Herlan Station Project, Monroe County, Ohio

Ecological Resources Inventory Report



Prepared for: American Electric Power 700 Morrison Road Gahanna, Ohio 43230

Prepared by: Dan Godec Stantec Consulting Services Inc.

September 29, 2016

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1.0 Introduction

American Electric Power (AEP) is proposing to construct the Herlan Station electric transmission substation facility in Monroe County, Ohio (Figure 1, Appendix A). The proposed Project area is located northeast of the intersection of State Route 78 and State Route 379, approximately two miles northeast of Summerfield, Ohio. The Project area was surveyed for wetlands, waterbodies, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on August 4, 5, and 17, 2016. Approximate locations of ecological features located immediately adjacent to the Project area were also recorded during the field surveys, where landowner access was permitted. These features are shown on the Figure 2 maps in Appendix A as "approximate" wetland, stream (waterway), and upland drainage features. No formal wetland/stream delineations, wetland determination data forms, or stream data forms were completed for these features.

2.0 Methods

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil surveys, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0 (USACE 2012). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05) (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI) and/or Qualitative Habitat Evaluation Index (QHEI) (OEPA 2012; OEPA 2006). The centerline of each waterway was identified and surveyed using a handheld submeter accuracy GPS unit and mapped with GIS software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within



the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

Stantec contacted the Ohio Department of Natural Resources (ODNR) Office of Real Estate, the ODNR Ohio Natural Heritage Program, and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the proposed Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by these species.



3.0 Results

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys within the Project area on August 4, 5, and 17, 2016, for wetlands, waterbodies, and threatened and endangered species or their habitats. Figure 2 (Appendix A) shows the wetlands and waterbodies identified by Stantec within the Project area, as well as the locations of upland drainage features identified within the Project area. Figure 3 (Appendix A) shows the habitats and locations of any identified rare, threatened or endangered species observed within the Project area during the rare, threatened, and endangered species habitat assessment surveys. Representative photographs of the wetlands, streams, upland drainage features, and other habitats identified within the Project area are included in Appendix C of this report (photo locations are shown on Figures 2 and 3, Appendix A). Completed wetland determination and HHEI data forms are included in Appendix D.

Vegetation Communities and Land Cover Types within the Project Study Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Study Area
Hay Field	Extremely disturbed area dominated by non-native graminoids.	No	13.80
Old Field	Area of extreme disturbance/ruderal community dominated by opportunistic invaders or native highly tolerant taxa; An infrequently maintained area dominated by herbaceous species with a limited presence of early successional woody species.	No	1.28
Mixed Early Successional/Second Growth Deciduous Forest	Area with intermediate to moderate disturbance with a varying overstory of shade tolerant, deciduous trees dominated by red maple (Acer rubrum), beech (Fagus grandifolia), and various oak (Quercus spp.) species, with a thick understory of woody shrubs and herbaceous vegetation.	No	8.55
TOTAL			23.63

Table 1. Vegetation Communities and Land Cover Found within the Herlan Station Project Area,Monroe County, Ohio



3.2 WETLANDS

No wetlands were identified within the Project area. One wetland determination data form was completed in a low lying/old field area. This wetland determination sample point did not meet three criteria necessary to be considered a wetland.

3.3 STREAMS

Table 2. Summary of Stream Resources Found within the Herlan Station Project Area, Monroe County, Ohio

Stream Name	Photo Numbers ¹	Receiving Waters	Stream Flow Regime ²	Stream Evaluation Method	Stream Evaluation Score	OHWM Width (feet) ³	Delineated Length (feet) within Project Study Area
Stream 1	1, 2	South Fork	Intermittent	HHEI	33	2	162.5
Stream 2	3, 4	South Fork	Intermittent	HHEI	20	1.5	77.1
Stream 3	5, 6	South Fork	Intermittent	HHEI	39	2	594.7
Stream 4	7,8	South Fork	Ephemeral	HHEI	18	1	119.4
						TOTAL	953.7
¹ Appendix	C – Represer	ntative Photogra	phs				
² Stream clc	issification is	based on Federa	al Register/Vol. 67	7, No. 10 (USAC	CE 2002)		
$^{3}OHWM = O$	Drdinary High	Water Mark					

Three upland drainage features were identified in and/or near the southwest corner of the study area. These features appeared to exhibit the characteristics of a stream within the Project area. Upon further investigation outside of the study area, it was found that these features did not maintain a continuously defined bed, bank, and ordinary high water mark, and they did not have a connection to streams or other jurisdictional waters of the United States. Representative photographs of these features can be found in Appendix C.



RARE, THREATENED, OR ENDANGERED SPECIESHABITAT 3.4

Table 3. Summary of Potential Ohio State-Listed Species within the Herlan Station Project Area, Monroe County, Ohio

Common Name	Scientific Name	State Listing ¹	Known to Occur in Monroe County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
					Amphibian			
Eastern Hellbender	Cryptobranchus alleganiensis alleganiensis	E	Yes	No	Found mostly in unglaciated portions of Ohio and prefers large, swift flowing streams where they hide under larger rocks (ODNR 2016b).	No	No impacts are anticipated due to lack of suitable habitat within the Project area.	Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.
	•	·	·	·	Butterfly	•	·	·
Regal Fritillary	Speyeria idalia	E	Yes	No	Occurs in tallgrass prairie remnants and other open sites including damp meadows, marshes, wet fields, and pastures (Butterflies and Moths of North America 2016).	No	No impacts are anticipated due to lack of suitable habitat within the Project area.	No comments received.
					Fish			
Channel Darter	Persina copelandi	E	Yes	No	Habitat includes warm, low and moderate gradient rivers and large creeks in areas of moderate current. This darter usually is found over sand and gravel substrates. It prefers clear water and silt-free bottoms (NatureServe 2016).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	The ODNR recommends no in-water work occur in perennial streams from April 15 through June 30, to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this species or other aquatic species.
River Darter	Percina shumardi	Т	Yes	No	Large rivers and lower part of tributaries; deep chutes and riffles where current is swift and bottom is coarse gravel or rock (NatureServe 2016).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	The ODNR recommends no in-water work occur in perennial streams from April 15 through June 30, to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this species or other aquatic species.
Tippecanoe Darter	Etheostoma tippecanoe	Т	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 2016b).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	The ODNR recommends no in-water work occur in perennial streams from April 15 through June 30, to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this species or other aquatic species.
Ohio Lamprey	lchthyomyzon bdellium	E	No	No	Ohio lampreys are only found in the Ohio River and the lower portion of its tributary streams. Spawning adults are found in clear brooks with fast flowing water and either sand or gravel bottoms. Juveniles or ammocoetes are found in slow moving water buried in soft substrate of medium to large streams (ODNR 2016b).	No	No suitable habitat was observed within the Project area and no in- water work is proposed to occur in perennial streams by AEP. Therefore, no impacts are anticipated.	The ODNR recommends no in-water work occur in perennial streams from April 15 through June 30, to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this species or other aquatic species.
					Mussel			
Ohio Pigtoe	Pleurobema cordatum	E	Yes	No	This mussel prefers strong currents of large rivers with substrates of sand and gravel, though it is also somewhat tolerant of lentic systems (NatureServe 2016).	No	No suitable habitat is present within the Project area. Therefore, no impacts are anticipated.	No comments received.



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Common Name	Scientific Name	State Listing ¹	Known to Occur in Monroe County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment
					Mammal		
Indiana Bat	Myotis sodalis	E	Yes	No	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). 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; USFWS 2015). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	Yes	No potential hibernacula were observed within the Project area. One potential Indiana bat roost tree was identified within the Project area during the field surveys. It is anticipated that this potential roost tree can be avoided or removed between October 1 and March 31. Therefore, impacts to this species are not anticipated.
Black Bear	Ursus americanus	E	Yes	No	Black bears inhabit forests and nearby openings, including forested wetlands. When inactive, they occupy dens under fallen trees at ground-level or above-ground tree cavities or hollow logs, underground cave-like sites, or the ground surface in dense cover (NatureServe 2016).	Yes	Suitable habitat was observed within the Project area, but due to the mobility of this species, impacts to this species are not anticipated.

¹E=Endangered; T=Threatened ²According to Ohio Department of Natural Resources, State Listed Wildlife Species by County (ODNR 2016a). ³According to Ohio Natural Heritage Program (Appendix B).

ODNR Comments/Recommendations
If suitable habitat is present and trees must be cut, the ODNR recommends that tree clearing only occur between October 1 and March 31. If no tree removal is proposed, this project is not likely to impact this species.
Due to the mobility of this species, this project is not likely to impact this species.

HERLAN STATION PROJECT, MONROE COUNTY, OHIO

Table 4. Summary of	Potential Federally-Lis	ed Species within the Herlar	n Station Project Area, I	Monroe County, Ohio
				/ ·

Common Name	Scientific Name	Federal Listing ¹	Known to Occur in Monroe County? ²	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Indiana Bat	Myotis sodalis	E	Yes	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). 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; USFWS 2015b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	Yes	No potential hibernacula were observed within the Project area. One potential Indiana bat roost tree was identified within the Project area during the field surveys. It is anticipated that this potential roost tree can be avoided or removed between October 1 and March 31. Therefore, adverse effects to this species are not anticipated	The project is in the vicinity of one or more confirmed records of Indiana bats. Therefore, USFWS recommends that trees ≥ 3 inches dbh be saved wherever possible. Because this project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to this species. If no caves or abandoned mines are present and tree removal is unavoidable, seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) is recommended. Following this seasonal tree clearing recommendation should ensure that any effects to the Indiana bat are insignificant or discountable.
Northern Long- eared Bat	Myotis septentrionalis	Т	Yes	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2016). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	Yes	No potential hibernacula were observed within the Project area. One potential northern long-eared bat roost tree was identified within the Project area during the field surveys. It is anticipated that this potential roost trees can be avoided or removed between October 1 and March 31. Therefore, adverse effects to this species are not anticipated.	If no caves or abandoned mines are present and tree removal is unavoidable, seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) is recommended. Following this seasonal tree clearing recommendation should ensure that any effects to northern long-eared bats are insignificant or discountable.
¹ E=Endangered; T=Th ² According to USF	nreatened WS (2015a).						

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 area on August 4, 5, and 17, 2016. During the field surveys, one ephemeral stream totaling approximately 119.4 linear feet in length, and three intermittent streams totaling approximately 834.3 linear feet in length were delineated within the Project area. No impacts to the identified streams are anticipated as they will likely be avoided or temporarily crossed by timber mats. Table 2 contains detailed information regarding the streams identified within the Project 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 area at the time that fieldwork was conducted. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

The Project area includes potential roosting and foraging habitat for the Indiana bat and northern long-eared bat and is in the vicinity of one or more confirmed records of Indiana bats according to the U.S. Fish and Wildlife Service (USFWS; Appendix B). Therefore, the USFWS recommends that trees \geq 3 inches diameter breast height (dbh) be saved wherever possible. Because the Project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Because Indiana bat presence in the vicinity of the Project has been confirmed, clearing of trees \geq 3 inches dbh during the summer roosting season may result in direct take of individuals. If no caves or abandoned mines are present and tree removal is unavoidable, the Service recommends that removal of any trees \geq 3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. According to the USFWS (Appendix B), because Indiana bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species. In addition, the USFWS stated that due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species.

The ODNR Ohio Natural Heritage Program (Appendix B) stated that the Project is not located within any state-listed threatened or endangered species. Additionally, the ODNR 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 area or a one-mile radius of it.

The response received from the ODNR Office of Real Estate (Appendix B) indicated that the Project is within the range of the following state-listed threatened and endangered species of fish: channel darter, river darter, Tippecanoe darter, and Ohio lamprey. The ODNR recommended that no in-water work take place in perennial streams from April 15 to June 30, in



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order to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, the ODNR stated that this project is not likely to impact these or other aquatic species.

The ODNR also stated that the Project is within the range of the eastern hellbender. However, the ODNR stated that due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species. Additionally, the ODNR stated that the Project is within the range of the black bear, but that the Project is not likely to impact that species due to its mobility. Finally, the ODNR stated that the Project is within the range of the Indiana bat. They stated that if suitable Indiana bat habitat is present and trees must be cut, the ODNR recommends that tree clearing only occur between October 1 and March 31.



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Appendix A Figures

A.1 FIGURE 1 – PROJECT LOCATION MAP







Title Project Location Map

Figure No. 1

Client/Project



Notes

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



A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP





Figure No. 2

Title Wetland and Waterbody **Delineation Map**

Client/Project American Electric Power Herlan Station Project

1937004664 Prepared by HDB on 2016-08-29 Technical Review by CP on 2016-07-08 Independent Review by NN on 2016-09-05 Project Location Monroe County, Ohio



*No features within data frame



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 Data Sources Include: Stantec, AEP, NADS, FEMA, USGS, USFWS
 Orthophotography: 2015 NAIP



A.3 FIGURE 3 – HABITAT ASSESSMENT MAP







Figure No. [°]3

Title Habitat Assessment Map

Client/Project American Electric Power Herlan Station Project

Project Location

1937004664 Prepared by HDB on 2016-08-29 Technical Review by CP on 2016-07-08 Independent Review by NN on 2016-09-05



*No features within data frame



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 Data Sources Include: Stantec, AEP, NADS
 Orthophotography: 2015 NAIP



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Appendix B Agency Correspondence







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

September 28, 2016

Dan Godec Stantec 11687 Lebanon Road Cincinnati OH 45241

Re: 16-592; Request for Technical Assistance, Herlan Station Project

Project: The proposed project consists of constructing a new substation off Cole Road

Location: The proposed project is located in Seneca Township, Monroe 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 records 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 vicinity of one or more records for the Indiana bat (Myotis sodalis), a state endangered and federally endangered species. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute **presence**/absence in the area. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (Carva ovata), shellbark hickory (Carya laciniosa), bitternut hickory (Carya cordiformis), black ash (Fraxinus nigra), green ash (Fraxinus pennsylvanica), white ash (Fraxinus americana), shingle oak (Quercus imbricaria), northern red oak (Ouercus rubra), slippery elm (Ulmus rubra), American elm (Ulmus americana), eastern cottonwood (Populus deltoides), silver maple (Acer saccharinum), sassafras (Sassafras albidum), post oak (Quercus stellata), and white oak (Quercus alba). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the Ohio lamprey (*Ichthyomyzon bdellium*) a state endangered fish, the channel darter (*Percina copelandi*), a state threatened fish, the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish, and the river darter (*Percina shumardi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

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

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

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.

Water Resources: The Division of Water Resources has the following comment.

Based upon the site map identifying the location of the proposed development, the project appears to be located outside the Special Flood Hazard Area (i.e., one-percent-annual-chance or 100-year floodplain). For information regarding any additional or higher standards for local floodplain management requirements, please contact Carroll County's designated Floodplain Manager, Ms. Tammy Dowdell at 330-627-0003 or tdowdell@carrollcountyohio.us.

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



Ohio Department of Natural Resources

IOUNR KASICIL 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

August 11, 2016

Dan Godec Stantec Consulting Services, Inc. 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 Herlan Station project area, including a one mile radius, in Seneca Township, Monroe 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,

Debbie Woischhe

Debbie Woischke Ohio Natural Heritage Database Program

Godec, Daniel

From:susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>Sent:Tuesday, August 23, 2016 3:12 PMTo:Godec, DanielCc:nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.usSubject:Herlan Station Project, AEP Ohio Transmission, Monroe 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-1535

Dear Mr. Godec,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures

should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

The proposed project is in the vicinity of one or more confirmed records of Indiana bats. Therefore, we recommend that trees \geq 3 inches dbh be saved wherever possible. Because the project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat presence in the vicinity of the project has been confirmed, clearing of trees \geq 3 inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and tree removal is unavoidable, we recommend that removal of any trees \geq 3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. Please note that, because Indiana bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.

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 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.

Due to the project type, size, and location, we do not anticipate adverse effects to any other 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 Service should be initiated to assess any potential impacts.

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 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,

Jan

Dan Everson Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW

Appendix C Representative Photographs







Photograph 1. View of Stream 1. Photo taken facing upstream.



Photograph 2. View of Stream 1. Photo taken facing downstream.





Photograph 3. View of Stream 2. Photo taken facing upstream.



Photograph 4. View of Stream 2. Photo taken facing downstream.





Photograph 5. View of Stream 3. Photo taken facing upstream.



Photograph 6. View of Stream 3. Photo taken facing downstream.





Photograph 7. View of Stream 4. Photo taken facing downstream.



Photograph 8. View of Stream 4. Photo taken facing upstream.





Photograph 9. View of upland (old field habitat) at wetland determination sample point (SP 1). Photo taken facing south.



Photograph 10. View of upland drainage feature within southwest portion of study area. Photo taken facing east.





Photograph 11. View of upland drainage feature within southwest portion of study area. Photo taken facing southwest.



Photograph 12. View of upland drainage feature near southwest portion of study area. Photo taken facing southeast.





Photograph 13. View of terminus of upland drainage feature near State Route 379, showing loss of defined bed and bank and no connection to jurisdictional streams. Photo taken facing south.



Photograph 14. View of terminus of upland drainage feature near State Route 379, showing loss of defined bed and bank and no connection to jurisdictional streams. Photo taken facing north.





Photograph 15. View of potential bat roost tree (PRT-1) in west-central portion of study area. Photo taken facing northwest.



Photograph 16. View of potential bat roost tree (PRT-1). Photo taken facing southwest.





Photograph 17. Representative view of hay field habitat. Photo taken facing northeast.



Photograph 18. Representative view of old field habitat. Photo taken facing west.





Photograph 19. Representative view of mixed early successional/second growth deciduous forest habitat. Photo taken facing southeast.



Photograph 20. Representative view of existing two-track dirt access road. Photo taken facing northeast.





Photograph 21. Representative view of existing two-track dirt access road. Photo taken facing southwest.

Appendix D Data Forms

D.1 HHEI DATA FORMS



SITE NAME/LOCATION Has law Stars SITE NUMBER 5+0 LENGTH OF STREAM REACH (ft) 200 I	100 Proviect <u>regm </u> RIVER BASIN <u>0 + 10</u> LAT. <u>39.81319 </u> LONG. <u>81, 30569</u> 9R COMMENTS	DRAINAGE AREA (ml ²)	<u>0,5 m</u> , 2
NOTE: Complete All Items On This Form STREAM CHANNEL NONE / NATE MODIFICATIONS:	- Refer to "Field Evaluation Manual fo	or Ohio's PHWH Streams" for Instr COVERING CRECENT OR NO REC	uctions OVERY
1. SUESTRATE (Estimate percent of ever (Max of 40). Add total number of significat TYPE PE BLDR SLABS [16 pts] PE BEDROCK [16 pts] PE BEDROCK [16 pt] PE GRAVEL (2-84 mm) [12 pts] PE SAND (<2 mm) [6 pts] PE Total of Percentages of Bidr Stabs, Boulder, Cobble, Bedrock V SCORE OF TWO MOST PREDOMINATE SUBST PE	y type of substrate present. Check ONL Y tw Int substrate types found (Max of 8). Final metr IIII SILT [3 pt] IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	o predominant substrate <i>TYPE</i> boxes ic score is sum of boxes A & B. PERCENT 15 OY DEBRIS [3 pts] 1 [0 pt] (B) (B) ER OF SUBSTRATE TYPES:	HHEI Metric Points Substrate Max = 40 23 A + B
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> 3.0 m - 4 0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] COMMENTS	_DK ≤ 1.0 m (≤ 3'3") [BANKFULL WIDTH (meters)	Max=30
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L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	L R (Most Predominant per Bank) Mature Forest, Wetland Immalure Forest, Shrub or Old Field Residential, Park, New Field Fenced Pasture	L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction	
FLOW REGIME (At Time of Evalue Stream Flowing Subsurface flow with isolated pools COMMENTS SINUOSITY (Number of bends pe None	en 61 m (200 ft) of channel) (Check ONLY one box); Moist Channel Dry channel Check ONLY on 1.0 2.0	nnel, isolated pools, no flow (Intermittent) el, no water (Ephemeral) a box):	
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June 20, 2008 Revision

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MODIFICATIONS: 1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY Ywg predominant substrate TYPE boxes (Max of 40, Add total number of significant substrate types found (Max of 4), Fnall metric score is sum of boxes A & 8. 1. SUBSTRATE (Estimate percent of significant substrate types found (Max of 4), Fnall metric score is sum of boxes A & 8. 1. Status (Sold) Image: Status (Sold) 2. Maximum Pool Depth (Measure the maximum pool depth within the G1 metax (200 ft) evaluation reach at the time of evaluation reach at the time of evaluation reach at the time of evaluation avoid price for mad culverts or storm water pipes (Check ONLY one box): > 30 entimetry (Status (Sold) 2. Maximum Pool Depth (Measure das the average of 3-4 messatements) (Check ONLY one box):	SITE NAME/LOCATION Here Start SITE NUMBERS LENGTH OF STREAM REACH (ft) 100 DATE 8/4/16 SCORER ATK NOTE: Complete All Items On This Form STREAM CHANNEL	COMMENTS COMMEN	HHEI Score (sum SIN <u>Ohic</u> IG. <u>82.30594</u> RIVER CO Eluation Manual for Ohio's ECOVERED RECOVERIN	DRAINAGE AREA (m ²) DE RIVER MILE B PHWH Streams" for Instr NG RECENT OR NO RECO	20 0,1 m; 1 uctions
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Pool Dept 3. > 30 centimeters [20 pts] > 5 cm - 10 m (15 pts] (S cm (5 pts]) (Max = 30 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): (A) meters (>13) [30 pts] (Max = 30 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): (Max = 30 > 3.0 m + 40 m (> 9 Tr - 13) [25 pts] (D m - 15 m (> 3 3", -4 8") (15 pts] (Max = 30 > 3.0 m + 40 m (> 9 Tr - 13) [25 pts] (D m - 15 m (> 3 3", -4 8") (15 pts] (Max = 30 > 1.5 m - 3.0 m (> 4 8" - 9") [20 pts] (Max = 30 m (> 3 3") [5 pts] (Max = 30 COMMENTS AVERAGE BANKFULL WIDTH (meters) (Max = 30 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters) (Max = 30 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY (Nol Treedominant per Bank) L R (Most Precominant per Bank) L R (Most Precominant per Bank) L R (Most Precom Pasture Row Crop (Cometerox) (Crop (C	1. SUESTRATE (Estimate percent of even (Max of 40). Add total number of signification of the signification of	ry type of substrate pres ant substrate types found ERCENT TYPE 2 2 2 3 3 4 3 4 1 5 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	sent. Check ONLY <u>two</u> predom (Max of 8). Final metric score is SILT [3 pt] LEAF PACK/WOODY DEBRI FINE DETRITUS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] TOTAL NUMBER OF SI	inant substrate TYPE boxes s sum of boxes A & B. PERCENT S [3 pts] (B) (B) (B) (B) (B) (B) (C) (C) (C) (C) (C) (C) (C) (C	HHEI Metric Points Substrate Max = 40 10 10 A + B
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY Conservation Tillage Wide >10m I R Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old I R Narrow <5m	 Maximum Pool Depth (Measure the many evaluation. Avoid plunge pools from road > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	aximum pool depth with I culverts or storm water p average of 3-4 measurer	in the 61 meter (200 ft) evalua ipes) (Check ONLY one box > 5 cm - 10 cm [15 pts] < 5 cm [5 pts] NO WATER OR MOIST CH MAXIMUM POOL DE nents) (Check ONLY > 1.0 m - 1.5 m (> 3'3" - 4'8' \$ 1.0 m (≤ 3'3") [5 pts] AVERAGE BANKFUI	ANNEL [0 pts] PTH (centimeters): one box): ") [15 pts] LL WIDTH (meters)	Pool Depth Max = 30 5 5 Bankfull Width Max=30 5
Sinucisity (Number of bends per 61 m (200 ft) of channel) (Check $ONLY$ one box): None 1.0 2.0 3.0 0.5 1.5 2.5 3.0	RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH ↓ R (Per Bank) Wide >10m ↓ Moderate 5-10m ↓ Narrow <5m ↓ None COMMENTS ↓ L R (Per Bank) Wide >10m ↓ R (Per Bank) ↓ None COMMENTS ↓ Stream Flowing ↓ Subsurface flow with isolated pool COMMENTS ↓ (Number of bends per None ↓ Stream Flow REGIME (At Time of Evaluent ↓ Stream Flowing ↓ Subsurface flow with isolated pool ↓ COMMENTS ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	This information m LAIN QUALITY $& NC$ FLOODPLAIN QUALIT L R (Most Predo Mature Fore Mature Fore Field Residential, Fenced Past Uation) (Check ONLY or s (Interstitial) Mature for Field Fenced Past Field Fenced Past Mature for Field Fenced Past Field Fenced Past Mature for Field Fenced Past Field Fenced Past Mature for Field Fenced Past Field Field Fenced Past Field F	nust also be completed DTE: River Left (L) and Right (F minant per Bank) L st, Wetland Image: Shrub or Old park, New Field Image: Shrub or Old Park, New Field Image: Shrub or Old iure Image: Shrub or Old Image: Shrub or Old Image: Shrub or Old	R) as looking downstream ☆ R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction ted pools, no flow (Intermittent) ter (Ephemeral) 3.0 3.0 >3	

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PHWH Form Page

	Stream Z
ADDITIONAL STREAM IN	NFORMATION (This Information Must Also be Completed):
QHEI PERFORM	MED? - TYES ANO QHEI Score(If Yes, Attach Completed QHEI Form)
DOWNSTREAM	M DESIGNATED USE(S)
D CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTA	ACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:_	Scimmer fred NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Monce	Township / City: Summer Field
MISCELLANEO	bus
Base Flow Conditions? (Y/	//N): Y Date of last precipitation: 8/1/16 Quantity: 0.65
Photograph Information:	
Elevated Turbidity? (Y/N):	Canopy (% open): 5%
Were samples collected for	or water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp	p (°C) Dissolved Oxygen (mg/i) pH (S.U.) Conductivity (µmhos/cm)
is the sampling reach repre	resentative of the stream (Y/N) If not, please explain:
· · · · · · · · · · · · · · · · · · ·	
Additional comments/descr	cription of pollution impacts:
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) ved? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) plogy
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) ved? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) plogy
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Voucher? (Y/N)
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) voucher? (Y/N) observed? (Y/N) Voucher? (Y/N) observed? (Y/N) voucher? (Y/N) observed? S AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Iandmarks and other features of interest for site evaluation and a narrative description of the stream's location Sloce
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Performed? (Y/N):	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheels from the Primary Headwater Habitat Assessment Manual) Voucher? (Y/N)
Performed? (Y/N):	If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Performed? (Y/N):	<pre>(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Voucher? (V/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) observed? voucher? (V/N) Aquatic Macroinvertebrates Observed? (Y/N) voucher? (Y/N) observed? voucher? (V/N) Aquatic Macroinvertebrates Observed? (Y/N) voucher? (Y/N) observed? observed</pre>
Performed? (Y/N):	If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site in number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) ved? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) observed? Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) observed? Observed? Voucher? Voucher? S AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be abeled with the site and so the stream's location Store Store S and other features of Interest for site evaluation and a narrative description of the stream's location Store Store S and other features Store Store Stor

SHE NAMELOCATION	SITE NUMBERST	recivn 3	RIVER BAS	SIN Otic	DR	AINAGE AREA (ml²)	2015m
ENGTH OF STREAM F	SCORER ATK	LAT <u>/9,81</u> CO	<u>5097</u> LON	IG. <u>81, 205197</u> RIV	ER CODE		<u>.</u>
NOTE: Complete A	Il Items On This Form	n - Refer to	o "Field Eva	luation Manual for	Ohio's PHW	/H Streams" for Instr	uctions
STREAM CHANNEL MODIFICATIONS:	NONE / NA	TURAL CHA	NNEL OR		OVERING [RECENT OR NO RECO	OVERY
. SUBSTRATE (I	Estimate percent of eve	ry type of s	ubstrate pres	ent. Check ONLY two	predominant s	substrate TYPE boxes	uue
(Max of 40). Ad	d total number of signific P	ant substrate ERCENT	e typies found (<u>TYPE</u>	Max of 8). Final metric	score is sum	of boxes A & B. PERCENT	Metric
	iS [16 pts]	7 -		SILT [3 pt]	(DEBRIS (3 n	<u> </u>	Points
BEDROCK	[16 pt]	3		FINE DETRITUS D	pts]		Substrat
	5-256 mm) [12 pts] _	10		CLAY or HARDPAN	[0 pt]	+5	MIGA - 4
GRAVEL (2 SAND (<2 n	-64 mm) [9 pts] nm) [6 pts]	69		ARTIFICIAL [3 pfs]			19
Total of P	ercentages of		(A)			(B)	AAR
Bldr Slabs, Boul	der, Cobble, Bedrock	<u>30</u>	IZ		-		ATD
CORE OF TWO MOST	PREDUMINA LE SUBS	IRAIEITP	E9:	TOTAL NOMBE	R OF SUBST	KATE TYPES:	
Maximum Pool evaluation. Avoi	Depth (Measure the main of plunge pools from road	aximum po d culverts or	o <i>l depth withi</i> storm water p	in the 61 meter (200 fr ipes) (Check ONLY	evaluation re one box);	ach at the time of	Pool Dep Max = 3
> 30 centimeters	[20 pts]		D	> 5 cm - 10 cm [15	pts]	· - ·	
> 22.5 - 30 cm [JU DISI						
> 10 - 22.5 cm [25 pts)		ð	NO WATER OR MC	DIST CHANNE	L [0 pts]	5
☐ > 10 - 22.5 cm [COMMENTS_	25 pts)		ð	NO WATER OR MC	DIST CHANNE	centimeters):	5
COMMENTS	25 pts)	average of	3-4 measuren	MAXIMUM P	DIST CHANNE	centimeters):	Bankful
→ 10 - 22.5 cm [COMMENTS	25 pts) DTH (Measured as the 37) [30 pts]	average of	3-4 measuren	< 5 cm [5 pta] NO WATER OR MC MAXIMUM P(nents) (Chec > 1.0 m - 1.5 m (> 3 .1.0 m - 1.5 m (> 3)	DIST CHANNE OOL DEPTH (k <i>ONLY</i> one b 3" - 4' 8") [15 p	centimeters):	Bankfull Width
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→ 10 - 22.5 cm [COMMENTS	25 pts] DTH (Measured as the 3) [30 pts] > 9' 7" - 13') [26 pts] > 4' 8" - 9' 7") [20 pts]	average of	3-4 measuren	AVERAGE B.	DIST CHANNE DOL DEPTH (k <i>ONLY</i> one b 3" - 4' 8") [15 p xs] ANKFULL WI	L (0 pts) centimeters): box): ats) DTH (meters)	S Bankful Width Max=30
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→ 10 - 22.5 cm [COMMENTS_ BANK FULL W > 4.0 meters (> 13 > 3.0 m - 4.0 m (> 1.5 m - 3.0 m (COMMENTS_ RIPARI R (Per I Wide U U Mode	25 pts] DTH (Measured as the 3') [30 pts] > 9' 7" - 13') [26 pts] > 4' 8" - 9' 7") [20 pts] An ZONE AND FLOODF IAN WIDTH Bank) >10m rate 5-10m	This i PLAIN QUAL FLOODF L R D D	a-4 measuren	AVERAGE B. MAXIMUM P(MAXIMUM P(MAXIMUM P(1.0 m - 1.5 m (> 3' \$ 1.0 m (s 3' 3'') [5] AVERAGE B. Must also be complete DTE: River Left (L) and Y minant per Bank) st, Wetland rest, Shrub or Old	ANKFULL WI Right (R) as ic Change of the second s	L (0 pts] 4 centimeters): 4 cox): 1.2 oxx): 1.2 otherwise 1.2 conservation Tillage 1.1 Uthan or Industrial 1.1	S Bankful Width Max=30
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→ 10 - 22.5 cm [COMMENTS	25 pts] IDTH (Measured as the 3) [30 pts] > 9' 7" - 13') [25 pts] > 4' 8" - 9' 7") [20 pts] AN ZONE AND FLOODF IAN WIDTH Bank) >10m rate 5-10m w <5m INTS	This i PLAIN QUAL FLOODF L R D D D D D D D	a-4 measurem a-4 measurem and information <u>m</u> information <u>m</u>	AVERAGE B. Must also be complete Maximum Price also be completed MAXIMUM Price > 1.0 m - 1.5 m (> 3' > 1.0 m (≤ 3' 3") [5 m AVERAGE B. Must also be completed DTE: River Left (L) and Y. minant per Bank) st, Wetland rest, Shrub or Old Park, New Field ure	DIST CHANNE DOL DEPTH (k ONLY one b 3" - 4" a") [15 p xs] ANKFULL WI Right (R) as ic C C C C C C C C C C C C C C C C C C C	L (0 pts] 4 centimeters): 4 cox): 1 ates] 1.2 DTH (meters) 1.2 coxking downstream Ar 1.2 cokking downstream Ar 1.2 conservation Tillage 1.1 Urban or Industrial 0pen Pasture, Row Crop Mining or Construction	S Bankful Width Max=30 15
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PHWH Form Page - 1

DDITIONAL OTOFICE INFO		A LA CARACTERISTICS
UDITIONAL STREAM INFORMATION (his Information Must Also be Completed):	
QHEI PERFORMED? - 🗍 Yes	No QHEI Score (If Yes, Attach Cor	npleted QHEI Form)
DOWNSTREAM DESIGNATED	USE(S)	
WWH Name: <u>>6445 tor</u>	E Disl	tance from Evaluated Stream
	Dist	ance from Evaluated Stream
F LYUTI IVAIIIC.	Dist	ance from Evaluated Stream
MAPPING: ATTACH COPIES OF	MAPS, INCLUDING THE ENTIRE WATERSHED AREA	CLEARLY MARK THE SITE LOCATION
SGS Quadrangle Name: Summ	NRCS Soil Map Page:	NRCS Soil Map Stream Order
punty: Monroe	Township / City: Sum	mesfield .
MISCELLANEOUS		
Y	Ghli	0.0-11
ase Flow Conditions? (Y/N): D	te of last precipitation: 8/1/16 C	Quantity:
notograph Information:		
evated Turbidity? (Y/N):	Canopy (% open): 5 %	
ere samples collected for water chemist)? (Y/N): <u>V</u> (Note lab sample no. or id. and att	ach results) Lab Number:
eld Measures: Temp (°C)		Conductivity (unbec/ere)
the sampling reach representative of the	stream (Y/N) If not, please explain:	A second s
·····		
ditional comments/description of polluti	n impacts:	
F		500 Store (1997)
	the second s	
BIOTIC EVALUATION		
erformed? (Y/N): (If Yes, Re	ord all observations. Voucher collections optional. NOT	FE: all voucher samples must be labeled with the site
ID number	Include appropriate field data sheets from the Primary H	Headwater Habitat Assessment Manual)
sh Observed? (Y/N) / Voucher?	Y/N) N Salamanders Observed? (Y/N) V	oucher? (Y/N)_N
ogs or Tadpoles Observed? (Y/N)	voucher? (Y/N) Aquatic Macroinvertebrates Ob	oserved? (Y/N) Voucher? (Y/N)
omments Regarding Biology.	P. 5	
		- Contraction and the second second second
		CH /This must be semi-late due
Include important landmarke and	ther features of interact for alto analysis	
and an annound and an annound an a state	viner reardines of mitchest int site exsination and a p	an anve description of the stream's location
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F	a particur	- 10 (at 4
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LOW	in the	XPS
Right		
"Jeen	- n - n	
	N 1.10	11 ST 21
	1. Cone	
	50 200	2
	50000	2

3

SITE NAME/LOCATION Heclen stat	ten Pro	HHEI Score (sum of met	rics 1, 2, 3) :	0./m; 2
LENGTH OF STREAM REACH (ft) 100	_LAT.39.8	15-198 LONG. 81.30442 RIV			
NOTE: Complete All Items On This Fo	rm - Réfer t	o "Field Evaluation Manual for	Ohio's PHWH	Streams" for Instru	uctions
STREAM CHANNEL NONE / N. MODIFICATIONS:	ATURAL CHA	WNEL ORECOVERED OREC	overing 🗍 i	RECENT OR NO RECO	VERY
1. SUESTRATE (Estimate percent of e	very type of s	substrate present. Check ONLY two	predominant sul	ostrate TYPE boxes	UNE
(Max of 40). Add total number of signif	icant substrat	e types found (Max of 8). Final metric <u>TYPE</u>	score is sum of	boxes A & B. <u>PERCENT</u>	Metric
BLDR SLABS [18 pts]			DEBRIS 13 nts		Points
BEDROCK [16 pt]	20		pts]		Substrate
COBBLE (65-256 mm) [12 pts]	10	CLAY OF HARDPAN	[0 pt]		Intax = 40
GRAVEL (2-84 mm) [9 pts]	30				13
					-
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	30	(A) 9		(B) 4	A+B
SCORE OF TWO MOST PREDOMINATE SUB	STRATE TYP	PES: TOTAL NUMBE	R OF SUBSTRA	TE TYPES:	
2. Maximum Pool Depth (Measure the	maximum po	ol depth within the 61 meter (200 ft) evaluation read	h at the time of	Pool Depth
evaluation. Avoid plunge pools from ro	ad culverts or	r storm water pipes) (Check ONLY)	one box): nts1		Max = 30
> 22.5 - 30 om [30 pts]		< 5 cm [5 pts]			0
> 10 - 22.5 cm [25 pts]		NO WATER OR MC	DIST CHANNEL	[U pts]	-
COMMENTS	2	MAXIMUM PC	DOL DEPTH (ce	ntimeters):	
BANK FULL WIDTH (Measured as th	e average of	3-4 measurements) (Chec	k ONLY one bo	x):	Bankfull
4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		> 1.0 m - 1.5 m (> 3'	3" - 4' 8") [15 pts ts]]	Max=30
> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]			***		5
COMMENTS		AVERAGE B/	ANKFULL WIDT	ዝ (meters)	2
	This	information must also be complete	d		
RIPARIAN ZONE AND FLOOD		LITY &NOTE: River Left (L) and PLAIN QUALITY	Right (R) as loo	king downstream☆	
L B (Per Bank)	LR	(Most Predominant per Bank)	LR		
Wide >10m		Mature Forest, Wetland		Conservation Tillage	
D D Moderate 5-10m	DE	Field		Jrban or Industrial	
□ □ Narrow <5m		Residential, Park, New Field		Open Pasture, Row Crop	
COMMENTS	00	Fenced Pasture		Wining or Construction	
	<i>aluation)</i> (C	theck ONLY one box):	el, isolated pool , no water (Ephe	s, no flow (Intermittent) emeral)	
FLOW REGIME (At Time of Ex Stream Flowing Subsurface flow with isolated po COMMENTS E Chemica	ools (Interstitie	ground water			
FLOW REGIME (At Time of Exstream Flowing Stream Flowing Subsurface flow with isolated proceeding COMMENTS SINUO SITY (Number of bends) None 0.5	per 61 m (20 1.0 1.5	(Check ONLY one) (Check ONLY one) 2.0 2.5	box):	3.0 >3	

4

	Stream 4
ADDITIONAL STREAM INFORMATION (This Information Must Also be C	ompleted):
QHEI PERFORMED? - O Yes ONO QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	가슴 집 가슴에, 가격 가슴 가슴 옷 이 옷을
Stwith Fork	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE	WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Summer field NRC	CS Soil Map Page: NRCS Soil Map Stream Order
County: Monsoe Township /	city_ Summerfield
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	//bQuantity:0.05-11
Photograph Information:	3
Elevated Turbidity? (Y/N): N Canopy (% open): 5%	
Were samples collected for water chemistry? (Y/N): N (Note lab same	ple no. or id, and attach results) Lab Numher
Field Measures: Temp (°C) Dissolved Ovygen (mg/l)	
Is the compling reach correct table of the close of an Y	
is the sampling reach representative of the stream (Y/N)_1 If not, pleas	e explain:
Additional comments/description of pollution Impacts:	
· · · · · · · · · · · · · · · · · · ·	A
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher colle	ections optional. NOTE: all voucher samples must be labeled with the
ID number. Include appropriate field data shee	ets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observ Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Ma	ved? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding Biology nove observed. Do	- channel
	/·
the second s	
DRAWING AND NARRATIVE DESCRIPTION OF	STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site	evaluation and a narrative description of the stream's location
190	
0.1	
clope >>	7
	The Sta
FLOW	189 h
1119	Aroch ??
0.0.0	h /h. /
e 1 jell	A 296
Scoubble	
	glape
	the second s
PHWH Form	Page - 2

D.2 WETLAND DETERMINATION DATA FORMS





WETLAND DETERMINATION DATA FORM

Eastern Mountains and Piedmont Region

Project/Site: Applicant: Investigator #1: Soil Unit: Landform: Slope (%): Are climatic/hyd	Herlan Sta AEP Aaron Kwo GwD2 - Gue Side slope 1 drologic cond	tion Project lek rnsey-Westmore silt lo Latitude: ditions on the site ty	am, 12-189 <u>39.81</u> pical for	Investig % slopes Loc Loc this time	gator #2: al Relief: ongitude: of year?	Convex -81.303 (If no, expl	Stantec Project #: NWI/WWI Classification: 734 ain in remarks)	193704664 N/A Datum: ☑ Yes □	NAD 83 No	Date: County: State: Wetland ID: Sample Point: Community ID: Section:	08/05/16 Monroe Ohio Non-JD Point SP-1 UPL 21
Are Vegetation	🗆 , Soil 🗆 ,	or Hydrology 🗆 sig	nificantly	/ disturbe	ed?		Are normal circumsta	nces_present?)	Township:	7N
Are Vegetation	□, Soil □,	or Hydrology 🗆 na	turally pr	oblemati	c?		Yes	Nロ		Range:	7W Dir:
SUMMARY OF	FINDINGS	10									
Hydrophytic Ve	getation Pre	esent?			⊡ No			Hydric Soils	Present?	Within A Woth	□ Yes ☑ No
Remarks:	ogy Present	1?			⊡ INO			is this samp	pling Point	within A wetta	and? - Tes - NO
Remarks.											
HYDROLOGY											
Wetlend Hydr	ology India	atara (Chaok hara i	Lindiaata	ro oro or	t propop	+ 🗆 \•			Coossilari		
	ology indica	ators (Check here i	Indicato	is are no	ot presen	(□):			Secondary:	B6 - Surface Sc	nil Cracks
	A1 - Surface A2 - High Wa A3 - Saturati B1 - Water M B2 - Sedime B3 - Drift De B4 - Algal Ma B5 - Iron Dep B7 - Inundati	Water ater Table on Aarks nt Deposits posits at or Crust posits on Visible on Aerial Im	agery		B9 - Wate B13 - Aqu B14 - Tru C1 - Hydr C3 - Oxid C4 - Pres C6 - Rece C7 - Thin Other (Ex	er-Stained latic Faun e Aquatic ogen Sulfi ized Rhizo ence of R ent Iron Re Muck Sur plain in Ro	Leaves a Plants de Odor ospheres on Living Roots aduced Iron eduction in Tilled Soils face emarks)			 B8 - Sparsely Ve B8 - Sparsely Ve B10 - Drainage B16 - Moss Trir C2 - Dry Seaso C8 - Crayfish B C9 - Saturation D1 - Stunted or D2 - Geomorph D3 - Shallow A D4 - Microtropo 	a cracks pagetated Concave Surface Patterns n Lines n Water Table urrows Visible on Aerial Imagery Stressed Plants ic Position quitard tranbic Relief
										D5 - FAC-Neutr	al Test
Surface Water Water Table Pro Saturation Pres	Present? esent? ent? ed Data (stre	☐ Yes ☑ No ☐ Yes ☑ No ☐ Yes ☑ No	Depth: Depth: Depth: g well, aei	0 0 0 rial photo:	(in.) (in.) (in.) s. previou	s inspect	ons), if available:	Wetland Hyd	drology Pr	esent? □	Yes ☑ No
Pomarke:		an gauge, monitonn	g wen, aei		3, previou	5 mopeou					
SOILS Map Unit Name	:	GwD2 - Guernsey-	Westmor	e silt loa	m, 12-18	% slope	Series Drainage Class:	Well Drained	to Somew	hat Poorly Dra	1
Taxonomy (Sub	ogroup):	[E.g. Typic Hapluda	aitsj								
	Rottom	the depth needed to document the in-	dicator or confirm	the absence of	indicators.) (Typ	e: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, CS=C	Covered/Coated Sand Grai	ns; Location: PL=Pc	ore Lining, M=Matrix)	Toxturo
Top	Donth	Horizon	Color	(Maint)	0/		Color (Moiot)		Turne	Location	(e.g. clay sand loam)
Depth	16 16				70			70	туре	Location	cilt loom
NRCS Hydric Soil Field Indicators (check here if indicators are not present A1- Histosol S5 - Sandy Redox A2 - Histic Epipedon S6 - Stripped Matrix A3 - Black Histic S7 - Dark Surface A4 - Hydrogen Sulfide S8 - Polyvalue Below Dark Surface (MLRA 147, 148) A10 - 2 cm Muck (LRR N) F2 - Loamy Gleyed Matrix A11 - Depleted Below Dark Surface F3 - Depleted Matrix A12 - Thick Dark Surface F6 - Redox Dark Surface S1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) F7 - Depleted Dark Surface S4 - Sandy Gleyed Matrix F8 - Redox Depressions					sent): F12 - Iron-Manganess F13 - Umbric Surface F19 - Piedmont Floor A 147, 148) F21 - Red Parent Ma	e Masses (LRR N, (MLRA 122, 136) aplain Soils (MLRA terial (MLRA 127, 147	VILRA 136) [.148) [r) [/tic vegetation and	Indicators fo A10 - 2cm M A16 - Coast F F19 - Piedmon TF12 - Very Other (Expla	r Problematic Soils 1 luck (MLRA 147) 'tarife Redox (MLRA 147, 148) t Floodplain Soils (MLRA 136, 147) Shallow Dark Surface in in Remarks)	
Restrictive Layer (If Observed)	Туре:	N/A		Depth:	N/A			Hydric Soil	Present?		Yes 🗹 No
Remarks:											



WETLAND DETERMINATION DATA FORM

Eastern Mountains and Piedmont Region

Project/Site:

Herlan Station Project

Wetland ID: Non-JD Point Sample Point SP-1

VEGETATION	(Species identified in all uppercase are non-na	ative spec	cies.)		
Tree Stratum (Plo	ot size: 30 ft radius)				
	<u>Species Name</u>	% 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: 4 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. $2 x 1 = 2$
	Total Cover =	0			FACW spp. $5 \times 2 = 10$
					FAC spp. 10 $X 3 = 30$
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. <u>103</u> $x 4 = $ <u>412</u>
1.	Juglans nigra	15	Y	FACU	UPL spp. $0 x 5 = 0$
2.	Sambucus nigra	2	N	FAC	
3.	Rubus allegheniensis	3	N	FACU	Total <u>120</u> (A) <u>454</u> (B)
4.					
5.					Prevalence Index = B/A = 3.783
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes I No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes
	Total Cover =	20			□ Yes \square No Prevalence Index is ≤ 3.0 *
					Yes I No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 5 ft radius)				Yes I No Problem Hydrophytic Vegetation (Explain) *
1.	Echinochloa muricata	5	N	FACW	* Indicators of hydric soil and wotland hydrology must be
2.	Schedonorus arundinaceus	20	Y	FACU	present, unless disturbed or problematic.
3.	Solidago altissima	25	Y	FACU	F
4.	Elymus canadensis	15	Y	FACU	Definitions of Vegetation Strata:
5.	Parthenocissus quinquefolia	5	N	FACU	
6	Toxicodendron radicans	3	N	FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Dipsacus fullonum	5	N	FACU	height (DBH), regardless of height.
8.	Carex vulpinoidea	2	N	OBL	
9.	Vernonia gigantea	5	N	FAC	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.	Trifolium hybridum	10	N	FACU	it, tan.
11.	Trifolium pratense	5	N	FACU	
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall
13.					and woody plants less than 5.20 ft. tail.
14.					
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 Ves No
4.					
5.					
	Total Cover =	0			
Remarks:					
1					

Additional Remarks:

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/22/2016 5:09:17 PM

in

Case No(s). 16-1856-EL-BLN

Summary: Letter of Notification -Herlan 138 kV Switching Substation Project Part 5 of 5 electronically filed by Mrs. Erin C Miller on behalf of AEP Ohio Transmission Company