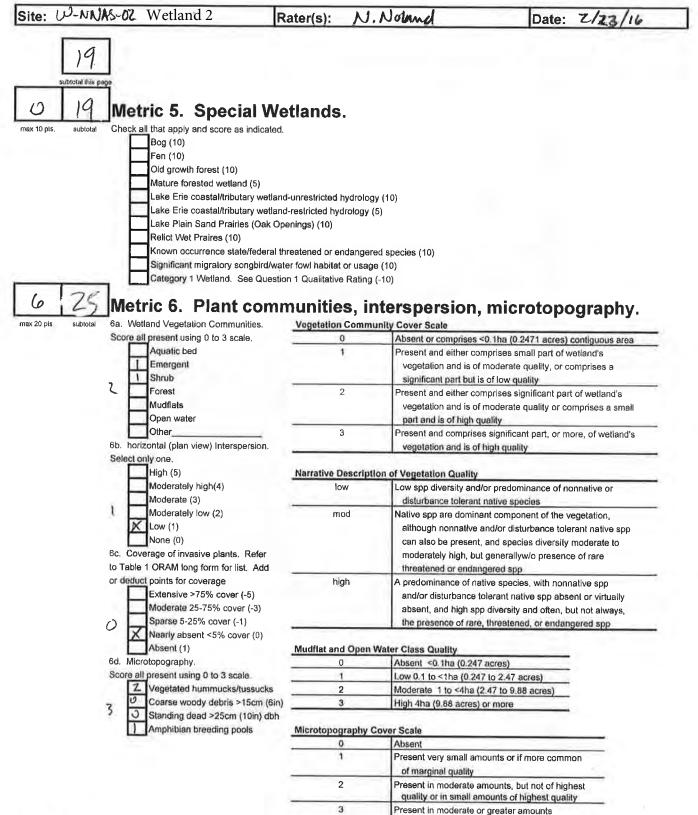
W-WNAS-02

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellito
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwelli
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsi
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virgínicum		Helianthus grosseserratu
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicate
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflore
	Parnassia glauca	Schechzeria palustris		Lythrum alatun
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianun
	Rhammus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutan
	Salix candida	Vaccinium oxycoccos		Spartina pectinate
	Salix myricoides	Woodwardia virginica		Solidago riddelli
	Salix serissima	Xyris difformis		
	Solidago ohioensis	5 35		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

-3







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

and of highest quality

ORAM Summary Worksheet

W	-NWK-02	•
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		circle answer or insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	A A A
	Metric 6. Plant communities, interspersion, microtopography	6	1
	TOTAL SCORE	25	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

9

Wetland Categorization Worksheet

W-NNAS-01

Choices	Circle one	0	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland		Is quantitative rating score less than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status		Evaluate the welland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the welland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the welland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the welland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

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

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

Instructions

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

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

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

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

Background Information

Name: Nathan Noland Date: 2/23/2016 Affiliation: Stanter Consulting Services. Inc. Address: 11687 Lebanon Rd. Cincinnati, OH 45241 Phone Number: 513 - 842 - 8200 e-mail address: e-mail address: nathan.noland@stantec.com Name of Wetland: W-NNAS-03 Wetland 3 Vegetation Communit(ies): PEM HGM Class(es): Depression Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Site location Lat/Long or UTM Coordinate 39.860742 -83.119896 USGS QUAD Name West Columbus County Franklin Township Na Section and Subsection N/14 Hydrologic Unit Code 0506 000 1 Site Visit NA National Wetland Inventory Map None Ohio Wetland Inventory Map rong Soil Survey Ko; Kokomo silty clay loam, 0-2% slopes Delineation report/map See Surisdictional Delineation Report

1

ame of Wetland: W-NNAS-03 Wetland 3
/etland Size (acres, hectares): O.O.S.ac. ketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.
N N N Acs Field Acs Field Numeros Stranger Stran
Beatty Rd. Demiments, Narrative Discussion, Justification of Category Changes: See Jurisdictional Waters Report
inal score : 🛛

Scoring Boundary Worksheet

Wetland 3

UP-NNAS-03 INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

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

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

3

Narrative Rating

Wetland 3 W-NNAS-03

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

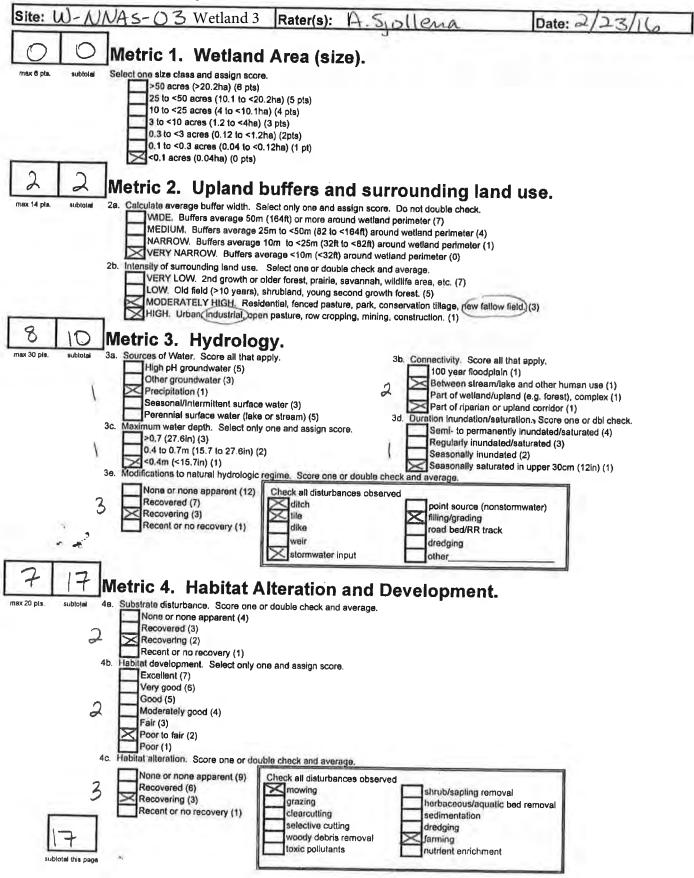
#	Question	Circle one	
-	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	NO
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		12
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category	Go to Question 3
		3 wetland. Go to Question 3	0
3	Documented High Quality Wetland. Is the wetland on record in	YES	NO
	Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	m
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO)
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acré) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis,</i> or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
ŝ	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO)
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland	Go to Question 7
		Go to Question 7	0
Z	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland	Go to Question 8a
		Go to Question 8a	(C)
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

		W-1	INAS-03
3b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	5
)a	Lake Erle coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	NO
b	elevation, or along a tributary to Lake Erie that is accessible to fish? Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or	Go to Question 9b YES	Go to Question 10
	landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
C	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland	YES	NO
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
3d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
)e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES	NO
		Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	-0
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	YES	(NO)
	characterized by the following description: the welland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its guality.	Go to Question 11	∂
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	evaluated for possible Category 3 status	Quantitative Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

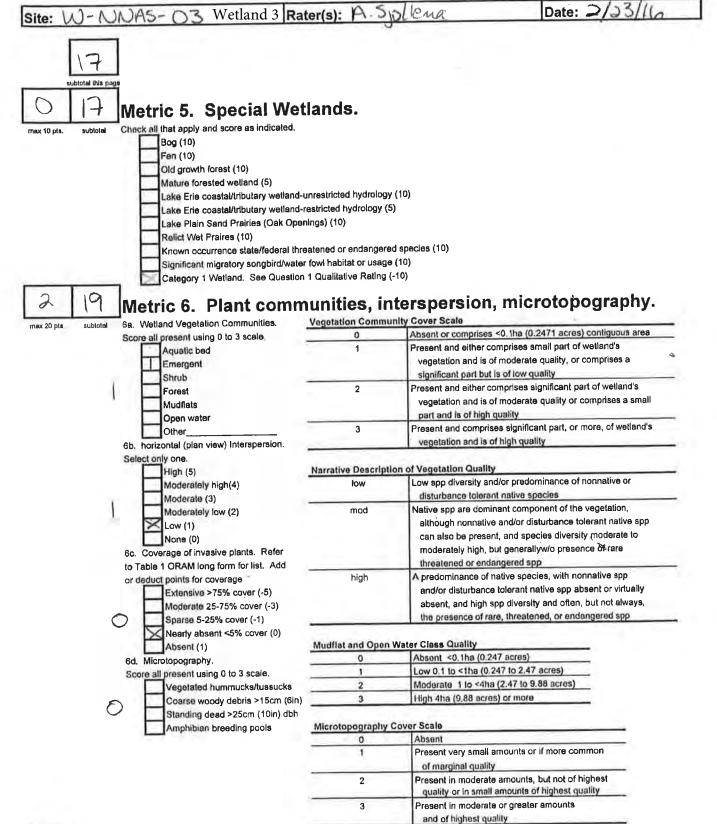
Wetland 3 W-NNA403

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

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



last revised 1 February 2001 jim



GRAND TOTAL(max 100 pts)

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

ORAM Summary Worksheet

Wetland 3 W-NNAS-03

		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
*	Question 5. Category 1 Wetlands	YES (10)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES O	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	dist berther
	Metric 2. Buffers and surrounding land use	2	THE REAL PROPERTY OF
	Metric 3. Hydrology	8	and an and a second
	Metric 4. Habitat	7	and the second s
	Metric 5. Special Wetland Communities	0	A STATE
	Metric 6. Plant communities, interspersion, microtopography	2	Comparison of the spinster of
	TOTAL SCORE	19	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

9

Wetland Categorization Worksheet

W-NNAS-03

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

End of Ohio Rapid Assessment Method for Wetlands.

W-NNAS-04

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

Instructions

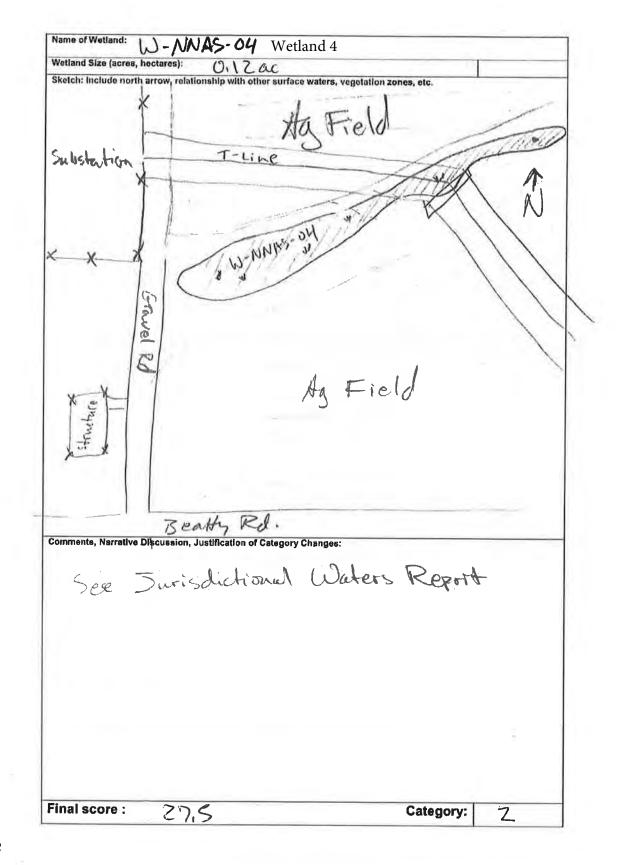
The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

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

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

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

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Dato: 2/23/2016	
Affiliation: Stantec Consulting Services. Inc.	
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Address: 11687 Lebanon Rd: Cincinnati, OH 45241 Phone Number:	
5/5-842-8200	
nathan notanda stante com	
Name of Wetland: W-NNAS-OL/ Wetland 4	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression Location of Wotland: Include map, address, north arrow, landmarks, distances, roads, etc. /	
AN A	
Seutty Rel 19	
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Levilong or UTM Coordinate 39.861028, -83.116765 USGS Quad Name West Columbus County Franklin	le built in strage
Let/Long or UTM Coordinate 39.861028, -83, 116765 USGS Quad Name West Columbus County Franklin Township N/A	a providence a
Let/Long or UTM Coordinate 39.861028, -83, 116765 USGS Quad Name West Columbus County Franklin Township N/A Section and Subsection N/A	
Let/Long or UTM Coordinate 39.861028, -83.116765 USGS Quad Name West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code 05060001	
Let/Long or UTM Coordinate 39.861028, -83.116765 USGS Quad Name West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code 05060001 Site Visit N/A	
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Let/Long or UTM Coordinate 39.861028, -83, 116765 USGS Quad Name West Columbus County Franklin Township N/A Section and Subsection N/n Hydrologic Unit Code 05060001 Site Visit N/A National Wetland Inventory Map None Ohio Wetland Inventory Map None	
Let/Long or UTM Coordinate 39.861028, -83.116765 USGS Quad Name West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code 05060001 Site Visit N/A National Wetland Inventory Map Objo Wetland Inventory Map	



Scoring Boundary Worksheet

N-NWAS-04 INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide

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

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

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

Narrative Rating

W-NNAS04

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

#	Question	Circle one	- 0
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohlo, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland, should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Watland is a Category 3 watland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES (Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NG Go to Question 5
5	Category 1 Wetlands. is the wetland less than 0.5 hectares (1 acre) In size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmiles australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
,	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly Sphagnum spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
2	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5,5-9,0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question Ba
la	"Old Growth Forest." Is the welland a forested welland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b

W-NNAS-04

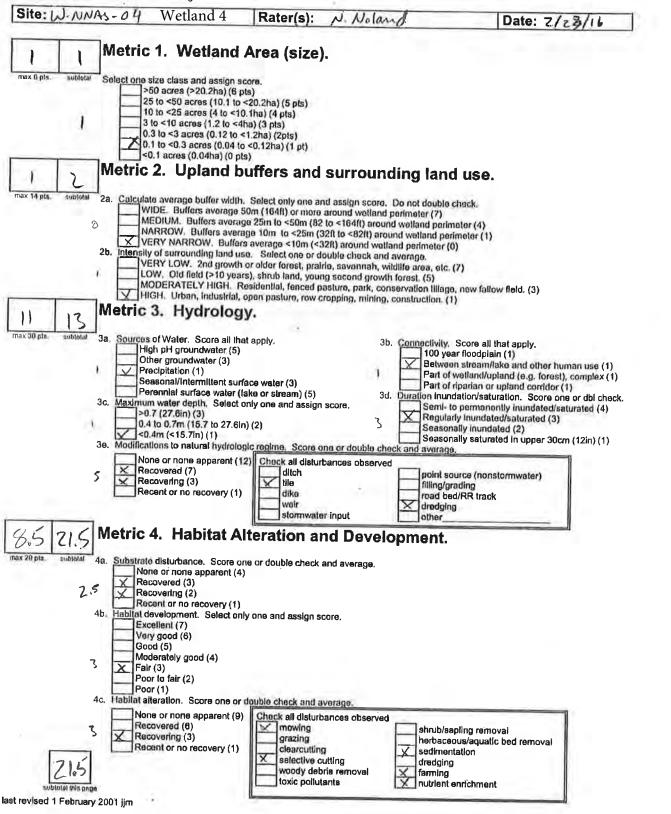
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO /
	50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	0
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Welland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
90	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
90	Does the wetland have a predominance of non-native or disturbance	YES	NO
50	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	0
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of welland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wat Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

W-NNAS-04

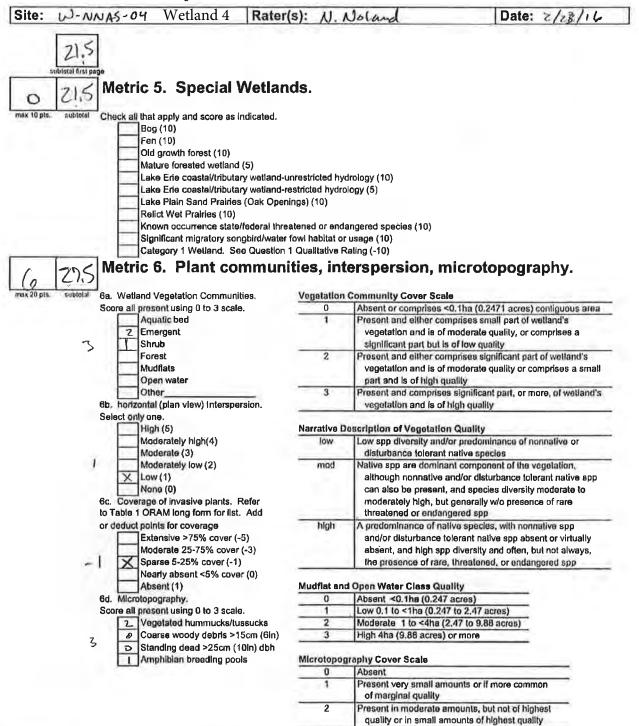
invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Invasivo/exotic app Lythrum salicaria Myriophyllum spicatum Najas minor Phularis arundinacea Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnus frangulo Typha angustifolia Typha xglauca	fen species Zygadenus elegans vor. glaueus Cacalia plantaginea Carex flava Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spp. Lobelia kalmii Pornassia glauca Potentilla fruticosa Rhammus ahtifolia Rhynchospora capillacea Saltx candida	bog species Calla palustris Carex atlantica var. capillucea Carex atlantica var. capillucea Carex atlisperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Briophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium coryonbosum Vaccinium oxycoccos	Oak Opening species Carex cryptelopis Carex stricta Cladium martscoides Calamagrostis stricta Calamagrostis canadensis Quercus palustris".	wet prairie species Calamograstis canadensis Calamograstis canadensis Carex stricta Carex subzaumit Carex satwellit Gentiana andrewsii Helianthus grosseserratus Liatris spicata Lysinachia quadriflora Lythrum alatum Pycnonthenum virginianum Silphium terebinthinaceum Sorghastrum nutans Spurtina pectinala
	Salix myricoides Salix serissima Solidago ohioensis Toflejdia ghutinosa Triglochin maritimum Triglochin maritimum	Woodwardia viiginica Xyris difformis		Solidago riddellii

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

ORAM v. 5.0 Field Form Quantitative Rating



ORAM v. 5.0 Field Form Quantitative Rating



27.5

End of Quantitative Rating. Complete Categorization Worksheets.

3

Present in moderate or greater amounts

and of highest quality

ORAM Summary Worksheet

Wetland 4

W-NNAS-04

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		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Calegory 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NG	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with Invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	t	THE CR
	Metric 2. Buffers and surrounding land use		
	Metric 3. Hydrology	11	
	Metric 4. Habitat	8.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	6	
	TOTAL SCORE	27.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland 4

Wetland Categorization Worksheet

W-NNAS-04

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

Final Category Category 2 Choose one Category 1 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Wetland 5

11-NNAS-05

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

Instructions

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

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

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

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

Namo: Nathan Noland	
Date: 2/23/2016	
Affiliation: Stantec Consulting Services. Inc.	-
Address: 11687 Lebanon Rd. Cincinnati, OH 45241	
Phone Number: 513-842-8200	
e-mail address: nathan. noland @stanter.com	
Name of Wetland: 11-4 to to C GF Wetland 5	
Vegetation Communit(les): PEM	
HGM Class(0s): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. /	
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Lat/Long or UTM Coordinate 38.860758, -83, 118209 USGS Quad Name Wast Columbus	1
West Columbus	
West Columbus	
County Franklin Township N/A	
County Franklin Township N/A Section and Subsection N/A	
County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code 05060001	
West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code 05060001 Site Visit N/A National Wetland Inventory Map	
West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code OSO60001 Site Visit N/A National Wetland Inventory Map None	
West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code OS 06 000 1 Site Visit N/A National Wetland Inventory Map Non e Ohio Wetland Inventory Map Non e	
West Columbus County Franklin Township N/A Section and Subsection N/A Hydrologic Unit Code 05060001 Site Visit N/A National Wetland Inventory Map None Ohio Wetland Inventory Map None	un Z-6%

14

Name of Wetland: W-NNAS-05 Wetland Size (acres, hectares): 0,05a	1(
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Comments, Narrative Discussion, Justification of Cal	tegory Changes:
	1 1. Later Report
See Jurisdiction	al Waters Report
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See Jurisdiction	al Waters Report

Wetland 5

Scoring Boundary Worksheet

W-NNA--05

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.		
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Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.		
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	1	
Step 5	in all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		1
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wellands that form a patchwork on the landscape, divided by artificial boundaries, configuous to streams, lakes or rivers, or for dual classifications.	1	

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

Narrative Rating

W-NNAS-05

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

#	Question	Circle one	0	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical-habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Welland Is a Category 3 wetland. Go to Question 3	Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	RO Go to Question 4	
6	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland	Go to Question 5	
i	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and eilther 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acldic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 5 YES Wetland is a Category 1 wetland Go to Question 6	Go to Question 6	
1	Bogs. Is the wetland a peet-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly Sphagnum spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	Go to Question 7	
2	Fens. is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question Ba	Go to Question 8a	
Bn	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland Is a Category 3 wetland. Go to Question 8b	Go to Question 8b	

Wetland 5

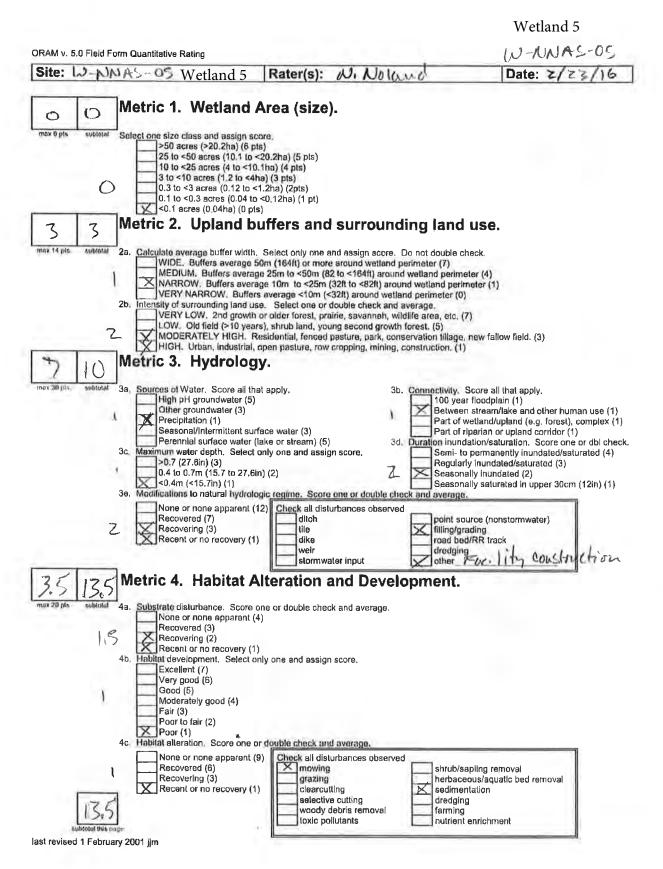
W-NUNS-Or,

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

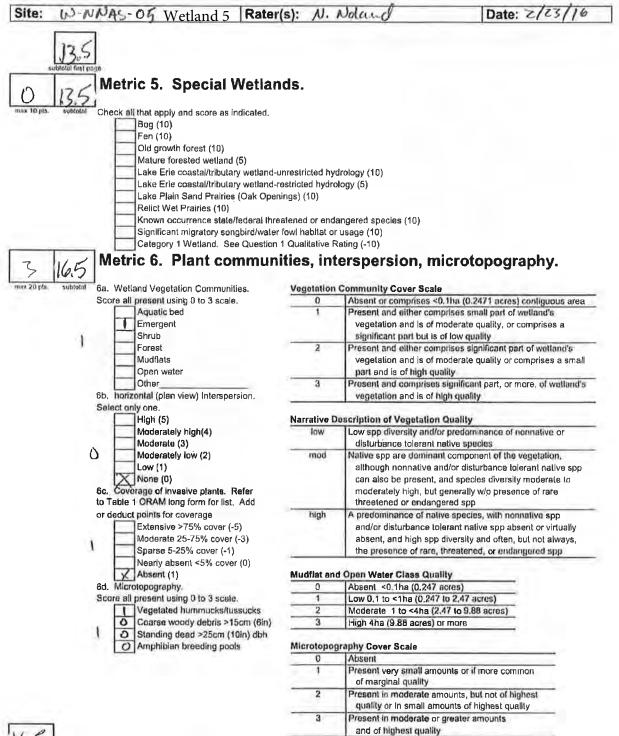
Wetland 5 W-NWAS-05

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Lythrum sahcarta Myriophyllum spicatum Najas minor Phalaris arundinacea Phalaris arundinacea Potamogeton crispus Rammeulus ficaria Rhammus frangula Typha angustifoliu Typha xglauca	Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eviophorum viridicarinatum Gentianopsis spp. Lobelia kalmit Parnassia glauca Potentilla fruticosa Rhamms abnifolia Rhynchospora capillacea Salix candida Salix myricoides Salix serissima Solidago ohioensis Tofieldia ghutinosa Driglochin maritimum	Calla polistris Carex atlantica var. capillacea Carex echinata Carex oligosperna Carex trisperna Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Lavix loricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp_ Vaccinium macroeurpon Vaccinium corynibosum Vaccinium corynibosum Vaccinium corynibosum Vaccinium corynibosum Vaccinium corynibosum	Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides Calamagrostis stricta Calamagrostis canadeusis Quercus palustris	Calamagrastis canadensis Calamagrastis canadensis Calamagrastis stricta Carex atherade Carex atherade Carex pellite Carex pellite Carex serite Carex serite Carex serite Carex serite Carex pellite Carex pellite Ca

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







End of Quantitative Rating. Complete Categorization Worksheets,

ORAM Summary Worksheet Wetland 5

wide or .

			N-NNAS-05
		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES MO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6, Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES M	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, ovaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	AND AD ANY A
	Metrlc 2. Buffers and surrounding land use	3	POT CONTRACTOR
	Metric 3. Hydrology	5	and the second s
	Metric 4. Habitat	3.5	A discourse of the
	Metric 5. Special Wetland Communities	0	15 million - T
	Metric 6. Plant communities, Interspersion, microtopography	3	Number of Street
	TOTAL SCORE	16.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Wetland 5 W-NNAS-05

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

Final Category Category 2 Choose one Category 1 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

9/30/2016 1:32:29 PM

in

Case No(s). 16-0549-EL-BNR

Summary: Notice - Request for Expedited Treatment: In the Matter of the Construction Notice for the Beatty Road Station Drainage Improvements electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company