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Case Number: 13-360-EL-BGA

File Date: 1/22/2014

Section: 1 of 3

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PUCO EXHIBIT FILING

Date of Hearing: ______ Case No. ____ 13-360-EL-BGA PUCO Case Caption: In the mother of the application amendment of Buckeye wind Lic for an its Certificate to Anstall and operate a wind electric generation Harden List of exhibits being filed: 's om pani michael Speerschneide Testimmy of - U pplication Goy M notice 3 Staff's Staff An vestigation Repart & ile commendation estimming of stuart siegfrie RECEIVED-DOCKETING DIV 2014 JAN 22 PM 3: 57 Reporter's Signature: Ais Dullin Date Submitted:

Proceeding

BEFORE THE OHIO POWER SITING BOARD

In the Matter of the : Application of Buckeye : Wind Farms, LLC, for an: Amendment to its : Case No. 13-360-EL-BGA Certificate to Install : and Operate a Wind : Powered Electric : Generation Facility in : Hardin County, Ohio. :

PROCEEDINGS

Before Mr. Scott Farkas, Administrative Law Judge, at the Ohio Power Siting Board, 180 East Broad Street, Columbus, Ohio, Hearing Room 11C, on Monday, January 6, 2014, at 10:00 a.m.

- - -

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Ohio Power Siting Board Staff Investigation Report and Recommendation

Case No.:	13-0360-EL-BGA		
Project:	Amendment to Buckeye I Wind Farm (08-0666-EL-BGN)		
Applicant:	Buckeye Wind LLC, subsidiary of EverPower Wind Holdings, Inc.		
Report Date:	November 1, 2013		
Summary of Staff Recommendations (see report text for discussion):			

Application:	[] Approval	[] Disapproval	[X] Approval with Conditions
Waiver:	[X] Approval,	in part	

I. Waiver Description

Attorneys representing Buckeye Wind LLC (Applicant) submitted a Motion for Waiver on March 15, 2013, with a Renewed Motion for Waiver filed four days later. With its Renewed Motion for Waivers, the Applicant sought waivers from certain provisions of Chapter 4906-17, OAC, that it believed were not applicable given the scope of the proposed amendment.

On July 1, 2013, Ohio Power Siting Board (OPSB) Staff filed a letter to the Administrative Law Judge in which it did not contest the requested waivers with the exception of the requirement to describe any future plans for future additions. In response, the Applicant filed a Notice of Withdrawal of Request of Waiver in which it withdrew the specific requested waiver as pertains to future plans. In addition, the Applicant indicated that it had no plans to propose additional wind turbines for the certificated Buckeye I or Buckeye II projects.

As of the writing of this report, the Administrative Law Judge has not ruled on the requested waivers.

II. Amendment Description

With its amendment, the Applicant is proposing to modify certain components of the Buckeye I wind farm previously certified in Case No. 08-0666-EL-BGN. The Applicant indicates that it has rights to all parcels on which the facility would be located, with no further land rights required for the proposed amendment. Specifically the Applicant has proposed changes to the following project components:

- Construction staging areas;
- Project Substation;
- Access Roads; and

• Electric Collection Line System.

The Applicant is not proposing to relocate or add wind turbines under this proposed amendment.

A. Construction Staging Areas

The Applicant initially proposed, and the Ohio Power Siting Board (Board) approved, three construction staging areas as part of the 08-0666-EL-BGN proceeding. With this amendment, the Applicant is proposing to adjust the sizes and locations of these three construction staging areas as summarized below in Table 1. The sizes and locations of the proposed amended staging areas are identical to those approved by the Board in the Buckeye II proceeding.

Staging Area	Original Staging Area Size (acres)	Proposed Amended Staging Area Size (acres)	Same Parcel as Originally Proposed
Eastern	3.75	10	Yes
Southern	3.75	9.5	Yes
Western	3.75	3.4	No

The Applicant has proposed to move the western staging area 1.3 miles west of its initial location to a parcel that the Applicant indicates it controls. This new location would be immediately northwest of where 3 Mile Road terminates at US Highway 36. The city of Urbana has raised a concern with this project component based on a perceived potential conflict with a city sewer line extension to a nearby business.¹ The Applicant asserts that its staging area would not impact the sewer line but nonetheless commits to any repairs in the event that damages do occur.²

The eastern and southern staging areas are proposed to be relocated at the request of the landowners within the same parcels as initially planned. Applicant asserts that the proposed changes to the construction staging areas would allow it to use the same staging areas for both the Buckeye I and Buckeye II (Case No. 12-0160-EL-BGN) projects.

Because the size and location of this project component has been previously approved by the Board in its approval of Buckeye II, and therefore found to have been reasonable,

¹City of Urbana Petition for Leave to Intervene; 3/27/13

² Applicant Response to Initial Set of Staff Data Requests, Question 3a

Staff did not conduct an additional analysis of the proposed staging areas in this amendment proceeding.

B. Project Substation

In its amendment, the Applicant has proposed to move the project substation within the same parcel as initially approved. The substation would entail the temporary disturbance of approximately 5 acres, with permanent disturbance estimated at 1.75 acres.

Applicant indicates that the proposed change to the substation location would allow it to use the same substation for both the Buckeye I and Buckeye II projects.

The size and location of the amended substation area are identical to those approved by the Board in the Buckeye II proceeding. Because the size and location of this project component has been previously approved by the Board, and therefore found to have been reasonable, Staff did not conduct an additional analysis of the proposed project substation location in this amendment proceeding.

C. Access Roads

The Applicant is proposing a new access road, as well as modifications to four previously approved access roads. Figure 6 of the Applicant's filing shows the certified and proposed amended access road locations. The access roads would entail a permanent disturbance 20 feet in width, while temporary disturbance would typically include vegetation clearing to a width of 55 feet. These disturbance parameters are consistent with those from the initial application.

1. Relocating four access roads

With its amendment, the Applicant has proposed to relocate four access roads from their previously approved locations. The Applicant indicates that the proposed relocated access roads are all located in farm fields, with no tree clearing required.

a. The access road to Turbine 40, approximately 1,000 feet in length, is proposed to shift approximately 750 feet to the west. This new route, which would parallel the original route, would be further from a wetland and follow a relocated collection line route. The wetland was identified in the Applicant's Habitat Conservation Plan (HCP) as potential habitat for the Eastern massasauga rattlesnake (*Sistrurus catenatus*), a candidate species for federal listing.

- b. At the landowner's request, the Applicant is also proposing to relocate the north-to-south access road to Turbine 36. The shift is approximately 500 feet east of its approved located, and it would follow a relocated collection line. This access road would be approximately 1,600 feet in length.
- c. One of the relocated access roads would extend east-west approximately 2,100 feet between Ault Road and Turbine 44. The relocated access road would avoid a stream crossing consistent with a suggestion made by Staff during a field investigation for Buckeye 1.
- d. Approximately 625 feet of the access road that extends from US Highway 36 to Turbine 21 is proposed to be shifted approximately 470 feet to the east so that it is within the same parcel as the eastern construction staging area. In addition, this proposed shift moves the access road's connection to US Highway 36 so that it is no longer directly in front of a residence.
- 2. Additional access road

Also, the Applicant has proposed the construction of a new access road running north and south between turbines 16 and 18. The Applicant indicates that this new access road, approximately 2,600 feet in length, reduces the need to use Perry Road and instead follows an approved collection line route.

Although located largely in an active agricultural field, the Applicant estimates that the new access road would have temporary impacts to forested areas of 0.14 acres. This new access road would also require a stream crossing near Turbine 18. This stream was assessed using the Headwater Habitat Evaluation Index (HHEI), and based on the scoring, was categorized as a Modified Class 1 Primary Headwater Habitat stream.³ A crossing structure is already in place at that location. The existing structure may be used or improved as necessary.

D. Electric Collection Line System

As initially proposed, the electric collection system would have been approximately 65.4 miles of which approximately 40 miles would have been overhead lines. As proposed with this amendment, and as clarified in response to Staff's second set of data requests,

³ Stream ID = Stream S; Stream Crossing ID = S5

the electric collection system would total 41.1 miles all of which would be installed underground on parcels of participating landowners.⁴

Of the 41.1 miles, Staff determined that there are 7.32 miles that have not been reviewed and approved in the initial Buckeye I or Buckeye II proceeding. Segments of the electric collection system that have been previously reviewed and approved by the Board were not further analyzed, but rather Staff focused its review in this proceeding on the 7.32 miles of new collection line routing. The maps attached at the end of this report identify the segments of the electric collection system that comprise the 7.32 miles.

The Applicant is proposing to use direct burial methods, such as with the use of a cable plow or trencher, to install the electric collection line in most areas. The Applicant may also use open trenches for installation in areas where the direct burial methods may not be as appropriate. Other installation techniques, as listed below in Tables 2 and 3, may be used in certain locations to facilitate the avoidance of specific resources. Burial of the collection line would occur to a minimum depth of 36 inches, with an additional 12 inches in active agricultural fields.

The 7.32 miles of relocated electric collection system would involve the crossing of three streams and 2 wetlands, the details for which are provided in Table 2 below.

Stream/Wetland ID	Category	Crossing Methodology
Stream B-2 (S12)	Modified Class II PHWH ⁵	Trench or HDD ⁶
Stream K (S28)	Modified Class I PHWH	Trench or HDD
Stream LL (S19)	Class II PHWH	Trench or HDD
Wetland Q	ORAM ⁷ Category 1	Boring
Wetland KA	ORAM Category 1	Boring

Table 2

The 7.32 miles of relocated electric collection system would also necessitate the crossing of three roads as specified below in Table 3. As indicated in response to Staff's first set of data requests, the Applicant intends to install the collection line at these three road crossings using directional drilling.⁸ As such, any direct impacts to the road at the crossing locations would be avoided.

⁴ Applicant Response to Second Set of Staff Data Requests, Question 5

⁵ PHWH = primary headwater habitat

⁶ HDD = horizontal directional drill

⁷ ORAM = Ohio Rapid Assessment Methodology

⁸ Applicant Response to Initial Set of Staff Data Requests, Question 7c

Table 3

Road	Jurisdiction	Crossing Methodology
Urbana Woodstock Pike	County	Directional drill
North Ludlow Road (SR 814)	State	Directional drill
North Ludlow Road (SR 814)	State	Directional drill

III. Conclusions

The Applicant is not proposing to relocate or add wind turbines under this proposed amendment.

Because the proposed construction staging areas and the substation location have previously been reviewed and approved by the Board in the Buckeye II proceeding, and therefore found to have been reasonable, Staff has not repeated any analysis of those project components in this proceeding.

With respect to the proposed changes to the access roads, including the one new access road, Staff concludes that these proposed alternatives do not introduce any significant incremental ecological or societal impacts. To the contrary, the new access road planned to extend between turbines 16 and 18 would reduce the use of Perry Road, thereby reducing the public impact associated with this project component. While the new access road would involve a stream crossing, its impacts would be minimized by the use of the existing crossing structure in its current form or as improved if necessary. By coordinating the new access road location with an approved segment of electric collection system, there would be minimal incremental impact associated with the new access road. Temporary impacts are expected in the form of soil disturbance and vegetation clearing.

The proposed amendment to the electric collection system would result in a reduction in the overall length of the electric collection system by approximately 24 miles. In addition all of the collection lines now would be installed underground thereby eliminating visual impact associated with above-ground lines. Permanent impacts associated with the underground installation of the electric collection system should be minimal given that the system route has been planned to largely avoid sensitive resources. In the few instances where such resources are encountered, the Applicant has proposed installation techniques that would minimize impacts to the resources. Temporary impacts are expected, and would include (1) soil and vegetation disturbance to a maximum width of 25 feet to accommodate the installation machinery, and (2) the potential for damage to drainage tile lines. Applicant commits to restoring the temporary disturbances, including the repair of any damaged tile lines.

IV. Recommended Findings

Staff recommends the Board find the proposed amendment to the Certificate poses minimal social and environmental impacts, provided that the amendment includes the conditions specified in the section of the report entitled Recommended Conditions.

V. Recommended Conditions

- 1) The Applicant shall adhere to all conditions of the original Certificate for the Buckeye I Wind Farm (Case No. 08-0666-EL-BGN).
- 2) The Applicant shall construct the facility as approved in Case No 08-0666-EL-BGN, and as further modified by the proposed amendment and replies to Staff data requests in this proceeding.
- 3) The Applicant shall exercise reasonable efforts to coordinate activities at the western construction staging area with the city of Urbana in the event that the installation of the city's planned sewer line extension coincides with the installation of the western construction staging area.
- 4) Within six months of completing construction, the Applicant shall either communicate the location of the buried electric collection lines to the Ohio Utilities Protection Service or become a member of the Ohio Utilities Protection Service.















BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the Application of Buckeye Wind LLC to Amend its Certificate Issued in Case No. 08-666-EL-BGN

: Case No. 13-0360-EL-BGA

PREFILED TESTIMONY OF STUART M. SIEGFRIED EFFICIENCY AND RENEWABLES DIVISION DEPARTMENT OF ENERGY AND ENVIRONMENT

OHIO POWER SITING BOARD STAFF

Staff Exhibit _2

December 23, 2013

1	1.	Q.	Please state your name and business address.
2		Α.	My name is Stuart M. Siegfried, and my business address is 180 East Broad
3			Street, Columbus OH 43215.
4			
5	2.	Q.	By whom are you employed and what is your position?
6		A.	I am employed by the Public Utilities Commission of Ohio (PUCO) as a
7			Specialist 3 in the Efficiency and Renewables Division of the PUCO's
8			Department of Energy and Environment.
9			
10	3.	Q.	Please summarize your educational background and work experience.
11		Α.	I received a B.S. degree, International Business, from Bowling Green State
12			University.
13			
14			I have been employed by the PUCO since November 1990. My
15			responsibilities during this time have primarily involved environmental
16			matters.
17			
18	4.	Q.	Have you testified in prior proceedings before the Ohio Power Siting Board
19			(Board)?
20		Α.	Yes.
21			

1	5.	Q.	What is the purpose of your testimony in this proceeding?
2		Α.	With my testimony, I am sponsoring the Staff Report issued in Case No.
3			13-0360-EL-BGA.
4			
5	6.	Q.	What kind of a case is this?
6		A.	Wind developer Buckeye Wind, LLC has proposed an amendment to its
7			Buckeye I Project Certificate. After a hearing, a certificate was issued by
8			the Board in the Buckeye I case for the construction and operation of a
9			commercial wind farm in Case No. 08-666-EL-BGN. With its amendment,
10			the Applicant has proposed the following changes: (a) relocate four access
11			roads from locations previously approved in Case 08-0666-EL-BGN; (b)
12			add one new access road; (c) modify the electric collection system
13			previously approved in Case 08-0666-EL-BGN; (d) eliminate the substation
14			previously approved in Case 08-0666-EL-BGN and instead utilize the
15			substation approved in Case 12-0160-EL-BGN; and (e) eliminate the three
16			construction staging areas previously approved in Case 08-0666-EL-BGN
17			and instead utilize the staging areas approved in Case 12-0160-EL-BGN.
18			Since the filing of the Staff Report, the Applicant has filed a notice
19			modifying its proposed amendment as it pertains to the staging areas.
20			

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21 7. Q. What changes proposed in the amendment application does your testimony22 address?

Α. The Administrative Law Judge limited the hearing scope for this 1 proceeding to: the movement of one staging area 1.3 miles west; shifting 2 the project substation by 1,000 feet; and the addition of a new access road. 3 Subsequently, the Applicant filed a notice withdrawing its request to amend 4 the certificate as to the relocation of the western construction staging area 5 6 1.3 miles west. My testimony addresses the remaining two changes involving the substation and new access road. 7

8

9 8. Q. What analysis did Staff perform regarding the movement of a substation
10 location?

No further Staff analysis was needed with respect to the substation location. 11 Α. It is important to note that the Applicant proposed, Staff reviewed, and the 12 Board approved two separate and distinct substation locations, one in the 13 08-666-EL-BGN case for Buckeye I and one in the 12-160-EL-BGN case 14 for Buckeye II. By this amendment, the substation location proposed and 15 approved for Buckeye I is to be eliminated, and any accompanying impacts 16 avoided in favor of a single substation to serve both Buckeye I and 17 Buckeye II wind development. The remaining substation will be 18 constructed on the physical location already analyzed by the Staff and 19 20 approved by the Board in the 12-160-EL-BGN case for the Buckeye II project. 21

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1	9.	Q.	Did Staff take any steps to verify Applicant's statement that the substation
2			location proposed in the amendment filing is, in fact, the same location
3			previously approved by the Board?
4		A.	Yes, Staff compared GIS data submitted by the Applicant in the case to GIS
5			data provided in Case 12-0160-EL-BGN, with such comparison confirming
6			the Applicant's assertion. Staff also issued data requests directly relevant
7			to this question as part of its investigation in this case. Responses by the
8			Applicant indicated this to be the case.
9			
10	10.	Q.	Will the Staff still verify the location of this substation and confirm that the
11			facility is constructed consistent with Board approval prior to construction?
12		A.	Yes.
13			
14	11.	Q.	What analysis did the Staff perform regarding the amendment proposal to
15			construct a new access road?
16		Α.	As part of its investigation, Staff reviewed the application and issued data
17			requests that addressed the proposed new access road. Staff also visited
18			the proposed site for the new access road in August 2013. The new access
19			road would run north/south between turbine locations 16 and 18, and it
20			would follow a collection line route previously approved by the Board in
21			Case No. 08-0666-EL-BGN. The new access road would be approximately
22			2,600 feet in length, with a permanent disturbance of 20 feet in width. The

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1 Applicant has indicated that the new access road will reduce construction-2 related traffic on public Perry Road, thereby reducing impacts to that roadway. 3 4 Do Staff recommendations in this case change conditions approved by the 5 12. Q. 6 Board in the Buckeye I case or the certificate holder's obligation to comply 7 with those conditions? A. In addition to including some new conditions in this case, the Staff's 8 recommendations modify parts of the facility to be constructed under con-9 dition (1) of Buckeye I so it's consistent with the amendment. All of the 10 remaining conditions approved by the Board in Buckeye I remain the obli-11 12 gations of the Applicant. 13 13. Q. Does this conclude your testimony? 14 Α. Yes. However, I reserve the right to submit supplemental testimony as 15 16 described herein, as new information subsequently becomes available or in response to positions taken by other parties. 17

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Respectfully submitted,

Michael Dewine Ohio Attorney General

William L. Wright Section Chief

/s/Werner L. Margard

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PROOF OF SERVICE

I hereby certify that a true copy of the foregoing Prefiled Testimony of Stuart M. Siegfried, submitted on behalf of the Staff of the Ohio Power Siting Board, was served by regular U.S. mail, postage prepaid, hand-delivered, and/or delivered via electronic mail, upon the following parties of record, this 23rd day of December, 2013.

> <u>/s/Werner L. Margard</u> Werner L. Margard III

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Attorney for Ohio Farm Bureau Federation



BEFORE THE OHIO POWER SITING BOARD

In the Matter of the Application of Buckeye Wind LLC to Amend its Certificate Issued in Case No. 08-666-EL-BGN

Case No. 13-360-EL-BGA

DIRECT TESTIMONY OF MICHAEL SPEERSCHNEIDER

Q.1. Please state your name, title and business address.

A.I. My name is Michael Speerschneider. I am the Chief Permitting and Public Policy Officer for EverPower Wind Holdings Inc., and an officer of Buckeye Wind LLC which is a company within the corporate structure of EverPower. Buckeye Wind LLC holds the certificate for the Buckeye I Wind Farm which was issued in Case No. 08-666-EL-BGN. I am also an officer of Champaign Wind LLC, a company that is also within the corporate structure of EverPower and which holds the certificate issued for the Buckeye II Wind Farm in Case No. 12-160-EL-BGN. My business address is 1251 Waterfront Place. 3rd Floor, Pittsburgh, Pennsylvania, 15222.

Q.2. What are your duties as Chief Permitting and Public Policy Officer?

A.2. I am responsible for all aspects of the permitting necessary to construct and operate EverPower's utility scale wind energy projects in the Mid-Atlantic and Midwest, including management of an internal permitting team and external consultants.
I am responsible for coordinating the permitting processes with state and federal agencies. I am also responsible for governmental affairs, communicating with state and federal agencies to develop and maintain relationships and manage political risks for EverPower's business. I was involved in the preparation of the initial application by

Buckeye Wind for the Buckeye I Wind Farm, Case No. 08-666-EL-BGN, as well as the application by Champaign Wind for the Buckeye II Wind Farm, Case No. 12-160-EL-BGN. I have previously testified at length before the Ohio Power Siting Board in the Buckeye II Wind Farm proceeding, Case No. 12-160-EL-BGN.

Q.3. What is your educational and professional background?

A.3. I received a B.S. in Physics and a B.A. in environmental studies from the University of Pittsburgh. I received a M.S. in Technology and Policy and a M.S. in Materials Science and Engineering from the Massachusetts Institute of Technology. Prior to attending MIT, I worked for Cambridge Energy Research Associates developing models for demand, supply and pricing in North American natural gas markets. I joined EverPower in 2004 and have been involved in all facets of its developed projects and operations. While my focus has been on development, permitting, policies and siting or zoning regulations, I have worked closely with our financial, commercial and operations teams to help ensure efficient development, construction and operation of our projects. I have worked closely with project operators to engage local officials and residents, as well as state and federal regulators, regarding what few issues have arisen as a result of project operations.

Q.4. On whose behalf are you offering testimony?

A.4. I am testifying on behalf of the applicant, Buckeye Wind LLC.

Q.5. What is the purpose of your testimony?

A.5. To describe the proposed amendments to the certificate granted on March 22, 2010, and to discuss the factors behind the addition of a new access road and relocation of a substation which are the subjects of this hearing. As my testimony will highlight, the

new access road and the relocation of the substation are in the best interests of the public. I will also sponsor the admission of the application into evidence along with the exhibits and the proof of publication. Finally, I will review the conditions suggested by the Board's Staff in the Staff Report of Investigation filed on November 1, 2013 and respond on behalf of the Applicant.

Q.6. Please describe the amendments proposed in the application?

A.6. On March 19, 2013, Buckeye Wind submitted its application to amend the Buckeye Wind LLC certificate proposing to amend the Project's collection line design, the location and size of three construction staging areas, the location of four access roads, the addition of a new access road and the relocation of the project substation. On December 13, 2013, Buckeye Wind filed a notice of withdrawal of its request to shift the western construction staging area, leaving only the request to add a new access road and the request to shift the project substation as the issues for this hearing. The application was prepared at and under my direction, and has been designated as Company Exhibit 2.

The proposed amendment as a whole, will result in significantly less impact on the environment and the local community, primarily as a result of eliminating overhead collection lines in favor of underground lines. For example, the proposed amendment converts approximately 40 miles of overhead collection lines to underground collection lines, eliminating poles and above-ground wires. Just as important, the total collection line distance has been reduced from approximately 65 miles to 42 miles. These changes are significant design improvements, which Buckeye Wind was able to accomplish by obtaining additional property rights.

Another benefit of the proposed design is that the majority of the collection line system. all staging areas and the substation for the Buckeye I Wind Farm (Case No. 08-666-EL-BGN) will now share the same locations as the collection line system, staging areas and substation for the Buckeye II Wind Farm (Case No. 12-160-EL-BGN). This design change avoids redundant impacts that would result if the Buckeye I Wind Farm and Buckeye II Wind Farm were constructed and operated as proposed under the current certificates. Instead, under the new design as proposed in the amendment, both projects can utilize the same substation and staging areas as well as the same locations for the majority of the collection line systems.

Q.7. Would you please provide a description of the new access road that Buckeye Wind is proposing to construct?

A.7. The new access road will run north and south between turbines 16 and 18. It will start at an approved access road location south of turbine 16 and will then follow a collection line route that was approved in the initial certificate proceeding for the Buckeye I Wind Farm, terminating at turbine 18. The addition of this access road will be an improvement to the overall design because it will allow for a direct route from the nearby construction staging area to turbines 21, 18, 16 and 17, reducing the need to use Perry Road to access turbines 16 and 17 during construction and operation of the Buckeye I Wind Farm.

Q.8. Are there any environmental concerns with Buckeye Wind constructing a new access road as part of the Project?

A.8. No. The new access road will require a stream crossing near turbine 18 where a crossing for a Buckeye I Wind Farm collection line has been approved. The stream is a

low quality stream, and is an ephemeral. Modified Class I stream. A culvert is already in place at the stream and Buckeye Wind plans to utilize it if possible or improve it depending on the results of further analysis. The new access road will be located in active agricultural areas, and will only have a limited, temporary forest impact of 0.14 acres as a result of the temporary clearing impact performed during construction of the access road.

Q.9. Would you please provide a description of Buckeye Wind's proposal to abandon the current Buckeye I Wind Farm substation location?

A.9. If the amendment is approved, the current location for the Buckeye I substation will be abandoned, and the substation will be placed at the same location as the Buckeye II Wind Farm substation. The Buckeye II Wind Farm substation location is approximately 1,000 feet center to center from the current Buckeye I Wind Farm substation location, and is approximately 1,227 feet from the nearest non-participating residence versus 1,531 feet from the current location for the Buckeye I Wind Farm substation. Importantly, amending the Buckeye I Wind Farm certificate to place the Buckeye I Wind Farm substation at the same location as the Buckeye II Wind Farm substation will allow both projects to share the same substation, and avoid the impact of two substations on the same parcel.

Q.10. Are there any environmental concerns or other concerns with Buckeye Wind's proposal to use the Buckeye II Wind Farm substation location?

A.10. No. The substation will remain located in an active agricultural field, and will be 1,227 feet from the nearest non-participating residence and at the same location as the approved Buckeye II Wind Farm substation. Having the flexibility to combine the

substations at one location is a better design and will result in less overall impact to the property.

Q.11. Is the March 19, 2013 application including all appendices and exhibits true and accurate to the best of your knowledge and belief?

A.11. Yes, subject to any clarifying statements made by Buckeye Wind in response to Staff's data requests. In addition, Buckeye Wind withdrew its request to amend the certificate to shift the western construction staging area on December 13, 2013.

Q.12. Did Buckeye Wind have notices of the application to amend published in a newspaper of general circulation in Champaign County?

A.12. Yes, a notice was published on April 1, 2013 in the Urbana Daily Citizen. A true and accurate copy of that notice that has been designated as Company Exhibit 3.

Q.13. Have you reviewed the Staff Report of Investigation issued in this proceeding? A.13. Yes.

Q.14. Does Buckeye Wind have any concerns with any of the conditions recommended by Staff in the Staff Report of Investigation?

A.14. No, although condition 3 is no longer applicable because Buckeye Wind has withdrawn its request to relocate the western construction staging area.

Q.15. What do you recommend that the Ohio Power Siting Board do in this case?A.15. I recommend that the Ohio Power Siting Board grant the application to amend the certificate.

Q.16. Does this conclude your direct testimony?

A.16. Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served upon the following

parties of record via electronic mail this 23rd day of December, 2013.

G.S. Weithman, Director of Law City of Urbana 205 S. Main Street Urbana, OH 43078 diroflaw@cten.net

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Chad A. Endsley Ohio Farm Bureau Federation, Inc. 280 N. High Street, 6th Floor Columbus, Ohio 43218 cendsley@olbf.org Werner Margard John Jones Assistant Attorneys General 180 East Broad Street, 9th Floor Columbus, Ohio 43215 werner.margard@puc.state.oh.us john.jones@puc.state.oh.us

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/s/ Michael J. Settineri

12/23/2013 18255282 V.2

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in

Case No(s). 13-0360-EL-BGA

Summary: Testimony of Michael Speerschneider electronically filed by Mr. Michael J. Settineri on behalf of Buckeye Wind LLC





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Founded 1909

Vorys, Sater, Seymour and Pease LLP Legal Counsel

> Michael J. Settinert Direct Dial (614) 464-5462 Direct Fax (614) 719-5146 Email mjsettineri@vorys.com

> > May 16, 2013

Ms. Barcy F. McNeal, Secretary Public Utilities Commission of Ohio 180 E. Broad Street, 11th Floor Columbus, OH 43215-3793

> Re: OPSB Case No. 13-360-EL-BGA Buckeye Wind LLC Proof of Publication of Notice

Dear Ms. McNeal:

On March 19, 2013, Buckeye Wind LLC filed an application in the above case seeking to amend its certificate of environmental compatibility and public need. I am filing a copy of the Notice which was published on April 1, 2013 in the <u>Urbana Daily Citizen</u>, a newspaper of general circulation in Champaign County, Ohio.

Very truly yours,

Michael J. Settineri Attorney for Buckeye Wind LLC

MJS/jaw Enclosure

cc: All Parties of Record (w/Encl.)





Urbana tennis ready to begin season

By JUSTIN MILLER Suff Writer The Urbana boys transis learn begins its se on on Tuesday with a CBC road match

With only three returners, the Hillefinders

With only three returners, the Hillchinkers are see to look different than has year's squad, which went 11.4 and fieldheit third in the Central Bockney Conference. Wapter Wideman will take ever first singles, and Jacob Echness will add his experisons to non-center Storen Thiel in first doubles. Jacob Carlos will be manued by Kevin Thiel and Chane Abbey. Dashel Erdhiner may also get throws late the wrap's min.

Kevin Thiel (abc Kevia Thiel (above) will boys tennis fils serino.



w varsav players for Urb

MLB openers feature Strasburg, rivalries

By The Associated Press The Kassas City Royals have been abased from the playoffs since the day Billy Budler was born. They're barely had a winning scanon in the last two decades. They're often lost 160 games car. d yet, buoyed by the best record

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NOTICE

Buckeye Wind LLC, a wholly-owned subsidiary of EverPower Wind Holdings, Inc. has filed an application with the Ohio Power Siting Board in Case No. 13-360-EL-BGA seeking to amend its certificate of environmental compatibility and public need issued to construct a 97.2 to 135 megawatt (MW) wind-powered electric generation facility located in Champaign County. The purpose of the requested amendment is to relocate certain collection lines for the facility, four access roads, the project substation and relocate and resize three construction staging areas. In addition, one new access road is being added to the design. More information may be obtained by writing to the offices of the Ohio Power Siting Board, 180 East Broad Street, Columbus, Ohio 43215 or calling the Ohio Power Siting Board at 1-866-270-6772. A copy of the amendment application is available at the Ohio Power Siting Board's main office at 180 E. Broad Street, 11th Floor, Columbus, Ohio 43215; the Champaign County Library, 1060 Scioto Street, Urbana, Ohio 43078; the Mechanicsburg Public Library, 60 S. Main Street, Mechanicsburg, Ohio 43004; and the North Lewisburg Branch Library 161 Winders Street, North Lewisburg, Ohio 43060 or online on the Power Siting Board's website at https://dis.puc.state.oh.us/.

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in

Case No(s). 13-0360-EL-BGA

Summary: Proof of Public Notice electronically filed by Mr. Michael J. Settineri on behalf of Buckeye Wind LLC



¥,

Legal Counsel

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Michael J. Settineri Direct Dial (614) 464-5462 Direct Fax (614) 719-5146 Email mjsettineri@vorys.com

March 19, 2013

Ms. Barcy F. McNeal Secretary Public Utilities Commission of Ohio 180 E. Broad Street, 11th Floor Columbus, OH 43215-3793

> Re: Ohio Power Siting Board Case No. 13-360-EL-BGA Application to Amend the Buckeye Wind LLC Certificate

Dear Ms. McNeal:

Accompanying this letter are six copies of an Application by Buckeye Wind LLC, a wholly-owned subsidiary of EverPower Wind Holdings, Inc, for an Amendment to its Certificate of Environmental Compatibility and Public Need for a wind electric generation facility located in Champaign County, Ohio along with 10 electronic copies on disc. The original Application was electronically filed today. The Certificate was initially issued in Case No. 08-666-EL-BGN. In accordance with Rule 4906-5-03 of the Ohio Administrative Code, I would like to make the following declarations:

Name of the applicant: Buckeye Wind LLC

Name and Location of the Facility:

Buckeye I Wind Farm Champaign County, Ohio Goshen, Rush, Salem, Union, Urbana, and Wayne Townships



. .

> Ms. Barcy F. McNeal March 19, 2013 Page 2

> > Name of the authorized representative:

M. Howard Petricoff Vorys Sater Seymour and Pease LLP 52 East Gay Street Columbus, Ohio 43215 614-464-5414 <u>mhpetricoff@vorys.com</u>

Buckeye Wind LLC seeks to amend its Certificate that was issued on March 22, 2010 in Case No. 08-666-EL-BGN. Buckeye Wind LLC seeks various waivers from rule requirements that are not applicable to the changes proposed in its application to amend the Certificate. An initial motion for waivers was filed on February 6, 2013, and a renewed motion for waiver was filed on March 15, 2013.

Very truly yours,

Michael J. Settineri

MJS/skb Enclosure In the Matter of the Application of Buckeye Wind LLC to Amend its Certificate Issued in Case No. 08-666-EL-BGN

Case No. 13-360-EL-BGA

CHIEF EXECUTIVE OFFICER'S AFFIDAVIT

STATE OF NEW YORK)) SS: COUNTY OF NEW YORK)

Now comes James Spencer, Chief Executive Officer of Buckeye Wind LLC, a wholly owned subsidiary of EverPower Wind Holdings, Inc, who having been first duly sworn, declares and states as follows:

1. I am the highest ranking executive officer in charge of the Buckeye Wind I project in the Townships of Goshen, Rush, Salem, Union, Urbana and Wayne in Champaign County, Ohio.

 I have reviewed Buckeye Wind LLC's Application for an Amendment to its Certificate of Environmental Compatibility and Public Need issued in Case No. 08-666-EL-BGN.

3. To the best of my knowledge, the information and statements contained in the Application for an Amendment are true and correct.

4. Save for the items for which a waiver has been requested, the Application for an

Amendment is complete.

James Spencer Chief Executive Officer Buckeye Wind LLC, a subsidiary of EverPower Wind Holdings, Inc.

Sworn to before me and signed in my presence this 13^{77} day of March, 2013.

K. Emich

Notary Public My Commission Expires <u>7/23/2016</u>

KARALYN V. EMRICH NOTARY PUBLIC-STATE OF NEW YORK No. 01EM6265929 Qualified in New York County My Commission Expires July 23, 2016 3:11 2013 15976035

BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the Application of Buckeye Wind LLC to Amend its Certificate Issued in Case No. 08-666-EL-BGN

Case No. 13-360-EL-BGA

Application to Amend

the Buckeye Wind LLC Certificate

Granted March 22, 2010 in Case No. 08-666-EL-BGN

Introduction and Overview

Buckeye Wind LLC (hereinafter referred to as the "Applicant"), a wholly-owned subsidiary of EverPower Wind Holdings, Inc, has received a certificate to construct a windpowered electric generation facility consisting of 54 wind-powered electric turbines, along with access roads, electrical interconnect, construction staging areas, operations and maintenance facilities, and a substation (collectively, the "Project") to be located in Goshen, Rush, Salem, Union, Urbana, and Wayne Townships, Champaign County, Ohio. The Ohio Power Siting Board (the "Board") issued an Opinion, Order and Certificate in Case No. 08-666-EL-BGN on March 22, 2010 (the "Certificate"). The original Application for a certificate of environmental compatibility and public need was filed on April 24, 2009.

Through this petition, hereinafter referred to as the "Petition," the Applicant is proposing to amend the Project's collection line design and the location and size of three construction staging areas. In addition, the Applicant is proposing to relocate the project substation on the same parcel, relocate four turbine access roads and construct one new access road. The Applicant recently obtained land control of additional acreage within the Project area allowing it to improve the Project's design by shifting collection lines from overhead public right-of-ways to underground locations on private property leased by the Applicant. In addition, the Applicant has decided to relocate and resize all three construction staging areas and relocate the substation on the same parcel so that the same construction staging areas and substation may be used for both the Buckeye I project and Buckeye II project. Four access roads will require relocation as a result of the collection line design, staging area shift and substation shift and one new access road will be constructed.

The eastern and southern construction staging areas and substation are within the same parcels as previously located, but are being shifted slightly to accommodate landowner requests. The western construction staging area is being moved 1.3 miles west. The western construction staging area relocation was selected after analyzing component delivery routes, which indicated this location was preferred to the previous one. The substation is shifting by 1,000 feet center to center, with the shift putting the substation 1,227 feet from the nearest non-participating residence versus 1,531 feet as originally designed. The Buckeye I project and the Buckeye II project will both utilize the same construction staging areas and the substation. All relocated construction staging areas, access roads and the substation will be located in active agricultural fields. The new access road will also be located in active agricultural fields, but will have limited, temporary forest impacts of 0.14 acres. Also, the buried collection lines are located in approximately 93% active agricultural or other disturbed land.

Given the above changes, the Applicant is submitting this Petition to the Board for its review and approval of these project design changes. Because the proposed changes in the facility will not result in a material increase in any environmental impact of the facility nor cause a substantial change in the location of any of the Project's turbines, the Applicant respectfully requests that the Board approve this Petition without the necessity of an evidentiary hearing.

4906-17-01 Applicability and Definitions

(A) Application Filing Requirements

This Petition seeks to amend the Certificate in regard to the Project's collection line design, the location and size of three construction staging areas, the location of four access roads and the Project's substation, and the number of access roads, which will increase by one. The Petition does not seek changes in any other part of the Certificate as approved by the Board. To

> Buckeye Wind LLC Case No. 13-360-EL-BGA

avoid submitting unnecessary and redundant information, the Applicant has requested waivers from various rules in Chapter 4906-17. For example, information regarding turbine locations, operational noise, blade shear and ice throw is not applicable to the Petition.

(B) <u>Definitions</u>

As used in this Petition:

(1) "Project area" means the total wind-powered electric generation facility, including associated setbacks.

(2) "Wind-powered electric generation facility" or "wind-energy facility" or facility means all the turbines, collection lines, any associated substations, and all other associated equipment.

4906-17-02 Project Summary

The Applicant has requested a waiver in part from the requirements of this rule (Appendix A) because much of the information required is not applicable to the proposed amendment. Under this waiver, the Applicant is not providing information relating to the turbines and other facilities previously reviewed by the Board in Case No. 08-666-EL-BGN and presented in the Application. Instead, the Applicant is providing the following information: (1) a project summary and overview of the proposed changes to the collection line system, access roads, substation and construction staging areas under Rule 4906-17-02(A)(2); (2) a description of how the locations for the revised collection line system, four relocated access roads, relocated substation, relocated construction staging areas and the new access road were selected pursuant to Rule 4906-17-02(A)(3); (3) a discussion of the principal environmental considerations for the revised collection line system to Rule 4906-17-02(A)(4);

and (4) an explanation of the current Project schedule, including turbine construction pursuant to Rule 4906-17-02(A)(5).

(A) <u>4906-17-02(A)</u> Project Summary and Facility Overview

(2) Description of the Proposed Facility

Through this Petition, the Applicant is proposing to shift all of the overhead collection line system to underground electrical collection lines. The Applicant previously planned on working extensively with the Dayton Power & Light Company to arrange for the construction, operation and maintenance of the above ground portions of the 34.5 kv electrical collection lines associated with the Facility. As permitted, the Facility was designed for 39.8 miles of overhead collection lines. The Applicant now proposes to construct all of the electrical interconnection system underground. The majority of the relocated collection lines will be constructed in the same collection line routes as those in the Buckeye II project docketed as Case No. 12-160-EL-BGN. Figure 04 to this Petition shows the revised collection line layout for the Buckeye I project and delineates areas where the collection lines are shared with the Buckeye II project. Although collection lines may be shared between the projects, the Buckeye I project is separate from the Buckeye II project and subject to the Certificate.

In addition to revising the collection line system design, the Applicant seeks approval to relocate and resize three construction staging areas for the Project. Initially, all construction staging areas were planned to be 3.75 acres for the Buckeye I project. Two construction staging areas are being relocated at the landowners' requests on the same parcels as currently permitted. The third parcel is being relocated approximately 1.3 miles, to a separate parcel on which the Applicant has rights to install a construction staging area. The southern construction staging area will be 9.5 acres, the western construction staging area 3.4 acres, and the eastern construction

staging area 10 acres. Importantly, the relocation and resizing of the staging areas will allow both the Buckeye I project and Buckeye II project to use the same staging areas.

The Applicant is also seeking approval to relocate the Project substation on the same parcel as initially approved. The substation is being shifted to match the location for the Buckeye II project's substation. As noted previously, the substation is shifting by 1,000 feet center to center, with the shift putting the substation 1,227 feet from the nearest non-participating residence versus 1,531 feet as originally designed. The new locations for the substation and staging areas are shown on Figure 04.

Additionally, the Applicant is seeking approval to relocate four access roads and construct one new access road. Figure 06 illustrates the proposed changes to the access roads. The proposed access road running east to west to turbine 44 is being relocated from its approved location pursuant to a prior informal recommendation by Staff to eliminate a stream crossing. The proposed access road running north to south to turbine 36 is being relocated approximately 500 feet east from its OPSB approved location to accommodate a landowner request and will follow a relocated Buckeye I collection line. The proposed access road running diagonally to turbine 21 is being relocated approximately 400 feet to run along the southwest corner of the eastern construction staging area that is being relocated within the same parcel. The proposed access road running north and south between turbines 16 and 18 will be a new access road that will start at an approved access road location south of turbine 16 and will then follow an approved collection line route toward turbine 18, reducing the need to use Perry Road. The proposed access road running north and south to turbine 40 is being relocated to follow a relocated to follow a relocated to follow a round between turbines 40 is being relocated to follow an approved collection line route, which also provides a greater buffer distance to a nearby wetland.

(3) <u>Site Selection for Collection Lines, Construction Staging Areas, Relocated</u> <u>Access Roads and Substation</u>

As noted above, the Applicant had planned on working extensively with the Dayton Power & Light Company to arrange for the construction, operation and maintenance of the above ground portions of the 34.5 ky electrical collection lines associated with the Facility. After obtaining additional land rights, the Applicant is now able to construct all of the electrical interconnection system underground utilizing many of the same routes used for the Buckeye II project, which was the primary criteria for the location for the new underground collection lines. Relocated construction staging areas were selected in close cooperation and coordination with the landowners on whose property they would be located. Two of the relocated construction staging areas were a direct result of input from landowners in which the landowner requested that they be relocated within the same parcel. The third construction staging area relocation was selected after analyzing component delivery routes, which indicated this location was preferred to the previous one. As noted above, the construction staging area sizes are being changed to match the size of the construction staging areas of the Buckeye II project so that both projects can use the same staging areas. The substation is being relocated so that the same substation can be used for both the Buckeye I and Buckeye II projects. The substation will be located in the same parcel as the original substation.

The Applicant is also proposing to relocate four access roads and construct one new access road. The proposed access road running east to west to turbine 44 is being relocated from its approved location pursuant to Staff's recommendations to eliminate a stream crossing. The proposed access road running north to south to turbine 36 is being relocated approximately 500 feet east from its OPSB approved location to accommodate a landowner request and will follow a relocated Buckeye I collection line. The proposed access road running diagonally to turbine 21

is being relocated approximately 400 feet to run along the southwest corner of the eastern construction staging area that is being relocated within the same parcel. The proposed access road running north and south between turbines 16 and 18 will be a new access road that will start at an approved access road location south of turbine 16 and will then follow an approved collection line route toward turbine 18, reducing the need to use Perry Road. The proposed access road running north and south to turbine 40 is being relocated to follow a relocated collection line route, which also provides a greater buffer distance to a nearby wetland.

(4) <u>Principal Environmental Considerations</u>

The modifications to the collection line system will result in no overhead electric lines. This design change is a significant improvement because, unlike the use of overhead poles, there will be minimal permanent disturbance associated with the shift to underground collection lines. This will reduce the overall permanent disturbance of the Project. As with the current underground collection lines, construction impacts of the relocated collection lines will be temporary in nature, and confined to the properties of participating landowners. All construction staging areas will be located in active agricultural fields and the relocated buried collection lines will be located in approximately 93% active agricultural or other disturbed land. The relocated substation and new and relocated access roads will also be located in agricultural lands. The new access road will require a stream crossing near turbine 18 where an existing collection line crosses. A crossing is already in place at the stream and that structure may be utilized or improved depending on further analysis. The new access road will also have limited, temporary forest impacts of 0.14 acres during installation of the access road. The relocation of the collection lines, relocation and resizing of the construction staging areas, addition and relocation of access roads, and relocation of the substation will continue to result in the cumulative Facility

conversion of approximately 68 acres of land from its current use to built facilities (0.5% of the 13,500 acres of leased land).

(5) <u>Current Project Schedule</u>

The Certificate for this Project was issued in March 2010 with a final decision on the matter from the Supreme Court of Ohio in March 2012. Final designs are anticipated to be completed in the third quarter of 2013. Construction is anticipated to begin in the fourth quarter of 2013 and run through the middle of 2014. The Facility is anticipated to be placed in service at the end of 2014 after operational testing is complete. Additional information about the Project schedule can be found in Section 4906-17-03(B) of this Petition.

4906-17-03 Project Description and Schedule

The Applicant has requested a waiver in part from the requirements of this rule (Appendix A) as some of the requirements are not applicable to the proposed changes. Under this waiver, the Applicant is providing (1) a detailed description of the changes to the collection line system, the relocation of the construction staging areas, access roads and the substation and construction of one new access road under Rule 4906-17-03(A); (2) updated land area requirements including any changes to the construction impact areas pursuant to Rule 4906-17-03(A)(1)(b); and (3) an updated detailed schedule for the Project pursuant to Rule 4906-17-03(B).

(A) <u>4906-17-03(A) Detailed Project Description</u>

The Applicant is permitted to construct, own, and operate a wind-powered electric generation facility. As permitted, the Project is designed for a combination of overhead and underground collection lines and up to three construction staging areas. The Applicant is proposing to install all of the collection line system underground. Figure 04 shows the revised

interconnection system layout for the Facility. Due to landowner preferences and component delivery analyses, the Applicant is proposing to relocate all three construction staging areas. Additionally, because the Buckeye I project and Buckeye II project will now share construction staging areas, two relocated construction staging areas are expanding in size and one relocated construction staging area is contracting in size. The substation is being relocated so that the same substation can be utilized for both the Buckeye I and Buckeye II projects. The substation is shifting by 1,000 feet center to center, with the shift putting the substation 1,227 feet from the nearest non-participating residence versus 1,531 feet as originally designed. Additionally, four access roads are being relocated and one new access road is being constructed for the reasons discussed in Section 4906-17-02(A)(2).

(1) Description Details for the Project

(b) Land Area Requirements

Table 03-1 presents the estimated footprint for the Facility's collection lines, relocated and new access roads and staging areas, based on revised impact assumptions.

Facility Components	Typical Area of Vegetation Clearing	Area of Total Soil Disturbance (temporary and permanent)	Area of Permanent (fill/structures) Disturbance
Access Roads	55' wide per linear foot of road	40' wide per linear foot of road	20' wide per linear foot of road
Buried Electrical Collection Cable	25' wide per linear foot of cable	25' wide per linear foot of cable	none
Staging Areas (up to 3)	7.6 acres average	7.6 acres average	none
Substation	5 acres	5 acres	1.75 acres

Table 03-1. Impact Assumptions

(2) Description of Major Equipment

The initial Application called for approximately 39.8 miles of overhead collection lines in public right-of-ways and approximately 25.6 miles of underground collection lines. The Applicant's proposed collection line change would result in approximately 42.3 miles of underground collection lines and no overhead lines, a reduction of 23.1 miles of collection lines. Of the 42.3 miles of buried interconnect, approximately 17.3 miles (40%) will be installed co-linear with Project access roads and 25 miles (60%) will be installed in separate locations.

With respect to the construction staging areas, information on the proposed construction staging areas was presented at pages 11, 15-16 and 46 of the original Application. The location of all three staging areas has changed. Instead of being located at the intersection of State Route 814 and U.S. Route 36, one construction staging area will be at the intersection of U.S. Route 36 and Three Mile Road on a parcel previously identified for a wind turbine. The two other construction staging areas will be relocated within the same parcel in which they were previously located. Also, the size of all three staging areas has changed. Instead of being 3.75 acres each, the southern construction staging area will be 9.5 acres, the western staging area 3.4 acres, and the eastern staging area 10 acres. These three construction staging areas will be used for both the Buckeye I and Buckeye II projects.

The substation is shifting by 1,000 feet center to center, with the shift putting the substation 1,227 feet from the nearest non-participating residence versus 1,531 feet as originally designed. The substation will be utilized for both the Buckeye I and Buckeye II projects. Additionally, four access roads will be relocated and one new access road will be constructed for the reasons discussed in Section 4906-17-02(A)(2).

(B) <u>4906-17-03(B) Detailed Project Schedule</u>

(1) <u>Schedule</u>

Below is a detailed project schedule for the Board's review. The original Application estimated the start of construction in 2010 with an in-service date of mid-2011. The Applicant has been working diligently on various issues, including working toward obtaining an incidental take permit from the U.S. Fish and Wildlife Service for the Project. The Applicant estimates that the preparation of the final design will be completed in the third quarter of 2013 and that construction of the facility will begin in the fourth quarter of 2013 and run through the middle of 2014, followed by system testing. The Facility will be placed in service at the end of 2014.

Buckeye I Wind Farm Estimated Project Schedule



4906-17-04 Project Area Analyses

Considering the limited nature of the proposed Certificate amendment, the Applicant has requested a waiver in full from the requirements of this rule as not being applicable (Appendix A).

4906-17-05 Technical Data

The Applicant has requested a waiver in part from the requirements of this rule that are not applicable (Appendix A). Under this waiver, the Applicant will not provide information relating to the turbines and other facilities previously reviewed by the Board in Case No. 08-666-EL-BGN and presented in the Application. The Applicant will provide the following information and items: (1) an updated map of 1:12,000 scale of the project area site pursuant to Rule 4906-17-05(A)(3); (2) a description of Project area site activities related to the proposed relocations pursuant to Rule 4906-17-05(B)(1) and (3) an updated Project layout map of 1:12,000 scale as required by Rule 4906-17-05(B)(2) with the exception that grade elevations where modified during construction will not be shown (grade elevations to be modified during construction will be shown on the Project's detailed design drawings). In addition, the Applicant will provide (1) information on how the proposed change in collection line design relates to the collection line system for the proposed Buckeye II Wind Farm, docketed as Case No. 12-0160-EL-BGN and (2) information on the construction staging areas for the Project and the proposed shift of the construction staging areas, relocated access roads, new access road and the relocated substation.

The applicable subsection of the rule is listed in this section, with the remainder of the rule's subsection subject to the sought waiver.

(A) $\underline{4906-17-05(A)}$

(1) Project Area Map

See the attached Figure 1 which is a map of 1:12,000 scale of the project area site showing topographic contours, existing vegetative cover, land use and classifications and individual structures and installations.

(B) <u>4906-17-05(B)</u> Layout and Construction

(1) Project Area Site Activities

Buried Collection System Installation

As mentioned previously, electrical interconnects will generally follow Facility access roads, but will also follow field edges and cut directly across fields in some places. The proposed layout of the collection system is illustrated on Figure 05-2 and Figure 04. Where buried cable is proposed to cross active agricultural fields, the location of any subsurface drainage tiles will be determined (through consultation with the landowner) to avoid damaging these lines during cable installation.

Direct burial methods through use of a cable plow, rock saw, and/or trencher will be used during the installation of underground interconnect lines whenever possible. Direct burial with a cable plow will involve the installation of bundled cable (electrical and fiber optic bundles) directly into a "rip" in the ground created by the plow blade. The rip disturbs an area approximately 24 inches wide with bundled cable installed to a minimum depth of 36 inches. An area up to 25 feet wide must be cleared of tall-growing woody vegetation, if necessary, and will be disturbed by the tracks of the installation machinery. However, this disturbance does not involve excavation of the soil. Generally, no restoration of the rip is required, other than surficial compaction and smoothing. Similarly, surface disturbance associated with the passage of machinery is typically minimal. Should additional surface restoration be required, a small excavator or small bulldozer will closely follow the installation, smoothing the area. Direct burial with a trencher involves the installation of bundled cable in a similar fashion to cable plow installation. The trencher or rock saw uses a large blade or "saw" to excavate an open trench. A 24-inch-wide trench is generally opened with a sidecast area immediately adjacent to the trench. Similar to cable plow, this direct burial method installs the cable a minimum of 36 inches deep (48 inches in active agricultural fields) and requires only minor clearing and surface disturbance (up to 25 feet wide for the installation machinery and access).

Installation of utility lines in an open trench will be used in areas where the previously described direct burial methods are not practicable, or in areas where the location of subsurface drainage tiles cannot be confirmed. Areas appropriate for open trench installation will be determined at the time of construction and may include areas with unstable slopes, excessive unconsolidated rock, standing or flowing water, and/or suspected drainage tiles. Open trench installation is generally performed with a backhoe and generally results in a disturbed trench 36 inches wide and a minimum of 36 inches deep. The overall temporary footprint of vegetation and soil disturbance may be a maximum of 25 feet due to machinery dimensions and backfill/spoil pile placement during installation. In agricultural areas, all topsoil within the work area will be stripped and segregated from excavated subsoil. Replacement of spoil material will occur immediately after installation of the buried utility. Subgrade soil will be replaced around the cable, and topsoil will be replaced at the surface. Any damaged tile lines will be repaired, and all areas adjacent to the open trench will be restored to original grades and surface condition. Restoration of these areas will be completed through seeding and mulching of all exposed soils or by other appropriate farming methods in active agricultural fields.

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Relocated Access Road, Staging Area and Substation Installation

Figure 06 illustrates the Buckeye I OPSB approved access roads and proposed changes to access roads. The proposed access road running east to west to turbine 44 is being relocated from its approved location pursuant to Staff's informal recommendation to eliminate a stream crossing. The proposed access road running north to south to turbine 36 is being relocated approximately 500 feet east from its OPSB approved location to accommodate a landowner request and will follow a relocated Buckeye collection line. The proposed access road running diagonally to turbine 21 is being relocated approximately 400 feet to run along the southwest corner of the eastern construction staging area that is being relocated within the same parcel. The proposed access road running north and south between turbines 16 and 18 will be a new access road that will start at an approved access road location south of turbine 16 and will then follow an approved collection line route toward turbine 18, reducing the need to use Perry Road. The proposed access road running north and south to turbine 40 is being relocated to follow a relocated collection line route, which also provides a greater buffer distance to a nearby wetland.

Access road construction will be initiated by vegetation clearing that is deemed necessary. It is assumed that a 55-foot-wide corridor will be cleared along access roads. The actual cleared area will vary on a case-by-case basis depending on factors such as topography and vegetation, and where possible, adjusted to avoid sensitive ecological resources. Road construction will involve topsoil stripping and grubbing of stumps, as necessary. Stripped topsoil will be stockpiled along the road corridor for use in site restoration. Any grubbed stumps will be removed, chipped, or buried. Following removal of topsoil, subsoil will be graded, compacted, and surfaced with gravel or crushed stone (depth to be determined on a case by case

basis), and a geotextile fabric or grid will be installed beneath the road surface if necessary, to provide additional support.

The typical finished access road will be no greater than 20 feet in width with occasional wider pull-offs to accommodate passing vehicles, and earthen shoulders on either side to accommodate crane traffic. Maximum permanent road width will be 20 feet. During construction, access road installation and use could result in temporary soil disturbance of a maximum width of 40 feet. In agricultural areas, topsoil will be stripped and wind-rowed along the access road to prevent construction vehicles from driving over undisturbed soil and adjacent fields. Once construction is complete, temporarily disturbed areas will be restored, including removal of excess road material and rocks greater than 12 inches, and returned to their approximate pre-construction contours.

In addition, approximately 5 acres will be cleared for the substation and a total of approximately 23 acres for the construction staging areas. As with other temporary disturbed areas, once construction is complete, temporarily disturbed areas will be restored, including removal of excess road material and rocks greater than 12 inches, and returned to their approximate pre-construction contours.

(2) Layout

See the attached Figure 05-2 which is a map of 1:12,000 scale of the proposed Facility layout. The buried collection lines will generally follow Facility access roads, but will also follow field edges and cut directly across fields in some locations where needed. Where buried collection lines are proposed to cross active agricultural fields, the location of any subsurface drainage tiles will be determined. As indicated on Figure 04, much of the collection line system is able to be shared with the Buckeye II Wind Project. Only 6.35 miles of the relocated

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collection lines will be separate from collection lines proposed for the Buckeye II Wind Project. Additionally, 0.55 miles of Phase I collection currently designed to be overhead will be converted to underground lines at the same location as previously approved.

At pages 11, 15-16 and 46 of the original Application, there was a discussion about the development of three construction staging areas to be located on leased private lands. Two of the construction staging areas will be along US Route 36 and the other at intersection of St Route 56 and Pisgah Road. These sites were to accommodate material storage, parking for construction workers, and construction trailers. The staging areas were anticipated to be approximately 3.75 acres each, with an additional 0.7 acre at the US Route 36 and Three Mile Road site for trailers. for a cumulative total of approximately 12 acres. The size of all three construction staging areas will change. The southern construction staging area will be 9.5 acres, the western construction staging area 3.4 acres, and the eastern construction staging area 10 acres for a cumulative total of 22.9 acres. The sizes of the Buckeye I project staging areas have changed to match the sizes of the Buckeye II project staging areas because the same staging areas will now be utilized for both projects. All three construction staging sites are going to be relocated but will remain in active agricultural fields. The eastern and southern locations are within the same parcel as previously located, but are being shifted slightly to accommodate landowner requests. The western location is being moved 1.3 miles west. The western location relocation was selected after analyzing component delivery routes, which indicated this location was preferred to the previous one.

Furthermore, the substation is shifting by 1,000 feet center to center, with the shift putting the substation 1,227 feet from the nearest non-participating residence versus 1,531 feet as originally designed. The substation will remain in the same parcel. This shift is occurring so the substation can be utilized for both the Buckeye I and Buckeye II projects. Additionally, four access roads will be relocated and one new access road will be constructed as noted on Figure 06 and as described above in Section 4906-17-02(A)(2).

4906-17-06 Financial Data

Considering the limited nature of the proposed Certificate amendment, the Applicant has requested a waiver in part from the requirements of this rule that are not applicable (Appendix A). In accordance with the waiver, the Applicant is providing a description of the current ownership of the project area, including the areas impacted by the new collection line design, the construction staging area relocation, the new access road and relocation of four others and the substation relocation as required by subsection 4906-17-06(A).

4906-17-06(A) Current and Proposed Ownership Status

As of this date, the Applicant has rights to all parcels on which the facility will be located, including all parcels on which the collection lines will be relocated. The Applicant also has access to the parcels on which the third staging area and new access road will be located. No further land rights are required to support this proposed amendment to the Certificate.

4906-17-07 Environmental Data

The Applicant has requested a waiver in full from the requirements of this rule, which are not applicable to this Petition (Appendix A).

4906-17-08 Social and Ecological Data

The Applicant has requested a waiver in part from the requirements of this rule that are not applicable to the changes proposed in this Petition (Appendix A). Each subsection of the rule are as follows:

(A) $\underline{4906-17-08(A)}$ – Health and Safety

The Applicant has requested a waiver in full from this subsection. None of the information required by this subsection is relevant or applicable to the change in the collection line design, the relocation of the construction staging area, the relocation of the substation or the relocation of the four access roads and construction of one new access road.

(B) <u>4906-17-08(B) – Ecological Impact</u>

The Applicant has requested a waiver in part from this subsection, and is providing following information: (1) A map of 1:24,000 scale showing the information required under Rule 4906-17-08(B)(1)(a); (2) vegetation and animal life surveys in areas where the relocated collection lines are routing through forestland or scrub-shrub pursuant to Rule 4906-17-08(B)(1)(b),(c); (3) a summary of steam crossing and wetland delineation studies performed by the Applicant for this Petition pursuant to Rule 4906-17-08(B)(1)(d); (4) a list of major species from the surveys pursuant to 4906-17-08(1)(e); and (5) an estimate on the impact of construction of the relocated collection lines, staging areas, access roads and substation as required under 4906-17-08(B)(2), including any potential impact on the rayed bean mussel and eastern massasauga rattlesnake.

In support of the preparation of this Petition, Hull & Associates and Buckeye Wind LLC have updated Phase 1 mapping including open spaces, have performed stream and wetland delineations and vegetation and animal surveys for the proposed modifications, and updated agricultural impacts due to the proposed changes.

(1)(a) Open Spaces and Facility Map

Figure 5 shows the Facility and lands within a 0.5-mile radius of the proposed Facility. Among other information, Figure 5 shows the following features:

- The proposed Project area boundary.
- Undeveloped or abandoned land such as wood lots, wetlands, or vacant fields.
- Recreational areas, parks, wildlife areas, nature preserves, and other conservation areas.

(1)(b) Vegetation Survey Results

In February 2013, Hull & Associates surveyed the vegetative communities and animal life within the forestland and scrub-shrub areas that could be potentially impacted by the relocated collection lines. The survey area included a 25 foot width buffer centered on the alignment of the proposed relocated buried electrical lines totaled 91.2 acres, representing the area of land disturbance that will occur to install the relocated buried electrical interconnects. The survey area was evaluated using the vegetation mapping performed for the Buckeye II Wind Farm Project area. Approximately 84.26 acres (92.8%) of the survey area is active or fallow agricultural land. The remaining 6.6 acres (7.2%) of the survey area is forested and scrub-shrub vegetation areas. With the addition of .14 acres of temporary disturbance in a forested area by the new access road, 6.74 acres of forested and scrub-shrub areas will be disturbed. Certain generalized vegetative community types occur within the survey area, including active and fallow agricultural areas, scrub-shrub areas, and forest areas. Ecological impact to agricultural areas from the relocation of buried interconnects is assumed to be negligible. The forest vegetative community type is further subdivided into upland woods, upland ridge woods (upland woods occurring on sloped terrain), and riparian woods (woods occurring adjacent to stream corridors).

Hull identified scrub-shrub and forested vegetative community types within the survey area as follows:

- Scrub-Shrub: The scrub-shrub community type comprises approximately 2.8 acres

 (3.0%) of the survey area. This community type is an intermediate successional stage
 between old field and forest. The scrub shrub community is dominated by upland shrubs
 and small trees; common species include green ash (*Fraxinus pensylvanica*), maples
 (Acer spp.), hackberry (*Celtis occidentalis*), raspberry and/or blackberry (*Rubus* spp.),
 multiflora rose (*Rosa multiflora*), and honeysuckles (*Lonicera* spp). The scrub-shrub
 type can occur on flat to sloping terrain, but usually does not occur on steep slopes.
- Forest: The forest community type comprises approximately 3.8 acres (4.2%) of the survey area and 3.94 acres with the addition of the new access road. The forest community type is further subdivided as follows:
 - Upland Woods: This community type comprises approximately 1.9 acres of the Forest community type within the survey area and 2.04 acres when taking into consideration the impact of the new access road. This community occurs on flat to gently sloping terrain on well-drained soils. Species typically observed within the canopy of this community type include honey locust (*Gleditsia triacanthos*), white oak (*Quercus alba*), shagbark hickory (*Carya ovata*), green ash, ironwood (*Ostrya virginiana*), American elm (*Ulmus americana*), black cherry (*Prunus serotina*), cottonwood (*Populus deltoides*), tupelo (*Nyssa sylvatica*), white ash (*Fraxinus americana*), osage orange (*Maclura pomifera*), burr oak (*Quercus macrocarpa*), sugar maple (*Acer saccharum*), red oak (*Quercus rubra*), and post oak (*Q. stellata*), while the shrub layer is dominated by honeysuckle shrubs.
 - Upland Ridge Woods: This wooded community type occurs on steeply sloped
 ridges that are inaccessible for agricultural purposes and comprises approximately

1.0 acres of the Forest community type within the survey area. Upland forest species found here include black cherry, catalpa (*Catalpa speciosa*), sugar maple, hackberry, white oak, red oak, sycamore (*Platanus occidentalis*), and green ash in the canopy, hop hornbeam (*Carpinus caroliniana*), paw paw (*Asimina triloba*), honeysuckles, and blackberries in the shrub layer. Species observed in the herb layer include *Geum* sp., *Aster* sp., and garlic mustard (*Alliaria petiolata*), and may also include a diverse herbaceous spring flora.

Riparian Woods: Riparian woods occur along streams and creeks and within floodplains, and comprise approximately 0.9 acres of the Forest community type within the survey area. Riparian woods typically occur on moderately well-drained alluvial soils. Species typically observed within the canopy include black cherry, honey locust, box elder (*Acer negundo*), green ash, American elm, cottonwood, burr oak, osage orange, red maple (*Acer rubrum*), red oak, tupelo, mockernut hickory (*Carya tomentosa*), Ohio buckeye (*Aesculus glabra*), and hackberry. Species within the shrub layer include honeysuckles, hawthorn (*Crataegus* spp.), spicebush (*Lindera benzoin*), and multiflora rose.

(1)(c) Animal Life Survey Results

Hull compiled a list of vertebrate fauna likely to occur in each habitat type identified within the survey area, based on field observations and published data. The results of these surveys are presented below by habitat type.

• Animal life in Scrub-Shrub habitat: Mammals that utilize scrub-shrub habitats include white-tailed deer, red fox, coyote, groundhog, striped skunk, eastern cottontail rabbit, field mouse, and meadow vole. A variety of songbird species utilize scrub-shrub

communities for nesting and rearing young, including indigo bunting, dark-eyed junco, robin, eastern towhee, sparrows, mourning dove, cardinal, and kingbird. Reptiles are not common in scrub-shrub habitats within the survey area, but a few snake species such as garter snakes or eastern hognose snake could inhabit these areas.

- Animal life in Upland Woods and Upland Ridge Woods habitat: Mammalian species that utilize mature upland forest and upland ridge habitats within the survey area include white-tailed deer, red fox, gray fox, coyote, raccoon, opossum, eastern cottontail rabbit, fox squirrel, gray squirrel, red squirrel, and eastern chipmunk. In addition, several bat species may utilize these wooded plant community types for roosting, foraging or as travel corridors, particularly when wetlands or streams are also present in the woods or in the immediate vicinity. Bird species that utilize forested habitats in the survey area may include scarlet tanager, blue jay, Baltimore oriole, black-capped chickadee, a variety of woodpecker species, vireos, and various raptor and owl species. Reptilian species that utilize forested habitats in the survey area may area include eastern box turtle, eastern fox snake, and several garter snake species.
- Animal life in Riparian Woods habitat: Mammals expected within the riparian woods habitat are similar to those described above for the upland woods and upland ridge habitats, with the addition of species that prefer to be located in or near small streams/wetlands, such as muskrat, mink, long-tailed weasel, beaver, and various bat species. Bird species that utilize these community types include various warbler species, goldfinch, cedar waxwing, wood thrush, hermit thrush, numerous woodpecker species, nuthatches, screech owl, barred owl, great-horned owl, whip-poor-will, eastern wild turkey, and various hawk species. Reptilian species that utilize forested habitats in the

Project Area include eastern box turtle, eastern fox snake, and several garter snake species.

- Animal species of commercial value: Animal species of commercial value are also
 present in the survey area. Ohio DNR regulates the hunting and trapping of furbearers in
 Champaign County, including muskrat, raccoon, red fox, gray fox, coyote, mink,
 opossum, striped skunk, weasel, and beaver. Given the remoteness of the survey area
 from urbanized areas, it is possible that hunting, trapping, and predator culling occur, and
 that furbearing animals are harvested and sold as regulations permit; however this type of
 commercial activity is probably very limited in this area.
- Animal species of recreational value: The survey area contains habitats suitable for animal species of recreational value. Forest and scrub-shrub areas within the survey area support populations of white-tail deer, ringneck pheasant, and wild turkey, all of which have been observed in the vicinity of the survey area. These habitats are used by hunters during hunting season. The average diversity of birds expected within the survey area is unlikely to attract more than a few avocational birdwatchers.

(1)(d) Summary of Ecological Impact Studies

In addition to the vegetation and animal life surveys, wetlands and streams in the area of the relocated collection lines, staging areas and access roads have been assessed and delineated. The delineation identified a total of 21 wetlands, all or a portion of which were within 100 feet of the relocated project components; fifteen Ohio Category 1 wetlands, one Ohio Category 1/2 gray zone wetland assumed to be Modified Category 2, four Ohio Modified Category 2 wetlands and one Ohio Category 2 wetland. See Table 8-10 for a summary of delineated wetlands. The delineation identified a total of 35 streams all or a portion of which were within 100 feet of the relocated project components. Several streams were delineated at more than one relocated project component location, resulting in a total of 43 stream segments delineated within 100 feet of the relocated project components; eleven Modified Class I Primary Headwater Habitat (PHWH) streams, sixteen Modified Class II PHWH streams, two Class II PHWH streams, one Modified Warm Water Habitat stream, two Warm Water (WWH) streams, two Exceptional Warm Water Habitat (EWH) streams, eight Cold Water Habitat (CWH) streams and one stream that is both EWH and CWH were identified near the relocated project components. See Table 8-11 for a summary of evaluated stream crossings. See Section 4906-17-08(B)(2)(a) below for additional detail about streams and wetlands in the Project Area.

(1)(e) List of Major Species

Federally-Listed Species

The survey area contains habitats with the potential to support a single federally-listed animal species, the Indiana bat (endangered). Review of the United States Department of the Interior's federally-listed species by Ohio counties list (USFWS, 2012) indicates that the survey area is within the range of two federally-listed and one candidate species: Indiana bat (endangered), rayed bean mussel (endangered), and eastern massasauga (candidate). However, suitable habitat for rayed bean mussel and eastern massasauga are not present within the survey area. A brief discussion on each species follows.

Indiana bat (*Myotis sodalis*): The Indiana bat is a migratory bat that hibernates in caves
and mines in the winter. In spring, reproductive females emerge from their hibernaculum
and migrate, forming maternity colonies in wooded areas to bear and raise their young.
Trees (dead, dying, or healthy) with exfoliating or defoliating bark, or trees containing
cracks or crevices, provide suitable summer roosts. Indiana bats require a mosaic of

habitats for feeding, preferring to forage along streams/rivers and above waterbodies, but also utilizing upland forests, clearings with successional old field vegetation, the borders of croplands, wooded fencerows, and pastures. EverPower, together with the USFWS, has determined that actions associated with the Facility have the potential to incidentally take Indiana bats, listed as federally endangered under the Endangered Species Act (ESA). Indiana bats could be injured or killed by colliding with or coming in close proximity to operational turbines. Section 10 of the ESA allows for incidental take of ESA listed species through the issuance of an Incidental Take Permit (ITP) by the USFWS and implementation of associated Habitat Conservation Plan (HCP). The HCP analyzes potential impacts to the Indiana bat from construction, operation, maintenance, and decommissioning of the project and describes how the project will meet the criteria for issuance of an ITP set forth in section 10(a)(2) of the Endangered Species Act and the implementing regulations, 50 Code of Federal Regulations (CFR) 17.22. Securing an ITP and development and implementation of the associated HCP are conditional requirements of the Certificate. Additional conditions in the Certificate also provide mitigation during construction activities, such as the tree clearing plan required by Condition 8(f) and the presence of an environmental specialist required by Condition 13.

• Rayed bean mussel (*Villosa fabalis*): The rayed bean mussel is typically found in small, headwater creeks (usually in or near shoal or riffle areas), and in the shallow, wave-washed areas of lakes. This species occurs only in water bodies that provide perennial water flow. This species has been recorded in the vicinity of the Little Darby Creek, and is potentially present in its perennial tributaries as well. The rayed bean mussel has the potential to occur in the vicinity of the relocated collection lines, and the USFWS

recommends that surveys for the presence of the rayed bean mussel be conducted where the Facility will directly or indirectly affect habitat types known to support this species. To comply with this request, Hull conducted a presence/absence mussel survey where appropriate habitat types were encountered during field reviews of stream crossings. A few shells of common mussel species were found, but no live mussels or fresh dead shells were observed. Irrespective of this finding, Buckeye will directionally drill beneath all perennial stream corridors that have the required base flow and substrate to support rayed bean mussels and that will be crossed by relocated collection lines. Furthermore, an erosion and sediment control plan and Stormwater Pollution and Prevention Plan (SWPPP) will be developed and implemented for the entire Project, which will control potential sedimentation, siltation, and run-off that could negatively affect mussels and other aquatic life. Most mussel species require good water quality and erosion and sediment control measures implemented through the National Pollutant Discharge Elimination System (NPDES) permit will preserve the existing water quality level. In summary, impacts to aquatic habitat will be minimal as a result of the avoidance measures and erosion and sediment control measures that will be implemented by Buckeye Wind and enforced by its NPDES permit during construction and decommissioning.

• Eastern massasauga (*Sistrurus catenatus catenatus*): This rare rattlesnake has declined drastically since the mid-1970s rangewide, and now occurs in primarily in disjunct, isolated populations. Massasaugas inhabit the edges of open-canopied wetlands with adjacent early successional uplands, and move seasonally between the upland and wetland habitats. Specifically, areas occupied by extant populations of massasaugas

possess the following characteristics: (1) open, sunny areas intermixed with shaded areas, presumably for thermoregulation; (2) presence of the water table near the surface for hibernation; and (3) variable elevations between adjoining lowland and upland habitats (Szymanski, 1998; Lee & Legge, 2000). Eastern massasauga was historically known from over 30 Ohio counties, but extensive farming has drastically reduced both numbers and habitat. Since 1976, the species has only been reported from eight Ohio counties, mostly in the central and eastern portions of the state. No potential suitable habitat in the area of the relocated collection lines or staging areas exists for this rattlesnake.

State-Listed Species

There are no records of state-listed species within 0.25 mile of the proposed relocated project components. However, the survey area contains habitats with the potential to support state-listed animal species. The table below shows the state-listed animal species with potential habitat within the survey area, along with general habitat requirements and Ohio state status for each species.

Animal Species ¹			
Scientific Name	Common Name	General Habitat	Ohio Status ²
Falco peregrinus	peregrine falcon	variety/nests on tall structures	E
Myotis sodalis	Indiana bat	woodlands	E ³
Taxidea taxus	badger	variety	SC

¹ (Hull & Associates, 2012)

 2 E = Endangered, T = Threatened, SC = Species of Concern (ODNR, 2012).

³ This species is also federally-listed as Endangered.

¹ E = Endangered, T = Threatened, P = Potentially Threatened, SC = Species of Concern (ODNR, 2012a).

² This species is also federally-listed as Endangered.

All staging areas, the four relocated access roads and the substation are located in active

agricultural fields. The buried collection lines are located in approximately 93% active

agricultural lands. The new access road will also be located in active agricultural areas, and will

only have temporary forest impacts of 0.14 acres. The impact of construction on animal species of commercial or recreational value is expected to be minimal. While the ecological communities within the survey area are important to a variety of vertebrate species, impacts from buried interconnect or construction will be narrowly confined to linear corridors and will not adversely affect usage of these habitats.

(B)(2) <u>Construction</u>

(a) Estimation of Impact of Construction on Undeveloped Areas

Although the majority of the collection line system is being relocated to disturbed areas, potential ecological impacts may occur during construction as a result of the installation of the relocated collection lines in undeveloped areas. Electrical cables will be placed into an excavated ditch and buried. The ditching operation will cause soil and vegetation disturbance of a total width of 25 feet. The alignment of the ditching operation can be adjusted in the field to avoid any significant features such as large trees. It is estimated that impacts to ecological habitats and animal species due to buried interconnect construction will be minimal throughout the survey area.

Although impacts will be minimal, potential impacts to upland and wetland communities are discussed below.

Upland Habitats

Collection line construction will result in temporary and permanent impacts to vegetation within the Project Area. Construction activities that will result in impacts to vegetation include site preparation, earth-moving, and excavation/backfilling activities associated with construction/installation of the construction staging areas and buried electrical interconnect. These activities will result in the cutting and clearing of vegetation, the removal of stumps and root systems, and increased exposure/disturbance of soil. Along with direct loss of (and damage to) vegetation, these impacts can result in a loss of wildlife food and cover, increased soil erosion and sedimentation, increased risk of colonization by non-native invasive species, and disruption of normal nutrient cycling. However, it is not anticipated that any plant species occurring in the area of the relocated collection lines will be extirpated or significantly reduced in abundance as a result of construction activities, especially as approximately 93 percent of the relocated collection lines will be buried in active agricultural fields.

Wetland & Surface Water Habitats

Over 93 percent of the relocated collection lines are located in currently or recently active agricultural fields. Also, the relocated staging areas, the four relocated access roads and the substation will be located in agricultural land. The new access road will also be located in active agricultural areas, and will only have limited, temporary forest impacts of 0.14 acres. The road will cross a low-grade stream by utilizing an existing road crossing that may or may not be improved after further analysis of the crossing structure is complete. Given the proposed changes, direct and indirect impacts to wetlands and surface waters in the vicinity of relocated collection lines, staging areas, the substation and access roads will be negligible.

Hull & Associates conducted a surface water and wetland delineation for the area within 100 feet of the relocated project components that construction could potentially impact. Hull conducted the delineation in May, June, and November 2008, in August 2009, in June, October, and December 2011 and in February 2013. At the time of surface water evaluation activities conducted in 2008, the Interim Midwest Regional Supplement to the 1987 Wetland Delineation Manual had not yet been implemented. Wetland delineation work conducted in August 2009 and June 2011 for this report used the Midwest Supplement, which was implemented in Interim form on November 25, 2008 and in final form in November 2009. Use of the Midwest Supplement

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resulted in small changes in field procedures and delineation criteria, as well as the use of new delineation data forms.

A surface water evaluation consists of an initial surface water determination to establish the absence or potential presence of surface waters at a given site and make a preliminary determination of federal and/or State of Ohio surface water jurisdiction. If surface waters are determined to be present, the surface water determination is followed by delineation (as necessary) to establish jurisdictional boundaries of wetlands, streams, ditches and other water bodies.

Federal regulations define a jurisdictional wetland as an area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. According to current wetland criteria, a wetland has: (1) hydric (i.e., wetland) soils, (2) evidence of inundated or saturated conditions (wetland hydrology), and (3) a predominance of wetland vegetation. When all three of these criteria are met, a wetland is present and is subject to federal and/or state regulations and permitting.

Currently the USACE has sole authority to verify delineations of surface waters and to determine whether wetlands or other water bodies are isolated or non-isolated. Verification occurs after review of a delineation report, which typically includes a field visit by USACE staff. Delineations are typically valid for a period of five years from the date of the USACE delineation verification letter.

Hull compiled existing information about the site from the following sources:

• Natural Resources Conservation Service (NRCS) Soil Survey of Champaign County, Ohio – the soil survey identifies soil mapping units within the Facility, including hydric
soil mapping units, non-hydric soil mapping units that may contain inclusions of hydric soil units, and non-hydric soil mapping units;

- County Listings of Hydric Soils and Non-hydric Soils with Hydric Inclusions Hydric or non-hydric status for each soil unit was determined using the Natural Resources
 Conservation Service Web Soil Survey 2.0; and
- United States Department of Interior National Wetlands Inventory (NWI) Maps These data provide an indication of the presence of wetland and open water areas across the Facility, as defined by the U.S. Fish and Wildlife Service (USFWS) classification system. The notation of a wetland on a NWI Map indicates that wetlands may occur or have occurred in the area. Often, those wetlands depicted on NWI maps are the wettest spots in a given area. NWI map information is used to supplement knowledge about a site and cannot take the place of field observations due to minimal ground truthing, map age, map scale, and wetland criteria that differ from USACE wetlands criteria.

Hull used this preliminary information to perform screening of the areas for the relocated project components to plan and focus on-site investigations. All areas were examined using confirmatory soil sampling and wetland and stream data collection.

Wetland Delineation & Evaluation Methods

In wetland delineation, data is collected concerning the vegetation, soils, and hydrology present in various plant communities to determine if the criteria for a jurisdictional wetland are met, and the wetland/non-wetland boundaries are flagged. The wetland/non-wetland boundaries and the sample locations are then surveyed and placed on a site map. From the wetland map, the acreage of each wetland can be calculated. A preliminary determination is also made as to

whether each wetland is isolated and thus under the jurisdiction of the State of Ohio Isolated Wetland Permit Program, or non-isolated, and thus under federal Clean Water Act jurisdiction.

As previously indicated, field delineation activities performed during 2008 were conducted according to methods outlined in the 1987 US Army Corps of Engineer's wetlands delineation manual, while field activities performed during 2009 and 2011 were conducted according to the 1987 Manual plus the methods outlined in the 2008 Midwest Supplement. Hull located the wetland edges in the field using these procedures, subsequent USACE memoranda and regulatory guidance, and basic principles of plant community ecology. Plant communities within the Facility were characterized using the three criterion wetland delineation approach. The wetland indicator status of plant species was determined using Reed (1988). After characterizing the vegetation, hydrology, and soils of a plant stand type, and becoming familiar with the soil, vegetation, and/or hydrologic cues that indicate wetland edge, Hull flagged the wetland edges with collection of additional soil or hydrologic data where needed to refine the edge.

Primary hydrologic indicators observed within wetlands during field activities included soil saturation within the upper 12 inches, water marks, water-stained leaves, sediment deposits, drift deposits and inundation. Secondary hydrologic indicators observed within some of the wetlands during field activities included the FAC-neutral test, geomorphic position, crayfish burrows, surface soil cracks, saturation visible on aerial imagery, drainage patterns, and local soil survey data.

Hull performed an evaluation of wetlands using Ohio's Rapid Assessment Method for Wetlands, Final Version 5.0 (ORAM). The ORAM value assessment is based on review of resource materials, data obtained in the field, and the acreage as determined by delineation and

mapping. The wetland value information is provided to the Ohio EPA for the purpose of placing wetlands into the appropriate wetland Category described in Ohio's Wetland Water Quality Standards (Sections 3745-1-05 and Sections 3745-1-50 through 3745-1-54).

There are three possible Ohio Wetland Anti-degradation tiers to which wetlands may be assigned:

- Category 1 Lowest value category. Generally limited to small, low diversity wetlands and wetlands with a predominance of nonnative invasive species.
- Category 2 Middle value category. Wetlands in this category are of moderate diversity but do not contain rare, threatened, or endangered species. They are generally degraded, but are capable of attaining higher value. Most wetlands in Ohio are expected to fall into this category.
- Category 3 Highest value category. Wetlands in this category may be large, diverse, represent rare plant community types, contain rare, threatened or endangered species, or any combination of these and several other factors.

The delineation identified a total of 21 wetlands, all or a portion of which were within 100 feet of the relocated project components; fifteen Ohio Category 1 wetlands, one Ohio Category 1/2 gray zone wetland assumed to be Modified Category 2, four Ohio Modified Category 2 wetlands and one Ohio Category 2 wetland. See Table 08-10 for a summary of delineated wetlands.

Wetland ID	Figure Number	NWI Community Type ¹	Wetland Size (acres)	ORAM Score ² 4	ORAM Category	Isolation Status
A	10	PUBFh	0.39	42	Modified 2	Isolated
В	10	PEMCd	2.9	41.5	Modified 2	Nonisolated
H	10	n/a	0.02	37.5	Modified 2	Nonisolated
Ι	10	PUBGh	0.66	37	Modified 2	Nonisolated
J	11	PEMA	0.74	7.5	1	Isolated
K	11	PEMC	1.44	17.5	1	Nonisolated
		,			1/2 Gray Zone; assumed	
	10	n/a	0.01	31	Modified 2	Nonisolated
<u>M</u>	11	n/a	0.19	11	1	Isolated
<u>N</u>	6	n/a	0.02	14	1	Nonisolated
Q	4	n/a	0.04	29	11	Nonisolated
<u> </u>	11	PEM1C	0.2	14	1	Isolated
<u> </u>	17	n/a	0.07	20	1	Isolated
<u> </u>	17	PEM1A	~0.20**	25	1	Isolated
W	6	PEM1C	0.19	10	1	Isolated
FF	[•] 17	n/a	0.39	16.5	1	Nonisolated
GG	16	n/a	~0.30- 3**	25	1	Nonisolated
JJ	6	PEM1A	0.19	27	1	Nonisolated
KK	7	PFO1A/PSS1C	~0.30- 3**	45	2	Nonisolated
NN	11	PSS1C/PUBGh	~0.30- 3**	28	1	Nonisolated
KA	6	n/a	0.05	14	1	Isolated
KB	6	n/a	0.38	20	1	Nonisolated

Table 08-10. Delineated Wetlands within 100 feet

1 NWI = National Wetlands Inventory

2 ORAM = Ohio Rapid Assessment Method of Wetlands v. 5.0 ** Wetland size estimated, extended out of delineation area.

Through careful design, all temporary and permanent impacts to identified wetlands will be avoided during construction of the relocated project components. A short portion of the collection line system will cross Wetland Q and Wetland KA. To avoid the wetlands, that portion of the collection line system will be installed by boring underneath each wetland. For

those wetlands near construction areas, steps may include prominently flagging or temporarily fencing the wetland edges prior to construction, proper implementation of a SWP3, and utilizing sediment and erosion control measures. Additional information on proposed mitigation measures can be found in Section 4906-17-08(B)(2)(c) of this Petition.

Stream Delineation & Evaluation Methods

In stream delineation, the location and length of streams is determined from existing mapping information and/or via surveying streams in the field. Note that some streams too small to be included on U.S. Geological Survey (USGS) topographic maps may nevertheless be under CWA jurisdiction. Jurisdictional streams generally have a defined channel, an Ordinary High Water Mark and discernible bed and bank features, and may have other morphological features typical of streams including riffles and pools, meanders, and a floodplain.

Streams identified on US Geological Survey (USGS) topographic maps are generally found to be under the Clean Water Act jurisdiction of the USACE. Additional streams may be identified in the field by the presence of a defined bed and bank, and Ordinary High Water Mark (OHWM) and other stream morphological features. Suspected stream channels are examined upstream to identify the source of water and downstream to determine if the channel ends in a wetland, a confluence with another stream, a culvert inlet, or another fate.

Hull evaluated streams within the Facility using the Ohio Qualitative Habitat Evaluation Index (QHEI) scoring method, or the Ohio Headwater Habitat Evaluation Index (HHEI) as applicable. Both methods yield a numerical score for the stream reach evaluated, which is then used to estimate the probable existing aquatic life use of each stream. The HHEI and the Ohio Headwater Macroinvertebrate Field Evaluation Index (HMFEI) are used on primary headwater habitat (PHWH) streams with drainage area less than one square mile and with maximum pool

depths less than 40 centimeters. Headwater streams are small first-order swales, creeks, and streams that are the origin of most rivers. These small streams join together to form larger streams and rivers, or run directly into larger streams and lakes. Ohio EPA defines a headwater stream as a stream with a watershed less than or equal to 20 square miles. Many streams and drainage ways have a watershed of less than one square mile; these are referred to as primary headwater streams. There are three possible categories to which PHWH streams may be assigned:

- Class I Lowest value category. These streams are limited to intermittent or ephemeral streams with warm water conditions. They may contain ephemeral warm water communities, but are often dry for long periods of time.
- Class II Middle value category. These streams are perennial or intermittent with warm water conditions. They generally contain species of animals that are adapted to warm water streams, including certain amphibians and pioneering fish species, along with invertebrates such as odonate larvae.
- Class III Highest value category. These streams are perennial with cold water conditions, and are usually groundwater fed. They contain species of animals adapted to the year-round presence of cool water, including certain amphibians or fish species, along with insect larvae such as mayflies, stoneflies, and caddisflies.

In addition to natural channels, different classes of headwater streams can also have modified channels. Many primary headwater streams are being modified through channelization and/or riparian removal, as part of activities related to agricultural activities and urban/suburban development. Such modification is the primary origin of habitat degradation in smaller streams and a leading source of impairment to the water quality of larger streams into which they flow. The QHEI is used for streams with drainage areas greater than one square mile and/or with pool depths greater than 40 centimeters. This index was designed to provide a measure of habitat quality that corresponds to physical factors that affect communities of fish and aquatic invertebrates, and is based on six main metrics: substrate, instream cover, channel morphology, channel and bank condition, pool and riffle quality, and gradient. These larger and deeper streams have sufficient amounts of water throughout the year to support year-round fish communities. Scores from the QHEI are used to assign each stream to one or more of the following aquatic life use designations, as defined by Ohio Water Quality Standards Water Use Designations (OAC 3745-1-07):

- Warmwater Habitat (WWH) Capable of supporting and maintaining a balanced community of warmwater aquatic organisms. This is the most widely applied use designation assigned to rivers and streams in Ohio.
- Limited Warmwater Habitat (LWWH) Temporary aquatic life habitat use designation created in the 1978 Ohio Water Quality Standards for streams not meeting specific warmwater habitat criteria. This aquatic life use designation is being phased out
- Exceptional Warmwater Habitat (EWH) Capable of supporting and maintaining an
 exceptional or unusual community of warmwater aquatic organisms with the general
 characteristics of being highly intolerant of adverse water quality conditions and/or being
 rare, threatened, endangered, or of special status.
- Modified Warmwater Habitat (MWH) Incapable of supporting and maintaining a balanced community of warmwater aquatic organisms because of extensive and irretrievable modifications to the physical habitat Seasonal Salmonid Habitat (SSH) –

Capable of supporting the passage of salmonids from October to May, and large enough to support recreational fishing.

- Coldwater Habitat (CWH) Capable of supporting populations of coldwater aquatic
 organisms on an annual basis and/or put-and-take salmonid fishing. These water bodies
 are not necessarily capable of supporting the successful reproduction of salmonids and
 may be periodically stocked.
- Limited Resource Water (LRW) Incapable of supporting and maintaining a balanced community of aquatic organisms because of natural background conditions or irretrievable human-induced conditions.

The boundaries of all wetland areas and sample points were captured in the field using Trimble GeoXT mapping-level portable Global Positioning System (GPS) receivers. Differentially corrected GPS data were determined to be accurate within 0.5 to 2.0 feet. The wetland areas and sample points were placed in a GIS database and assembled with other available geographically referenced information using ARC-GIS v.9.0 software. The delineation identified a total of 35 streams all or a portion of which were within 100 feet of the relocated project components. Several streams were delineated at more than one location, resulting in a total of 43 stream segments delineated within 100 feet of the Facility; eleven Modified Class I Primary Headwater Habitat (PHWH) streams, sixteen Modified Class II PHWH streams, two Class II PHWH streams, one Modified Warm Water Habitat stream, two Warm Water (WWH) streams, two Exceptional Warm Water Habitat (EWH) streams, eight Cold Water Habitat (CWH) streams and one stream that is both EWH and CWH were identified near the relocated project components. Characteristics of jurisdictional streams being crossed by the relocated collection lines and the new access road are summarized below in Table 08-11.

ID	Name	Flow	ALU Designation	Crossing ID
2	Stream B-2	Ephemeral	Modified Class II PHWH	S12
3	Stream BB (Treacle Creek)	Intermittent	EWH	<u>\$13</u>
4	Stream CC	Ephemeral	Modified Class I PHWH	S10
6	Stream D-2	Ephemeral	Modified Class II PHWH	S29
8	Stream E (Dugan Run)	Intermittent	Listed: WWH; Measured: Modified Class II PHWH	S11
9	Stream II	 Ephemeral	Modified Class I PHWH	\$17
11	Stream J-2	Intermittent	WWH	S27
12	Stream JJ	Intermittent	Modified WWH	S14
13	Stream K	Ephemeral	Modified Class I PHWH	S28
14	Stream L (Little Darby)	Intermittent	EWH and CWH	S 7
15	Stream LL	Ephemeral	Class II PHWH	S19
16	Stream MM	Ephemeral	Modified Class I PHWH	S20
17	Stream O	Perennial	CWH	S21, S22
18	Stream OO	Ephemeral	Modified Class II PHWH	S18
5	Stream S	Ephemeral	Modified Class I PHWH	S5
19	Stream QQ	Ephemeral	Modified Class I PHWH	S23
23	Stream WW	Ephemeral	Modified Class II PHWH	S25
25	Stream XX	Ephemeral	Modified Class II PHWH	S24
26	Stream Y (Buck Creek)	Intermittent	CWH	<u>S9</u>
27	Stream Y-2 (Buck Creek)	Intermittent	СѠН	S16
28	Stream Y-3 (Buck Creek)	Intermittent	СѠН	S15
29	Stream YY	Ephemeral	Modified Class I PHWH	S30

Table 08-11. Jurisdictional Streams crossed by relocated collection lines and an access road

For all identified stream crossings, effective techniques are available and will be used to avoid or minimize stream impacts that would require Clean Water Act Section 404 and 401 permits. The relocated staging areas and substation require no stream crossings. The one new access road will cross an ephemeral stream (Stream S) using an existing road crossing that may or may not be improved (widening or structural support) depending on the analysis of the road crossing structure. Most relocated collection line crossings of intermittent and ephemeral streams will trench through the stream and will be done when the stream is dry or flow is low. If water is present at the time an intermittent or ephemeral stream is crossed, Buckeye Wind will horizontally directionally drill underneath the stream regardless of its beneficial use classification. In cases when only buried electrical collection lines cross a perennial stream, the collection line will be directionally bored underneath the stream.

The relocated collection lines, access roads and staging areas are located entirely on leased private land. Therefore, no construction-related impacts will occur at recreational areas, parks, wildlife areas, nature preserves, or other conservation areas as identified in rule 4906-17-08(B)(1)(a)(iii).

(B)(2)(b) Estimation of Impact of Construction on Major Species

Siting collection lines, access roads, staging areas and the substation away from sensitive habitats, such as forestland, streams and wetlands, minimizes impacts to wildlife. Construction-related impacts to wildlife are anticipated to be limited to potential incidental injury and mortality due to construction activity and vehicular movement, construction-related silt and sedimentation impacts on aquatic organisms, habitat disturbance/loss associated with clearing and earth-moving activities, forest fragmentation, and displacement of wildlife due to increased noise and human activities. Each of these potential impacts is described below. None of the construction-related impacts related to the relocated collection lines, staging areas, access roads and substation will be significant enough to affect local populations of any resident or migratory wildlife species.

Incidental Injury & Mortality

Incidental injury and mortality should be limited to sedentary/slow-moving species such as small mammals, reptiles, and amphibians that are unable to move out of the area being disturbed by construction. If construction occurs during the nesting season, wildlife subject to

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mortality could also include the eggs and young offspring of nesting birds, as well as immature mammalian species that are not yet fully mobile. More mobile species and mature individuals should be able to vacate areas that are being disturbed. Approximately 93% of the relocated collection lines and all of the relocated construction staging areas, access roads and the substation are sited in active agricultural land that provides limited wildlife habitat, and which currently (and historically) experiences frequent agricultural-related disturbances. Additionally, the new access road will have limited, temporary forest impacts of 0.14 acres but will be permanently located in active agricultural areas. In addition, clearing of areas enrolled in the Conservation Reserve Program (CRP) will be conducted before March 1 and after July 15 to avoid potential disruption of breeding activities. Consequently, incidental species injury and mortality impacts are anticipated to be minor.

Siltation & Sedimentation

Earth-moving activities associated with collection line construction have the potential to cause siltation and sedimentation impacts down slope of the area of disturbance. The relocated collection lines, staging areas, access roads and the substation will be sited away from wetlands and streams to the extent practicable. To prevent adverse effects to water quality and aquatic habitat during construction, runoff will be managed under an NPDES construction storm water permit, a general permit for stormwater discharges associated with construction activity within the Big Darby Creek watershed, and the associated SWP3. An erosion and sediment control plan will be developed prior to construction that will use appropriate runoff diversion and collection devices. Also, because approximately 93 percent of the relocated collection lines are being sited in active agricultural land, soil disturbance/exposure due to construction will generally occur in areas already subject to regular plowing, tilling, harvesting, etc.

Habitat Loss

All relocated construction staging areas, access roads and the substation will be located in active agricultural lands and buried collection lines will be located in approximately 93% active agricultural or other disturbed land, which generally provides habitat for a limited number of wildlife species. In addition, these areas are already subject to periodic disturbance in the form of mowing, plowing, harvesting, etc. However, hayfields and pastureland do provide habitat for open country/grassland avian species (such as bobolink, red-winged blackbird, and savannah sparrow), and will be disturbed by collection line construction. The new access road will also be located in active agricultural areas, but will have limited, temporary forest impacts of 0.14 acres. Scrub-shrub, and forested communities will experience minimal construction-related disturbance. As Table 8-9 below demonstrates, based on the current relocated collection line and access road layout, approximately 3.94 acres of forest and 2.8 acres of scrub-shrub habitat will be temporarily disturbed. The only permanent loss to forestland habitat will be 0.28 acres. **Table 08-9. Relocated Collection Line, Staging Areas, and New Access Road Impacts**

Community	Total Disturbance (acres)	Temporary Disturbance (acres)	Permanent Loss (acres)
Forestland	3.94	3.66	0.28
Scrub-Shrub	2.80	2.80	0
Residential	0.28	0.28	0 '
Agricultural Lands	114.2	89.41	24.79

*91.2 acres relocated lines + 22.9 acres laydown areas + .14 acres new access road.

Forest Fragmentation

The proposed relocation of collection lines, access roads, the substation, and staging areas and the new access road will result in a permanent loss of 0.28 acres of forestland. No forests will be significantly fragmented by the proposed collection line and access road

relocation because any forested habitat impacted will occur at the edge of relatively small blocks or woodlots.

Disturbance/Displacement

Some wildlife displacement may also occur due to increased noise and human activity as a result of construction. The significance of this impact will vary by species and the seasonal timing of construction activities.

(B)(2)(c) Description of Short-term and Long-term Mitigation Procedures

Various procedures will be used to reduce impacts during construction, including impact minimization measures, site restoration, and mitigation. Each of these procedures is described in detail below:

Impact Minimization Measures

Mitigation measures to avoid or minimize impacts to vegetation will include identifying/delineating sensitive areas where no disturbance or vehicular activities will be allowed, limiting areas of disturbance to the smallest size practicable, siting components in previously disturbed areas (e.g., existing farm lanes), educating the construction workforce on respecting and adhering to the physical boundaries of off-limit areas, employing best management practices during construction, and maintaining a clean work area within the designated construction sites. Following construction activities, temporarily disturbed areas will be seeded (and stabilized with mulch and/or straw if necessary) to reestablish vegetative cover in these areas. Native species will be allowed to re-vegetate these areas, except in active agricultural fields.

To avoid or minimize impacts on surface waters, preliminary and final design is guided by the following criteria during the siting of collection lines, construction staging areas, access roads and the substation: Relocated staging areas, access roads and the substation are sited to completely avoid wetlands and surface waters. The new access road will cross a Class 1 ephemeral stream that will be crossed by previously approved collection lines at the same location. Relocated collection lines will avoid crossing wetlands by either boring below the wetland or siting the collection lines to avoid the wetlands. Also, efforts will be made to cross streams at existing or previously disturbed locations and techniques that minimize constructionrelated impacts to surface waters will be utilized.

Other on-site environmental or logistical constraints, (such as stands of mature forest, landowner concerns, and other current land use), may make further avoidance of streams unfeasible. Where crossings of surface waters are required, Buckeye will employ best management practices associated with applicable streamside activities. Specific mitigation measures for protecting wetlands and surface water resources will include designating no equipment access areas and restricted activity areas, employing low impact stream crossing techniques, developing and implementing a sediment and siltation control plan and a storm water pollution prevention plan, and implementing spill prevention, containment and countermeasure controls. Each of these mitigation measures is described below.

No Equipment Access Areas: Except where crossed by permitted access roads, wetlands and surface waters will be designated "No Equipment Access," thus prohibiting the use of motorized equipment in these areas.

Restricted Activity Areas: A buffer zone of 50 feet, referred to as a "Restricted Activity Area", will be established wherever a collection line traverses, or comes in proximity to, wetlands and surface waters. The 50-foot buffer zones will be depicted on construction drawings. Construction vehicles will be allowed in this zone. However, in order to provide

further protection to wetlands and surface waters, restricted activities within this buffer zone will include:

- No deposition of slash;
- No accumulation of construction debris;
- No application of herbicide;
- No degradation of stream banks;
- No equipment washing or refueling and
- No storage of any petroleum or chemical material.

Low Impact Stream Crossing Techniques: Buckeye will adhere to any permit special conditions pertaining to low impact stream crossing techniques, including seasonal restrictions and/or alternative stream crossing methods, such as temporary bridging and installation of crossings "in the dry." Open-bottomed or elliptical culverts may be utilized on certain streams to minimize loss of aquatic habitat and restriction of fish passage. Utilizing these techniques should avoid or minimize any adverse impacts on fish and other aquatic organisms.

Storm Water Pollution Prevention Plan (SWP3): To avoid and minimize impacts to aquatic resources resulting from construction-related siltation and sedimentation, an approved SWP3 will be implemented. To protect surface waters, wetlands, and groundwater, silt fencing, hay bales and other sediment and erosion control measures will be installed and maintained throughout Facility development. The location of these features will be indicated on construction drawings and reviewed by the contractor prior to construction.

Spill Prevention, Containment, and Countermeasure (SPCC): SPCC measures will be implemented to prevent the release of hazardous substances into the environment. These measures will not allow refueling of construction equipment within 100 feet of any stream or wetland, and all contractors will be required to keep materials on hand to control and contain a petroleum spill. These materials will include a shovel, tank patch kit, and oil-absorbent materials. Any spills will be reported in accordance with ODNR regulations. Contractors will be responsible for ensuring responsible action on the part of construction personnel.

Site Restoration

Following completion of construction of relocated project components, temporarily impacted areas will be restored to their pre-construction condition. Restoration activities are anticipated to include the following:

- Pre-construction contours and soil/substrate conditions will be established in all disturbed areas, to the extent practicable.
- Disturbed stream banks will be stabilized per the conditions of any formal state-issued permit.
- Buried electrical interconnect routes will be restored to pre-construction contours (as necessary) and allowed to regenerate naturally.
- Restoration of disturbed agricultural fields will be accomplished by decompacting the soil, removing rocks, and re-spreading stockpiled topsoil.
- Disturbed soils throughout the Project Area will be re-seeded with an annual cover crop to stabilize exposed soils and control sedimentation and erosion.
 Seeding outside of active agricultural fields will be restricted to native seed mixes.

These actions will assure that, as much as possible, the site is returned to its pre-construction condition and that long-term impacts are minimized.

Mitigation Measures

Buckeye Wind has made a strenuous effort to avoid federally regulated surface water impacts from discharge of fill material, and is exploring methods for crossing streams during construction that do not involve any impacts to streams for relocated collection lines, including using horizontal direction drilling. These avoidance efforts notwithstanding, a limited amount of permanent and temporary surface water impact from discharge of fill material is unavoidable during construction of the relocated collection lines. It appears that all proposed surface water impacts can be covered under a Clean Water Act Section 404 general permit (e.g., the Nationwide Permit program) and that individual Section 404 and 401 permits will not be necessary. If required by the USACE and Ohio EPA during the permitting process, the Applicant will undertake a suitable compensatory mitigation project to mitigate for unavoidable permanent stream impacts associated with the Facility. Any necessary compensatory mitigation would be developed in consultation with the USACE and Ohio EPA during the permitting process.

(C) 4906-17-08(C) – Economics, Land Use and Community Development

The Applicant has requested a waiver in full from this subsection. None of the information required by the rule is relevant or applicable to the change in the collection line design, the relocation of the construction staging areas, access roads, and substation or the new access road.

(D) 4906-17-08(D) – Cultural Impact

The Applicant has sought a waiver in part from the requirements of this subsection that are not applicable to the amendment. The Applicant is providing a map, Figure 08-1, in accordance with subsection 4906-17-08(D)(1) and will estimate the impact of the collection line redesign on the landmarks set forth in the map (subsection 4906-17-08(D)(2)). The Applicant has sought a waiver from the remainder of the rule including parts (4), (5) and (6) as these

Buckeye Wind LLC Case No. 13-360-EL-BGA information requirements have no bearing on the collection line redesign, the relocation of the construction staging areas, the four access roads and the substation or the new access road.

(D)(1) Cultural Impact Map

Attached as Figure 08-1 is a map of 1:24,000 scale showing registered landmarks of historic, religious, archaeological, scenic, natural or other cultural significance within five miles of the proposed Facility.

(D)(2) Cultural Landmark Impact

The relocation of the collection lines will eliminate overhead collection lines and new poles in the Project Area. This will minimize any effect that the collection lines would have on registered landmarks and other areas identified under (D)(1) of this rule. The Applicant estimates no impacts to the areas identified under (D)(1) of this rule as a result of the relocation of the collection lines, access roads, staging areas and the substation.

(E) 4906-17-08(E) – Public Responsibility

The Applicant has sought a waiver in full from the requirements of this subsection as the required information does not relate to the changes proposed in this Petition.

(F) 4906-17-08(F) – Agricultural District Impact

Subsection 4906-17-08(F) requires an applicant to provide the Board with information regarding the facility's impact on agricultural land. The Applicant has requested a waiver in part from this rule (Appendix A) and is providing information related to the relocated project components. The applicable sections of the rule are as follows.

(F)(1) Agricultural Land Map

Agricultural land use is a significant component of the area for the relocated project components. All of the area disturbed by the four relocated access roads is agricultural. The

new access road will also be located in agricultural areas, with an estimated impact of 2.12 permanent loss to agricultural areas. The extent of agricultural lands and agricultural district lands within the Project Area are depicted on Figure 08-2.

(F)(2) Potential Impacts and Proposed Mitigation

Significant impacts to agricultural land have been avoided through careful design, which deliberatively sited the relocated collection lines, staging areas, access roads and the substation in active agricultural areas or in nearby field edges/hedgerows to the extent practicable. Table 07-23 quantifies impacts to agricultural lands by land use. Compared to Table 07-23 in the initial application, a reduction in 78 acres of total disturbance is anticipated with a reduction of 12 acres of permanent loss as a result of the redesigned collection line system.

Agricultural Land	Total Disturbance (acres)	Temporary Disturbance (acres)	Permanent Loss (acres)
Confined Feeding Operations	0.46	0.46	0
Croplands	295.6	244.13	51.47
Farmsteads	1.07	1.04	0.03
Nurseries and Ornamental Horticulture	0	0	0
Orchards and Groves	0	0	0
Other Agricultural Lands	0.56	0.28	0.28
Pasture	19.48	15.45	4.03
TOTAL	317.17	- 261.36	55.81

Table 07-23. Impacts to Agricultural Land.

(F)(2)(a)(i) Field Operations

All of the impacts to agricultural land as a result of the buried interconnects and relocated staging areas will be temporary. The substation impact remains the same while the relocated access roads will only result in an additional 1.06 acres of permanent impact. In locations where buried cable crosses agricultural fields, construction equipment may disturb a width of up to 25 feet of soil. However, this will represent a temporary disturbance only and, as the cable will be

buried at a depth of 48 inches in agricultural fields, will not have a long term impact on farming practices (e.g. plowing). Along with these direct impacts to agricultural land, movement of equipment and material during construction could result in damage to growing crops, damage to fences and gates, and/or temporary blockage of farmers' access to agricultural fields. However, as described in the following section, facilities have been located so as to minimize loss of active agricultural land and interference with agricultural operations. Such impacts are not anticipated during Facility operation and maintenance.

(F)(2)(a)(ii) Irrigation

Irrigation systems are not in widespread use in the Project Area. Potential interference to irrigation operations is very limited and coordination with affected landowners will alleviate potential for significant long-term disruption.

(F)(2)(a)(iii) Field Drainage Systems

Facility construction could result in damage to subsurface drainage systems (tile lines). Avoidance of damage to drainage systems will be incorporated in Facility design, and mitigation measures will be implemented as outlined below.

(F)(2)(b) Mitigation Measures

Mitigation measures to protect and restore agricultural soils have been incorporated into the siting of components, and additional measures will be undertaken during Facility construction, operation and maintenance. These mitigation measures include:

- Avoiding disturbance of surface and subsurface drainage features (ditches, diversions, tile lines, etc).
- Repairing all inadvertently damaged tile lines.
- Limiting vehicular access to construction roads only.
- Temporarily fencing/securing open excavation areas in active pastureland to protect livestock.

- Subsoil de-compaction and rock picking prior to re-spreading of topsoil in temporarily disturbed areas.
- Stabilizing restored agricultural areas with seed and/or mulch.
- Removing and disposing of all construction debris offsite at the completion of restoration.
- Compensation for damaged/lost crops.
- Coordination with landowner to assure that interference with irrigation is appropriately minimized during construction and avoided during operation and maintenance.

Proposed mitigation measures also include full restoration of temporarily disturbed agricultural land. Restored areas will include staging areas. The restoration process will generally involve the following sequence of activities: (1) removal of gravel or other temporary fill; (2) de-compaction of compacted subsoils using a deep ripper; (3) disking and removal of stones from de-compacted subsoil; (4) re-spreading of stockpiled topsoil over de-compacted subsoil so as to reestablish pre-construction contours to the extent practicable; (5) disking and removal of stones from re-spread topsoil and (6) seeding and mulching topsoil. Seed selection in agricultural fields will be based on guidance provided by the landowner.

(F)(3) Impact on the Viability of Agricultural Land

The impact of the facility construction and operation/maintenance taking into account the relocated collection lines, staging areas access roads and substation is quantified above in Table 07-23, and addresses impacts to the following agricultural land uses:

- Confined Feeding Operations;
- Croplands;
- Farmstead;
- Nurseries and Ornamental Horticulture;
- Orchards and Groves;
- Other Agricultural Lands and

• Pasture.

The relocations proposed in this will not physically impact any agriculturally related structures, and aside from temporary disturbance during construction activities, are largely compatible with farming practices. Furthermore, the relocations proposed in this Petition along with the new access road will not result in any substantial change in land use.

WHEREFORE, Buckeye Wind LLC respectfully requests that the Board approve this Petition and issue the requested Amendment of its March 22, 2010 Opinion, Order and Certificate without the necessity of a hearing as the proposed changes will not result in a material increase in any environmental impact of the facilities nor cause a substantial change in the location of all or a portion of such facility.

Respectfully submitted,

<u>s/ Michael J. Settineri</u>
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Attorneys for Buckeye Wind LLC

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served upon the following parties of record in Case No. 08-666-EL-BGN via U.S. Mail on this 19th day of March, 2013.

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s/Michael J. Settineri

Michael J. Settineri

Figures

to the Application to Amend the Buckeye Wind Farm Certificate Granted March 22, 2010 in Case No. 08-666-EL-BGN

Figure 1. Land Cover Map

Figure 02. Phase 1 Buried Collection Stream Crossings
Figure 04. Collection System Layout
Figure 5. Open Spaces/Agricultural Use Maps
Figure 05-2A. Facility Layout/Technical Data
Figure 05-2B. Facility Layout/Technical Data
Figure 06. Access Road Relocations
Figure 08-1. Cultural Resources

Figure 08-2. Agricultural Resources







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CASE NUMBER 13-360-EL-BGA NUMBER OF ITEMS

____ 1

DESCRIPTION

Figure 2: Stream Crossings / March 2013

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS_____

DATE 1/22/2014

CASE NUMBER 13-360-EL-BGA

NUMBER OF ITEMS

1

DESCRIPTION

Figure 4:

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS

DATE 1/22/2014

CASE NUMBER 13-360-EL-BGA NUMBER OF ITEMS

1

DESCRIPTION

Figure 05-2 A

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS_____

DATE 1/22/2014

CASE NUMBER 13-360-EL-BGA

NUMBER OF ITEMS

1

DESCRIPTION

Figure 05-2 B

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS_____

DATE 1/22/2014

CASE NUMBER 13-360-EL-BGA NUMBER OF ITEMS

1

DESCRIPTION

Figure 6: Access Roads

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS_____

DATE 1/22/2014

CASE NUMBER 13-360-EL-BGA

NUMBER OF ITEMS

1

DESCRIPTION

Figure 08-1 Cultural Resources

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS

DATE 1/22/2014

 CASE NUMBER
 13-360-EL-BGA
 NUMBER OF ITEMS
 1

DESCRIPTION

Figure 08-2 Agricultural Resources

Buckeye Wind Project

Goshen, Rush, Union, Urbana, and Wayne Townships - Champaign County, Ohio

BY T.NELOMS_____

DATE 1/22/2014

Appendix A to the Application to Amend the Buckeye Wind Farm Certificate Granted March 22, 2010 in Case No. 08-666-EL-BGN Motion for Waiver

BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the Application of Buckeye Wind LLC to Amend its Certificate Issued in Case No. 08-666-EL-BGN

Case No. 13-360-EL-BGA

RENEWED MOTION FOR WAIVER

Pursuant to Section 4906.06(A)(6), Revised Code, and Rule 4906-1-03 of the Ohio Administrative Code, Buckeye Wind LLC ("Buckeye"), moves the Ohio Power Siting Board (the "Board") to grant waivers from certain provisions of Chapter 4906-17 of the Ohio Administrative Code. This renewed motion for waiver replaces Buckeye's prior motion for waiver, filed on February 6, 2013.

Buckeye will be filing an application with the Board to amend the Buckeye Wind Farm certificate issued in Case No. 08-666-EL-BGN. Buckeye is not proposing to amend the certificate in order to change, relocate or add turbines to the project; rather Buckeye is proposing to shift a large portion of the project's collection line system, all three construction staging areas and the project substation to the same locations and areas that will be utilized by the Buckeye II Wind Farm, Case No. 12-160-EL-BGN. Buckeye is also proposing to relocate 6.35 miles of the collection lines to locations that will be separate from collection line routes proposed for the Buckeye II Wind Farm, relocate four access roads and install a new access road between turbines 16 and 18.

Given the scope and nature of the sought amendment, Buckeye seeks waivers from the application requirements that that are not applicable to the proposed changes to the project's approved design. Accordingly, Buckeye respectfully requests that for the reasons presented in the attached memorandum in support, the Board grant waivers in part or whole from the following rules of the Ohio Administrative Code: 4906-17-02; 4906-17-03; 4906-17-04; 4906-17-05; 4906-17-06; 4906-17-07 and 4906-17-08.

Respectfully submitted,

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Attorneys for Buckeye Wind LLC

MEMORANDUM IN SUPPORT

I. Introduction

In 2009, Buckeye Wind LLC, a wholly owned subsidiary of EverPower Wind Holdings, Inc. (hereafter referred to as "Buckeye") filed an application with the Ohio Power Siting Board (the "Board") to construct the Buckeye Wind Farm (the "Project") to be located in Champaign County. Buckeye's application proposed constructing 70 wind turbine generators and associated infrastructure including access roads, collection lines, construction staging areas, an operations and maintenance facility and a substation. The Board approved Buckeye's application, in part, on March 22, 2010 and issued a certificate to Buckeye for the construction and operation of 54 wind turbines. The Board's decision was appealed and subsequently affirmed by the Supreme Court of Ohio. *See In re Buckeye Wind, LLC*, 131 Ohio St.3d 449, 2012-Ohio-878, 966 N.E.2d 869.

The current design for the Project calls for a series of collection lines to carry the electric current generated by the turbines to the Project's substation. Recently, Buckeye acquired leases from another developer on land near and within the Project area. As a result, Buckeye is now able to route a majority of the collection lines on leased property rather than routing a sizeable portion of the collection lines through public right-of-ways. Also due to this development, Buckeye Wind is able to bury all of the collection lines underground instead of running them overhead, as originally planned. This change will greatly reduce the amount of collection lines required for the project.

In addition to improving the collection line design, the location of all three staging areas and the project substation has changed. Instead of being located at the intersection of State Route 814 and U.S. Route 36, one construction staging area will be relocated to the intersection

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of U.S. Route 36 and Three Mile Road on a parcel previously identified for a wind turbine. The two other construction staging areas will be relocated within the same parcel in which they were previously located. One construction staging area will remain 3.4 acres while the other two staging areas will be 9.5 and 10 acres in size. The project substation is being moved on the same parcel as originally approved, to a location that will be shared with the Buckeye II Wind Farm. The three construction staging areas will also be used by both the Buckeye I and Buckeye II projects.

Lastly, four access roads are being relocated and a new access road is being installed. The proposed access road running east to west to turbine 44 is being relocated from its approved location pursuant to Staff's informal recommendation to eliminate a stream crossing. The proposed access road running north to south to turbine 36 is being relocated approximately 500 feet east from its OPSB approved location to accommodate a landowner request and will follow a relocated Buckeye collection line. The proposed access road running diagonally to turbine 21 is being relocated approximately 400 feet to run along the southwest corner of the eastern construction staging area that is being relocated within the same parcel. The proposed access road running north and south between turbines 16 and 18 will be a new access road that will follow an approved collection line route between the two turbines, reducing the need to use Perry Road. The proposed access road running north and south to turbine 40 is being relocated to follow a relocated collection line route, which also provides a greater buffer distance to a nearby wetland.

Although Buckeye is not making any changes to the current turbine design, it is submitting the change in collection line design and the relocation of the construction staging areas to the Board for approval. Rule 4906-5-10(B) requires that an application to amend a

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certificate be submitted in the same manner as if the application was for a certificate. Buckeye's proposed design changes, however, are not substantial and will have little impact on the information previously reviewed by the Board in Case No. 08-666-EL-BGN.¹ Accordingly, Buckeye respectfully requests that the Board grant the following requested waivers from the Board's rules.

II. Rule 4906-17-02 Project Summary and General Instructions

Rule 4906-17-02 requires a summary and overview of the proposed project, including a statement of the general purpose and description of the facility. Specifically, the Rule states as follows:

- (A) An applicant for a certificate to site a wind-powered electric generation facility shall provide a project summary and overview of the proposed project. In general, the summary should be suitable as a reference for state and local governments and for the public. The summary and overview shall include the following:
 - (1) A statement explaining the general purpose of the facility.
 - (2) A description of the proposed facility.
 - (3) A description of the project area selection process, including descriptions of the primary factors considered.
 - (4) A discussion of the principal environmental and socioeconomic considerations of the preferred project area and any alternate project area sites.
 - (5) An explanation of the project schedule (a bar chart is acceptable).
- (B) Information filed by the applicant in response to the requirements of this rule shall not be deemed responses to any other section of the application requirements.
- (C) If the applicant has prepared the required hard copy maps using digital, geographically referenced data, an electronic copy of all such data, excluding

¹ Buckeye's application in Case No. 08-666-EL-BGN was submitted under Chapter 4906-13 before Chapter 4906-17 was effective. Buckeye, however, included the Chapter 4906-17 information requirements in its application.

data obtained by the applicant under a licensing agreement which prohibits distribution, shall be provided to the board staff on computer disk concurrently with the filing of the application.

(D) If the applicant for a wind-powered electric generation facility asserts that a particular requirement in Chapter 4906-17 of the Administrative Code is not applicable, the applicant must provide an explanation of why the requirement is not applicable. Further, the applicant shall provide in its application all relevant technological, financial, environmental, social, and ecological information that is generally known in the industry to be of potential concern for the particular type of facility proposed.

Given the nature of the proposed design changes, Buckeye requests a waiver in part from

the requirements of this rule that are not applicable to the proposed changes. Specifically, Buckeye proposes that it not be required to provide the Board with information concerning the certificated facilities that are not related to the collection lines or other proposed changes (for example turbines) and that it be permitted to provide the following information: (1) a project summary and overview of the proposed changes to the collection line system, access roads, substation and construction staging areas under Rule 4906-17-02(A)(2); (2) a description of how the locations for the revised collection line system, four relocated access roads, relocated substation, relocated construction staging areas and the new access road were selected pursuant to Rule 4906-17-02(A)(3); (3) a discussion of the principal environmental considerations for the revised collection line design and other proposed changes pursuant to Rule 4906-17-02(A)(4); and (4) an explanation of the current Project schedule, including turbine construction pursuant to Rule 4906-17-02(A)(5). Information relating to the turbines and other facilities unrelated to the collection lines was previously reviewed by the Board in Case No. 08-666-EL-BGN. Accordingly, for good cause shown, Buckeye respectfully requests that it be granted a waiver, in part, from the requirements of Rule 4906-17-02.

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III. 4906-17-03 Project Description in Detail and Project Schedule in Detail

Rule 4906-17-03 requires the applicant to submit detailed information on the type of wind turbines for the project, the number of turbines, capacity figures, land area requirements and a detailed project schedule. The Rule states:

- (A) An applicant for a certificate to site a wind-powered electric generation facility under this chapter shall provide a detailed description of the proposed facility.
 - (1) For its proposed project area and any alternative project area(s), the applicant shall submit:
 - (a) Type(s) of turbines or, if a specific model of turbine has not yet been selected, the potential type(s), estimated number of turbines, estimated net demonstrated capability, annual capacity factor, hours of annual generation, and the project developer to be utilized for construction and operation of the facility, if different than the applicant.
 - (b) Land area requirement or, for off-shore projects, the off-shore boundaries, the construction impact area in acres and the basis of how such estimate was calculated, and the size of the permanent project area in acres.
 - (2) The applicant shall submit a description of the major equipment including, but not limited to, the footprint of the turbine, the height of the turbine measured from the tower's base, excluding the subsurface foundation, and the blade length.
 - (3) The applicant shall submit a brief description of any new transmission line(s) required for the proposed project.

(B) Detailed project schedule.

- (1) Schedule. The applicant shall provide a proposed schedule in bar chart format covering all applicable major activities and milestones, including:
 - (a) Acquisition of land and land rights.
 - (b) Wildlife surveys/studies.
 - (c) Preparation of the application.
 - (d) Submittal of the application for certificate.

(e) Issuance of the certificate.

- (f) Preparation of the final design.
- (g) Construction of the facility.

(h) Placement of the facility in service.

(2) Delays. The applicant shall describe the impact of critical delays on the eventual in-service date.

Buckeye respectfully requests a general waiver in part from the requirements of this rule that do not relate to the collection lines and other proposed changes in the project's design. Under the proposed waiver, Buckeye would not be required to provide information related to the previously approved turbines, capacity, foundations or project delays as that information is not relevant to the proposed changes in the collection line system and the other proposed design changes. Moreover, Buckeye provided this information to the Board for its review and approval in Case No. 08-666-EL-BGN. Buckeye will provide the following information: (1) a detailed description of the changes to the collection line system, the relocation of the construction staging areas, the relocation of access roads and the relocation of the substation under Rule 4906-17-03(A); (2) updated land area requirements including any changes to the construction impact areas pursuant to Rule 4906-17-03(A)(1)(b); and (3) an updated detailed schedule for the Project pursuant to Rule 4906-17-03(B). Accordingly, for good cause shown, Buckeye respectfully requests that it be granted a waiver, in part, from the requirements of Rule 4906-17-03.

IV. <u>Rule 4906-17-04</u> Project Area Analysis

Rule 4906-17-04 relates to the selection of the project area for the wind generation facility. Information under this rule is not applicable as siting of the Project was completed and approved in Case No. 08-666-EL-BGN. The Rule states:

- (A) The applicant shall conduct a project area site selection study prior to submitting an application for a wind-powered electric generation facility. The study shall be designed to evaluate all practicable project area sites for the proposed facility.
 - (1) The applicant shall provide the following:

- (a) A description of the study area or geographic boundaries selected, including the rationale for the selection.
- (b) A map of suitable scale which includes the study area and which depicts the general project areas which were evaluated.
- (c) A comprehensive list and description of all qualitative and quantitative siting criteria, factors, or constraints utilized by the applicant, including any evaluation criteria or weighting values assigned to each.
- (d) A description of the process by which the applicant utilized the siting criteria to determine the proposed project area and any proposed alternative project area site(s).
- (e) A description of the project area sites selected for evaluation, their final ranking, and the factors and rationale used by the applicant for selecting the proposed project area site and any proposed alternative project area site(s).
- (2) The applicant shall provide one copy of any constraint map showing setbacks from residences, property lines, and public rights of way utilized for the study directly to the board staff for review.
- (B) The applicant shall provide a summary table comparing the project area sites, utilizing the technical, financial, environmental, socioeconomic, and other factors identified in the study. Design and equipment alternatives shall be included where the use of such alternatives influenced the siting decision.
- (C) The applicant may provide a copy of any project area site selection study produced by or for the applicant for the proposed facility as an attachment to the application. The study may be submitted in response to paragraphs (A) and (B) of this rule, provided that the information contained therein is responsive to the requirements of paragraphs (A) and (B) of this rule.

The Board approved the location for the Project in Case No. 08-666-EL-BGN, and the proposed redesign of the collection line system, the relocation of the construction staging areas and the other proposed changes have no bearing on the location of the Project's generating equipment. Accordingly, Buckeye respectfully requests that it be granted a waiver in full from

the requirements of Rule 4906-17-04.

V. 4906-17-05 Technical Data

Rule 4906-17-05 requires the applicant to submit a wide range of information on the location for the facility, including the features, geology and hydrology of the project area site. The Rule requires the applicant to also provide maps, aerial photographs and topographic maps. The Rule states:

- (A) Project area site. Information on the location, major features, and the topographic, geologic, and hydrologic suitability of the proposed project area site and any proposed alternative project area site(s) shall be submitted by the applicant. If this information is derived from reference materials, it shall be derived from the best available and current reference materials. The applicant shall provide the following for each project area site alternative.
 - (1) Geography and topography. The applicant shall provide a map(s) of 1:24,000 scale containing a five-mile radius from the proposed facility and showing the following features:
 - (a) The proposed facility.
 - (b) Major population centers and geographic boundaries.
 - (c) Major transportation routes and utility corridors.
 - (d) Bodies of water which may be directly affected by the proposed facility.
 - (e) Topographic contours.
 - (f) Major institutions, parks, and recreational areas.
 - (g) Residential, commercial, and industrial buildings and installations.
 - (h) Air transportation facilities, existing or proposed.
 - (2) An aerial photograph containing a one-mile radius from the proposed facility, indicating the location of the proposed facility in relation to surface features.
 - (3) A map(s) of 1:12,000 scale of the project area site, showing the following existing features:
 - (a) Topographic contours.
 - (b) Existing vegetative cover.
 - (c) Land use and classifications.
 - (d) Individual structures and installations.
 - (e) Surface bodies of water.
 - (f) Water and gas wells.
 - (g) Vegetative cover that may be removed during construction.
- (4) Geology and seismology. The applicant shall provide a map(s) of suitable scale and a corresponding cross-sectional view, showing the geological features of the proposed project area and the location of proposed test borings. The applicant shall also:
 - (a) Describe the suitability of the site geology and plans to remedy any inadequacies.
 - (b) Describe the suitability of soil for grading, compaction, and drainage, and describe plans to remedy any inadequacies.
- (5) Hydrology and wind. The applicant shall:
 - (a) Provide the natural and the man-affected water budgets, including the ten-year mean and critical (lowest seven-day flow in ten years) surface flows and the mean and extreme water tables during the past ten years for each body of water likely to be directly affected by the proposed facility.
 - (b) Provide an analysis of the prospects of floods and high winds for the project area, including the probability of occurrences and likely consequences of various flood stages and wind velocities, and describe plans to mitigate any likely adverse consequences. Identify any portion of the proposed facility to be located in a one hundredyear flood plain area.
 - (c) Provide existing maps of aquifers which may be directly affected by the proposed facility.
- (B) Layout and construction. The applicant shall provide information on the proposed layout and preparation of the proposed project area site and any proposed alternative project area site(s) and the description of proposed major structures and installations located thereon.
 - (1) Project area site activities. The applicant shall describe the proposed project area site preparation and reclamation operations, including:
 - (a) Test borings, including closure plans for such borings.
 - (b) Removal of vegetation.
 - (c) Grading and drainage provisions.
 - (d) Access roads.
 - (e) Removal and disposal of debris.
 - (f) Post-construction reclamation.

- (2) Layout. The applicant shall supply a map(s) of 1:12,000 scale of the proposed wind-powered electric generation facility, showing the following features of the proposed (and existing) facility and associated facilities:
 - (a) Wind-powered electric generation turbines.
 - (b) Transformers and collection lines.
 - (c) Construction laydown area(s).
 - (d) Transmission lines.
 - (e) Substations.
 - (f) Transportation facilities and access roads.
 - (g) Security facilities.
 - (h) Grade elevations where modified during construction.
 - (i) Other pertinent installations.
- (3) Structures. The applicant shall describe, in as much detail as is available at the time of submission of the application, all major proposed structures, including the following:
 - (a) Estimated overall dimensions.
 - (b) Construction materials.
 - (c) Color and texture of facing surfaces.
 - (d) Photographic interpretation or artist's pictorial sketches of the proposed facility from public vantage points within five miles of the proposed facility.
 - (e) Any unusual features.
- (4) Plans for construction. The applicant shall describe the proposed construction sequence.
- (5) Future plans. The applicant shall describe any plans for future additions of turbines to the proposed facility (including the type and timing) and the maximum electric capacity anticipated for the facility.
- (C) Equipment.
 - (1) Wind-powered electric generation equipment. The applicant shall describe the proposed major wind-powered electric generation equipment for the proposed project area and any proposed alternative project area(s).
 - (2) Safety equipment. The applicant shall describe:
 - (a) All proposed major public safety equipment.
 - (b) The reliability of the equipment.
 - (c) Turbine manufacturer's safety standards. Include a complete copy of the manufacturer's safety manual or similar document.

- (3) The applicant shall describe any other major equipment not discussed in paragraphs (C)(2)(a) to (C)(2)(c) of this rule.
- (D) Regional electric power system. The applicant shall provide the following information on interconnection of the facility to the regional electric power grid.
 - (1) Interconnection queue(s). The applicant shall provide the following information relating to its generation interconnection request:
 - (a) Name of queue.
 - (b) Web link of queue.
 - (c) Queue number.
 - (d) Queue date.
 - (2) System studies. The applicant shall provide system impact studies on its generation interconnection request. The studies shall include, but are not limited to, the following:
 - (a) Feasibility study.
 - (b) System impact study.

Buckeye provided information required by this rule in Case No. 08-666-EL-BGN and the proposed changes in the collection line system and access roads and relocation of the construction staging areas and substation have little relevance to the information required by this subsection. Accordingly, Buckeye requests a waiver from the requirements of Rule 4906-17-05 with the exception that Buckeye will provide the following information and items: (1) an updated map of 1:12,000 scale of the Project area site pursuant to Rule 4906-17-05(A)(3); (2) a description of Project area site activities related to the proposed design changes pursuant to Rule 4906-17-05(B)(1); and (3) an updated Project layout map of 1:12,000 scale as required by Rule 4906-17-05(B)(2) with the exception that grade elevations where modified during construction will not be shown. Grade elevations to be modified during construction will be shown on the Project's detailed design drawings. In addition, although not required by rule, Buckeye will provide (1) information on how the proposed change in collection line design relates to the collection line system for the proposed Buckeye II Wind Farm, docketed as Case No. 12-0160-

EL-BGN and (2) information on the construction staging areas for the Project and the proposed shift of the construction staging areas, relocated access roads, new access road and the relocated substation.

VI. <u>Rule 4906-17-06</u> Financial Data

Rule 4906-17-06 requires the applicant to submit ownership status of the project area,

capital costs for the project, operation and maintenance expenses, and an estimate of the cost of

any delays. The Rule states:

- (A) The applicant shall state the current and proposed ownership status of the proposed project area, including rights of way, structures, and equipment. Such information shall include type of ownership.
- (B) Capital and intangible costs. The applicant shall:
 - (1) Submit estimates of applicable capital and intangible costs for the various alternatives. The data submitted shall be classified according to federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for utility companies, unless the applicant is not an electric light company, a gas company, or a natural gas company, as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the capital and intangible costs classified in the accounting format ordinarily used by the applicant in its normal course of business).
 - (2) Compare the total costs per kilowatt with the applicant's similar facilities, and explain any substantial differences.
 - (3) Tabulate the present worth and annualized cost for capital costs and any additional cost details as required to compare capital cost of alternates (using the start of construction date as reference date), and describe techniques and all factors used in calculating present worth and annualized costs.
- (C) Operation and maintenance expenses. The applicant shall:
 - (1) Supply applicable estimated annual operation and maintenance expenses for the first two years of commercial operation. The data submitted shall be classified according to federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for utility companies, unless the applicant is not an electric light company,



a gas company, or a natural gas company, as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the operation and maintenance expenses classified in the accounting format ordinarily used by the applicant in its normal course of business).

- (2) Compare the total operation and maintenance cost per kilowatt with applicant's similar facilities and explain any substantial differences.
- (3) Tabulate the present worth and annualized expenditures for operation and maintenance costs as well as any additional cost breakdowns as required to compare alternatives, and describe techniques and factors used in calculating present worth and annualized costs.
- (D) Delays. The applicant shall submit an estimate of the cost for a delay prorated on a monthly basis beyond the projected in-service date.

Buckeye seeks a waiver from Rule 4906-17-06(B), (C) and (D). Buckeye will comply with subsection (A) and provide a description of the current ownership of the Project area, including the areas impacted by the new collection line design and the relocation of the construction staging areas. Good cause exists to support this waiver because the proposed collection line design modification and other proposed design changes have little to no impact on the overall capital cost of the Project as well as the Project's operation and maintenance costs, costs previously reviewed by the Board in Case No. 08-666-EL-BGN. The proposed design changes also have no bearing on the cost of project delays. Accordingly, Buckeye respectfully requests a waiver from Rule 4906-17-06(B), (C) and (D) as those rule requirements are not applicable to the proposed changes in project design.

VII <u>Rule 4906-17-07 Environmental Data</u>

Rule 4906-17-07 requires information to assess the environmental effects of the facility.

The Rule states as follows:

(A) General. The information requested in this rule shall be used to assess the environmental effects of the proposed facility. Where appropriate, the applicant may substitute all or portions of documents filed to meet federal, state, or local regulations. Existing data may be substituted for physical measurements. (B) Air.

(1) Preconstruction. The applicant shall:

- (a) Submit available information concerning the ambient air quality of the proposed project area site and any proposed alternative site(s).
- (b) Describe applicable federal and/or Ohio new source performance standards, applicable air quality limitations, applicable national ambient air quality standards, and applicable prevention of significant deterioration increments.
- (c) Provide a list of all required permits to install and operate air pollution sources. If any such permit(s) has been issued more than thirty days prior to the submittal of the certificate application, the applicant shall provide a list of all special conditions or concerns attached to the permit(s).
- (d) Describe how the proposed facility will achieve compliance with the requirements identified in paragraphs (B)(1)(b) and (B)(1)(c) of this rule, if applicable.
- (2) Construction. The applicant shall describe plans to control emissions during the project area site clearing and construction phase.

(C) Water.

- (1) Preconstruction. The applicant shall provide a list of all permits required to install and operate the proposed facility.
- (2) Construction. The applicant shall:
 - (a) Describe the schedule for receipt of the national pollution discharge elimination system permit.
 - (b) Estimate the quality and quantity of aquatic discharges from the project area site clearing and construction operations, including run-off and siltation from dredging, filling, and construction of shore side facilities.
 - (c) Describe any plans to mitigate the above effects in accordance with current federal and Ohio regulations.
 - (d) Describe any changes in flow patterns and erosion due to project area site clearing and grading operations.



- (3) Operation. In order to assess the effects of facility operation on water quality, the applicant shall:
 - (a) Provide a quantitative flow diagram or description for water and waterborne wastes resulting from run-off from soil or other surfaces at the proposed project area(s).
 - (b) Describe how the proposed facility incorporates maximum feasible water conservation practices considering available technology and the nature and economics of the various alternatives.
- (D) Solid waste.
 - (1) Preconstruction. The applicant shall:
 - (a) Describe the nature and amount of debris and solid waste on the project area site.
 - (b) Describe any plans to deal with such wastes.
 - (2) Construction. The applicant shall:
 - (a) Estimate the nature and amounts of debris and other solid waste generated during construction operations.
 - (b) Describe the proposed method of storage and disposal of these wastes.
 - (3) Operation. The applicant shall:
 - (a) Estimate the amount, nature, and composition of solid wastes generated during the operation of the proposed facility.
 - (b) Describe proposed methods for storage, treatment, transport, and disposal of these wastes.
 - (4) Licenses and permits. The applicant shall describe its plans and activities leading toward acquisition of waste generation, storage, treatment, transportation, and/or disposal permits. If any such permit(s) has been issued more than thirty days prior to the submittal of the certificate application, the applicant shall provide a list of all special conditions or concerns attached to the permit(s).

Buckeye seeks a waiver in full from the requirements of Rule 4906-17-07. This rule calls

for general information about the facility, information that the Board reviewed in Case No. 08-

666-EL-BGN. The Board reviewed the environmental impact of the Project in Case No. 08-666-EL-BGN and the proposed design changes are discrete changes in the Project design that have little relevance to the information required under this subsection. Accordingly, Buckeye respectfully requests a waiver in full from the requirements of Rule 4906-17-07 as not being applicable to the proposed changes in the project's design.

VIII. Rule 4906-17-08 Social and Ecological Data

Rule 4906-17-08 requires an applicant to submit a wide range of information regarding the social and ecological impact of the proposed facility. Much of the information required under 4906-17-08 has no relevancy to the proposed change in collection line design and the relocation of the construction staging areas. As well, conditions currently in place throughout the certificate address any issues that may be raised, such as mitigation measures in sensitive areas. Each subsection of Rule 4906-17-08 and the sought waiver are discussed below.

A. Subsection 4906-17-08(A) – Health and Safety

Subsection 4906-17-08(A) relates to health and safety issues. Under this subsection, the applicant must provide demographic information, noise information, water impacts, ice throw, blade shear and shadow flicker information. The rule provides:

(A) Health and safety.

- (1) Demographic. The applicant shall provide existing and ten-year projected population estimates for communities within five miles of the proposed project area site(s).
- (2) Noise. The applicant shall:
 - (a) Describe the construction noise levels expected at the nearest property boundary. The description shall address:
 - (i) Dynamiting activities.
 - (ii) Operation of earth moving equipment.

(iii) Driving of piles.

- (iv) Erection of structures.
- (v) Truck traffic.
- (vi) Installation of equipment.
- (b) For each turbine, evaluate and describe the operational noise levels expected at the property boundary closest to that turbine, under both day and nighttime conditions. Evaluate and describe the cumulative operational noise levels for the wind facility at each property boundary for each property adjacent to the project area, under both day and nighttime operations. The applicant shall use generally accepted computer modeling software (developed for wind turbine noise measurement) or similar wind turbine noise methodology, including consideration of broadband, tonal, and low-frequency noise levels.
- (c) Indicate the location of any noise-sensitive areas within one mile of the proposed facility.
- (d) Describe equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation.
- (3) Water. The applicant shall estimate the impact to public and private water supplies due to construction and operation of the proposed facility.
- (4) Ice throw. The applicant shall evaluate and describe the potential impact from ice throw at the nearest property boundary, including its plans to minimize potential impacts if warranted.
- (5) Blade shear. The applicant shall evaluate and describe the potential impact from blade shear at the nearest property boundary, including its plans to minimize potential impacts if warranted.
- (6) Shadow flicker. The applicant shall evaluate and describe the potential impact from shadow flicker at adjacent residential structures and primary roads, including its plans to minimize potential impacts if warranted.

Buckeye provided all of this information to the Board in Case No. 08-666-EL-BGN and

none of the information required by the rule is relevant to the proposed changes to the project's

design. Accordingly, Buckeye respectfully requests a waiver in full from the requirements of subsection 4906-17-08(A).

B. Subsection 4906-17-08(B) – Ecological Impact

Subsection 4906-17-08)(B) relates to the ecological impact of the Facility, and requires information related to vegetation and animal life surveys within the facility's Project area boundary. The subsection states:

- (B) Ecological impact.
 - (1) Project area site information. The applicant shall:
 - (a) Provide a map of 1:24,000 scale containing a half-mile radius from the proposed facility, showing the following:
 - (i) The proposed project area boundary.
 - (ii) Undeveloped or abandoned land such as wood lots, wetlands, or vacant fields.
 - (iii) Recreational areas, parks, wildlife areas, nature preserves, and other conservation areas.
 - (b) Provide the results of a survey of the vegetation within the facility boundary and within a quarter-mile distance from the facility boundary.
 - (c) Provide the results of a survey of the animal life within the facility boundary and within a quarter-mile distance from the facility boundary.
 - (d) Provide a summary of any studies which have been made by or for the applicant addressing the ecological impact of the proposed facility.
 - (e) Provide a list of major species from the surveys of biota. "Major species" are those which are of commercial or recreational value, or species designated as endangered or threatened in accordance with the United States and Ohio threatened and endangered species lists.
 - (2) Construction. The applicant shall:
 - (a) Estimate the impact of construction on the areas shown in response to paragraph (B)(1)(a) of this rule.
 - (b) Estimate the impact of construction on the major species listed under paragraph (B)(1)(e) of this rule.

- (c) Describe the procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts due to construction.
- (3) Operation. The applicant shall:
 - (a) Estimate the impact of operation on the areas shown in response to paragraph (B)(1)(a) of this rule.
 - (b) Estimate the impact of operation on the major species listed under paragraph (B)(1)(e) of this rule.
 - (c) Describe the procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts of operation.
 - (d) Describe any plans for post-construction monitoring of wildlife impacts.

Buckeye provided this information to the Board in Case No. 08-666-EL-BGN and given the close proximity of the relocated collection lines and staging areas to the prior locations, Buckeye requests that it not be required to provide survey information for both vegetation and animal life for the entire Project area. Over 93 percent of the relocated collection lines will be in active agricultural fields, and only approximately 6.8 acres of forestland will be disturbed by the relocated collection lines and new access road. Rather than provide full survey information, Buckeye instead will provide survey information on the areas of forest that will be temporarily disturbed, as well as a survey of the areas of scrub-shrub area that will experience a temporary disturbance with no permanent disturbance. The type of surveys conducted will be limited to only those surveys necessary for and applicable to the amendment. For example, avian and bat surveys will not be included in the amendment application as those surveys are primarily intended to document and characterize activity for use in determining potential impact by turbine operation.

This waiver is further justified because the Board has approved conditions to the current certificate that will protect areas of the relocated collection lines, staging areas and other proposed changes. For example, Condition 8 requires Buckeye to provide a stream crossing plan and final collection line plan including an explanation of how impacts to all sensitive resources will be avoided and minimized. Condition 8(f) requires Buckeye a tree clearing plan including a description about how electric line corridors and laydown areas will be protected from damaged during construction and how clearing work will be done to minimize removal of woody vegetation.

Other conditions include Condition 9 which requires Buckeye to install and maintain erosion and sedimentation control measures. Condition 11 requires Buckeye to employ BMPs when working in the vicinity of environmentally-sensitive areas. Condition 13 requires Buckeye to have an environmental specialist on site at all times that construction, including vegetation clearing is being performed in or near a sensitive area.

With the waiver, Buckeye is proposing to submit the following information: (1) A map of 1:24,000 scale showing the information required under Rule 4906-17-08(B)(1)(a); (2) vegetation and animal life surveys in areas where the relocated collection lines are routing through forestland or scrub-shrub pursuant to Rule 4906-17-08(B)(1)(b),(c); (3) a summary of steam crossing and wetland delineation studies performed by Buckeye for this Petition pursuant to Rule 4906-17-08(B)(1)(d) and; (4) a list of major species from the surveys pursuant to 4906-17-08(1)(e); and (5) an estimate on the impact of construction of the relocated collection lines, staging areas, access roads and substation as required under 4906-17-08(B)(2), including any potential impact on the rayed bean mussel and eastern massasauga rattlesnake. Buckeye also requests a waiver from the requirements of Subsection 4906-17-08(B)(3) as that subsection addresses the impacts of operation which is more relevant to the operation of the turbines, and not the buried collection lines, access roads, staging areas and substation.

C. Subsection 4906-17-08(C) – Economics, Land Use and Community Development

Subsection 4906-17-08(*C*) requires the applicant to provide information on land uses within five miles of the facility, the number of residential facilities within 1,000 feet of the facility boundary, turbine setbacks, land use impacts, structures to be removed and relocated and plans for the future use of the site. Subsection 4906-17-08(*C*) also requires economic information such as payroll and employment estimates, the probable impact on public services and facilities and the impact on regional development. Buckeye provided this information to the Board in Case No. 08-666-EL-BGN and the information will be unchanged by the proposed collection line redesign, the relocation of the construction staging areas and the other proposed changes. Accordingly, for good cause, Buckeye requests a waiver in full from the requirements of Subsection 4906-17-08(*C*) as not being applicable to the proposed changes in the project's design.

D. Subsection 4906-17-08(D) - Cultural Impact

Subsection 4906-17-08(D) requires the applicant to submit general information regarding the cultural impact of the facility. Buckeye provided this information in Case No. 08-666-EL-BGN to the Board. Taking into consideration the limited nature of the design changes, Buckeye proposes that the requirements of subsection 4906-17-08(D) be waived with the exception that Buckeye be required to provide a map in accordance with subsection 4906-17-08(D)(1) and estimate the impact of the collection line redesign and relocation of the construction staging areas, access roads and substation on the landmarks set forth in the map (subsection 4906-17-08(D)(2)).

E. Subsection 4906-17-08(E) – Public Responsibility

Subsection 4906-17-08(E) calls for information regarding public interaction programs, insurance, radio and TV interference, military radar interference, the impact on roads and bridges and the decommissioning plan for the facility. Buckeye is not proposing to modify its certificate in regard to any conditions on these topics. As well, the proposed change in collection line design and the other design changes have minimal bearing on the information required by this rule. Accordingly, Buckeye respectfully requests that it be granted a waiver in full from the requirements of subsection 4906-17-08(E).

F. Subsection 4906-17-08(F) – Agricultural District Impact

Subsection 4906-17-08(F) requires the applicant to provide the Board with information regarding the facility's impact on agricultural land. This information was provided to the Board in Case No. 08-666-EL-BGN. To avoid unnecessary and repetitive information, Buckeye requests that it be permitted to only provide information relating to the collection line redesign and the relocation of the construction staging areas, access roads and substation in response to this subsection. Accordingly, Buckeye respectfully requests a waiver from subsection 4906-17-08(F) as to any part of the facility other than the redesigned portion of the collection lines and the relocated construction staging areas, access roads and substation.

IX. Conclusion

Through this motion, Buckeye is asking the Board to waive the requirements in Chapter 4906-17 which are not applicable to the proposed changes to the project, and not necessary for the Board's consideration of the proposed design changes in the project's collection line system, staging areas, access roads and substation. Buckeye's application to redesign part of the project's collection line system and relocate the staging areas, certain access roads and the

substation will include, but is not be limited to, layout drawings, technical summaries, cultural impact information and agricultural land use information. This information will allow the Board and its Staff, as well as the public, to evaluate the impact of the proposed change to the project. Accordingly, for good cause shown, Buckeye respectfully requests that the Board grant the sought waivers in full.

Respectfully submitted,

s/ Michael J. Settineri

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Attorneys for Buckeye Wind LLC

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served upon the following

parties of record in Case No. 08-666-EL-BGN via U.S. mail on this 15th day of March, 2013.

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<u>s/ Michael J. Settineri</u> Michael J. Settineri This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 13-0360-EL-BGA

Summary: Motion for Waiver (Renewed) electronically filed by Mr. Michael J. Settineri on behalf of Buckeye Wind LLC

Appendix B to the Application to Amend the Buckeye Wind Farm Certificate Granted March 22, 2010 in Case No. 08-666-EL-BGN

Ecological Impact Evaluation by Hull & Associates



February13, 2013

Mr. Seth Wilmore Everpower Wind Holdings, Inc. 1251 Waterfront Place, 3rd Floor Pittsburgh, PA 15222

RE: Ecological Impact Evaluation for the Electrical Connection Route Amendment to the Buckeye I Wind Facility, Located in Champaign County, Ohio; EVP010.300.0011.

Dear Mr. Wilmore:

Hull & Associates, Inc. (Hull) is pleased to provide Buckeye Wind LLC, a wholly owned subsidiary of Everpower Wind Holdings, Inc., with this review of potential ecological impacts to vegetative communities and animal life for the Buckeye I Wind Farm. The Client is pursuing an amendment to the Certificate of Environmental Compatibility and Public Need (Certificate) issued for the Buckeye I Wind Facility by the Ohio Power Siting Board (OPSB) on March 22, 2010. The amendment will include buried electrical interconnects in place of overhead electrical lines in certain areas of the Buckeye I Wind Farm.

Introduction

Buckeye Wind LLC is proposing an amendment to the Certificate for the Buckeye I Wind Farm, which will include construction of buried electrical interconnects. This document assesses potential ecological impacts to vegetative communities and animal life as a result of construction of the amended project in accordance with Ohio Administrative Code 4906-17-08 (B).

Survey Area

The survey area was developed using a Geographic Information System (GIS), and included a 25-foot-width buffer centered on the alignment of the proposed relocated buried electrical lines. The survey area comprised a total of 91.2 acres, representing the area of land disturbance that will occur in order to install the relocated buried electrical interconnects. The survey area was evaluated using the vegetation mapping performed for the Buckeye II Wind Farm project area. Approximately 84.6 acres (92.8%) of the survey area was found to consist of active or fallow agricultural land. The remaining 6.6 acres (7.2%) of the survey area was found to consist of forested and scrub-shrub vegetation areas.

Land cover within the general vicinity of the survey area is a flat mosaic of active and abandoned agricultural land, upland scrub-shrub land, and fragmented upland forest stands. The National Land Cover Database (NLCD) classifies most of the general vicinity of the survey area as "planted/cultivated" which is defined by the USEPA as being "areas characterized by herbaceous vegetation that has been planted or is intensively managed for the production of food, feed, or fiber; or is maintained in developed settings for specific purposes".

Vegetative Communities within the Survey Area

Based on GIS screening of the survey area combined with a field survey, certain generalized vegetative community types occur within the survey area, including active and fallow agricultural areas, scrub-shrub areas and forest areas. Ecological impact to agricultural areas from the proposed relocation of buried interconnects is assumed to be negligible. The forest vegetative community type is further subdivided into upland woods, upland ridge woods (upland woods occurring on sloped terrain), and riparian woods (woods occurring adjacent to stream corridors).

Hull identified scrub-shrub and forested vegetative community types within the survey area as follows.

Scrub-Shrub

The scrub-shrub community type comprises approximately 2.8 acres (3.0%) of the survey area. This community type is an intermediate successional stage between old field and forest. The scrub shrub community is dominated by upland shrubs and small trees; common species include green ash (*Fraxinus pensylvanica*), maples (*Acer* spp.), hackberry (*Celtis occidentalis*), raspberry and/or blackberry (*Rubus* spp.), multiflora rose (*Rosa multiflora*), and honeysuckles (*Lonicera* spp). The scrub-shrub type can occur on flat to sloping terrain, but usually does not occur on steep slopes.

Forest

The forest community type comprises approximately 3.8 acres (4.2%) of the survey area. The forest community type is further subdivided as follows:

Upland Woods

This community type comprises approximately 1.9 acres of the Forest community type within the survey area, and occurs on flat to gently sloping terrain on welldrained soils. Species typically observed within the canopy of this community type include honey locust (*Gleditsia triacanthos*), white oak (*Quercus alba*), shagbark hickory (*Carya ovata*), green ash, ironwood (*Ostrya virginiana*), American elm (*Ulmus americana*), black cherry (*Prunus serotina*), cottonwood (*Populus deltoides*), tupelo (*Nyssa sylvatica*), white ash (*Fraxinus americana*), osage orange (*Maclura pomifera*), burr oak (*Quercus macrocarpa*), sugar maple (*Acer saccharum*), red oak (*Quercus rubra*), and post oak (*Q. stellata*), while the shrub layer is dominated by honeysuckle shrubs.

o Upland Ridge Woods

This wooded community type occurs on steeply sloped ridges that are inaccessible for agricultural purposes and comprises approximately 1.0 acres of the Forest community type within the survey area. Upland forest species found here include black cherry, catalpa (*Catalpa speciosa*), sugar maple, hackberry, white oak, red oak, sycamore (*Platanus occidentalis*), and green ash in the canopy, hop hornbeam (*Carpinus caroliniana*), paw paw (*Asimina triloba*), honeysuckles, and blackberries in the shrub layer. Species observed in the herb layer include *Geum* sp., *Aster* sp., and

garlic mustard (*Alliaria petiolata*), and may also include a diverse herbaceous spring flora.

o Riparian Woods

Riparian woods occur along streams and creeks and within floodplains, and comprise approximately 0.9 acres of the Forest community type within the survey area. Riparian woods typically occur on moderately well-drained alluvial soils. Species typically observed within the canopy include black cherry, honey locust, box elder (*Acer negundo*), green ash, American elm, cottonwood, burr oak, osage orange, red maple (*Acer rubrum*), red oak, tupelo, mockernut hickory (*Carya tomentosa*), Ohio buckeye (*Aesculus glabra*), and hackberry. Species within the shrub layer include honeysuckles, hawthorn (*Crataegus* spp.), spicebush (*Lindera benzoin*), and multiflora rose.

Animal Life within the Survey Area

Hull compiled a list of vertebrate fauna likely to occur in each habitat type identified within the survey area, based on field observations and published data. The results of these surveys are presented below by habitat type.

<u>Animal life in Scrub-Shrub habitat</u>: Mammals that utilize scrub-shrub habitats include white-tailed deer, red fox, coyote, groundhog, striped skunk, eastern cottontail rabbit, field mouse, and meadow vole. A variety of songbird species utilize scrub-shrub communities for nesting and rearing young, including indigo bunting, dark-eyed junco, robin, eastern towhee, sparrows, mourning dove, cardinal, and kingbird. Reptiles are not common in scrub-shrub habitats within the survey area, but a few snake species such as garter snakes or eastern hognose snake could inhabit these areas.

<u>Animal life in Upland Woods and Upland Ridge Woods habitat:</u> Mammalian species that utilize mature upland forest and upland ridge habitats within the survey area include white-tailed deer, red fox, gray fox, coyote, raccoon, opossum, eastern cottontail rabbit, fox squirrel, gray squirrel, red squirrel, and eastern chipmunk. In addition, several bat species may utilize these wooded plant community types for roosting, foraging or as travel corridors, particularly when wetlands or streams are also present in the woods or in the immediate vicinity. Bird species that utilize forested habitats in the survey area may include scarlet tanager, blue jay, Baltimore oriole, black-capped chickadee, a variety of woodpecker species, vireos, and various raptor and owl species. Reptilian species that utilize forested habitats in the survey area include eastern box turtle, eastern fox snake, and several garter snake species.

<u>Animal life in Riparian Woods habitat:</u> Mammals expected within the riparian woods habitat are similar to those described above for the upland woods and upland ridge habitats, with the addition of species that prefer to be located in or near small streams/wetlands, such as muskrat, mink, long-tailed weasel, beaver, and various bat species. Bird species that utilize these community types include various warbler

> species, goldfinch, cedar waxwing, wood thrush, hermit thrush, numerous woodpecker species, nuthatches, screech owl, barred owl, great-horned owl, whip-poor-will, eastern wild turkey, and various hawk species. Reptilian species that utilize forested habitats in the Project Area include eastern box turtle, eastern fox snake, and several garter snake species.

<u>Animal species of commercial value:</u> Animal species of commercial value are also present in the survey area. Ohio DNR regulates the hunting and trapping of furbearers in Champaign County, including muskrat, raccoon, red fox, gray fox, coyote, mink, opossum, striped skunk, weasel, and beaver. Given the remoteness of the survey area from urbanized areas, it is possible that hunting, trapping, and predator culling occur, and that furbearing animals are harvested and sold as regulations permit; however this type of commercial activity is probably very limited in this area.

<u>Animal species of recreational value</u>: The survey area contains habitats suitable for animal species of recreational value. Forest and scrub-shrub areas within the survey area support populations of white-tail deer, ringneck pheasant, and wild turkey, all of which have been observed in the vicinity of the survey area. These habitats are used by hunters during hunting season. The average diversity of birds expected within the survey area is unlikely to attract more than a few avocational birdwatchers.

<u>Federally-listed species:</u> The survey area contains habitats with the potential to support a single federally-listed animal species: Indiana bat (endangered). Review of the United States Department of the Interior's federally-listed species by Ohio counties list (USFWS, 2012) indicates that the survey area is within the range of two federally-listed and one candidate species: Indiana bat (endangered), rayed bean mussel (endangered), and eastern massasauga (candidate); however, suitable habitat for rayed bean mussel and eastern massasauga are not present within the survey area. No federally-listed species were observed in the survey area.

<u>State-listed species:</u> The survey area contains habitats with the potential to support state-listed animal species. The table below shows the state-listed animal species with potential habitat within the survey area, along with general habitat requirements and Ohio state status for each species.

Animal Species ¹							
Scientific Name	Common Name	General Habitat	Ohio Status ²				
Falco peregrinus	peregrine falcon	variety/nests on tall structures	E				
Myotis sodalis	Indiana bat	woodlands	E ³				
Taxidea taxus	badger	variety	SC				

¹ (Hull & Associates, 2012)

 2 E = Endangered, T = Threatened, SC = Species of Concern (ODNR, 2012).

³ This species is also federally-listed as Endangered.

The impact of construction on animal species of commercial or recreational value is expected to be minimal. The ecological communities within the survey area are important to a variety of vertebrate species; however, impacts from buried interconnect construction will be narrowly confined to linear corridors and will not adversely affect usage of these habitats.

Assessment of Ecological Impacts Due to Construction of Amendment Route

Ecological impact resulting from buried interconnect construction is expected to be minimal. Electrical cables will be placed into an excavated ditch and buried. The total width of soil and vegetation disturbance of the ditching operation is 25 feet. The alignment of the ditching operation will be adjusted in the field to avoid any significant features such as large trees.

Hull anticipates that impacts to ecological habitats and animal species due to buried interconnect construction will be minimal throughout the survey area.

If you have any questions regarding the analysis and conclusions presented in this report, please do not hesitate to contact me at your convenience.

Sincerely,

Hugh F. Crowell, PWS Ecology & Wetlands Practice Leader

References

- Hull. 2012. Surface Waters, Ecological Communities, and Threatened & Endangered Species. Prepared for Champaign Wind LLC. February 2012. EVP010.300.0008.
- ODNR. 2012. Endangered and Threatened Species [website]. Available at: http://www.dnr.state.oh.us/tabid/ 5664/Default.aspx (Accessed February 7, 2013).
- USFWS. 2012. Federally Listed Species by Ohio Counties. Ecological Services, Columbus, Ohio. October 16, 2012.

Appendix C to the Application to Amend the Buckeye Wind Farm Certificate Granted March 22, 2010 in Case No. 08-666-EL-BGN

Surface Water Evaluation by Hull & Associates

Buckeye Wind LLC Case No. 13-360-EL-BGA

SURFACE WATER DELINEATION REPORT

EVERPOWER WIND HOLDINGS, INC

FOR THE: BUCKEYE WIND POWER FACILITY CHAMPAIGN COUNTY, OHIO

PROPOSED RELOCATION OF COLLECTION LINES, STAGING AREAS AND SUBSTATION

PREPARED FOR: EVERPOWER WIND HOLDINGS, INC. 1251 WATERFRONT PLACE, 3RD FLOOR PITTSBURGH, PA 15222

PREPARED BY: HULL & ASSOCIATES, INC. 6397 EMERALD PARKWAY, SUITE 200 DUBLIN, OHIO 43016

MARCH 2013

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1.0 SUMMARY

A delineation of wetlands and other surface waters was completed for the proposed relocation of electrical collection lines, three staging areas and a substation for the proposed Buckeye Wind Power electric generation Facility in west central Ohio. The Facility will be located in Champaign County within the townships of Salem, Wayne, Rush, Urbana, Union, and Goshen.

The delineation identified a total of 21 wetlands, all or a portion of which were within 100 feet of the Facility; fifteen Ohio Category 1 wetlands, one Ohio Category 1/2 gray zone wetland assumed to be Modified Category 2, four Ohio Modified Category 2 wetlands and one Ohio Category 2 wetland (see Table 1 for a summary of delineated wetlands). The wetlands were evaluated and placed in the appropriate Ohio Antidegradation Category using the Ohio Rapid Assessment Method for Wetlands Final Version 5.0 (ORAM).

The delineation identified a total of 35 streams, all or a portion of which were within 100 feet of the Facility; several streams were delineated at more than one location, resulting in a total of 43 stream segments within 100 feet of the Facility; eleven Modified Class I Primary Headwater Habitat (PHWH) streams, sixteen Modified Class II PHWH streams, two Class II PHWH streams, one Modified Warm Water Habitat stream, two Warm Water Habitat (WWH) streams, two Exceptional Warm Water Habitat (EWH) streams, eight Cold Water Habitat (CWH) streams and one stream that is both EWH and CWH were identified within the Facility (see Table 2 for a summary of evaluated streams). The streams were evaluated using Ohio evaluation techniques appropriate to stream type and assigned to an existing use, or assigned an aquatic life use designation based on their listing in Ohio water quality standards (OAC 3745-1).

Based on US Army Corps of Engineers (USACE) guidance in effect at the time of this report, Hull has determined that of the 19 wetlands delineated, twelve are non-isolated and under the Clean Water Act jurisdiction of federal and state government. Seven wetlands were found to be isolated and under the sole jurisdiction of the Ohio Isolated Wetland Permitting Program. Isolation status was determined based on the December 2008 post-Rapanos guidance issued by the USACE and US Environmental Protection Agency. Hull has determined that with the exception of Stream GG, all of the streams evaluated within the Facility are under federal jurisdiction and therefore subject to Clean Water Act regulations through the USACE and the Ohio Environmental Protection Agency (Ohio EPA). Stream GG is an isolated stream and is not under federal jurisdiction.

Photographs taken during the delineation are located in Appendix A; wetland delineation data sheets are located in Appendix B; and Appendix C contains the ORAM data sheets. The Headwater Habitat Evaluation Index (HHEI) data sheets, the Headwater Macroinvertebrate Field Evaluation Index (HMFEI) data sheets, the Visual Encounter Survey sheets and the Ohio Qualitative Habitat Evaluation Index (QHEI) data sheets are located in Appendix D.



HULL & ASSOCIATES, INC. DUBLIN, OHIO

2.0 INTRODUCTION

2.1 Project Background

EverPower Wind Holdings, Inc. (EverPower) is planning development of a wind-powered electric generation Facility (Facility) in west central Ohio. The Facility will be located in Champaign County within the townships of Salem, Wayne, Rush, Urbana, Union, and Goshen. An application for a Certificate of Environmental Compatibility and Public Need (Certificate) for the Facility was awarded by the Ohio Power Siting Board in March 2010. The Facility will consist of 52 wind turbine generators, each with a nameplate capacity of 1.8 to 2.5 megawatts (MW), access roads, collection lines, associated substations and all other associated equipment (Facility features).

This surface water delineation was initiated in support of an amendment to the Certificate to relocate electrical interconnects from aerial to buried lines, and to relocate three staging areas and a substation. Throughout this delineation report, references to the Facility refer only to the portions of the Facility being relocated under the proposed amendment.

Note that this surface water delineation did not cover the entire geographical extent of the Facility, but instead concentrated on surface waters located within 100 feet of the relocated portions of the Facility that could potentially be impacted by construction.

2.2 Delineation Overview

Hull & Associates, Inc. (Hull) conducted the surface water delineation in May, June, and November 2008, in August 2009, June, October, and December 2011 and in March 2013. At the time of surface water evaluation activities conducted in 2008, the Interim Midwest Regional Supplement to the 1987 Wetland Delineation Manual had not yet been implemented. Wetland delineation work conducted in August 2009 and June 2011 for this report used the Midwest Supplement, which was implemented in Interim form on November 25, 2008 and in final form in November 2009. Use of the Midwest Supplement resulted in small changes in field procedures and delineation criteria, as well as the use of new delineation data forms.

The purpose of the delineation was to determine the extent and quality of wetlands and other surface waters located within or near the Facility that may be subject to regulation under Sections 404 and 401 of the Clean Water Act (1987, as amended) or the Ohio Isolated Wetland

Permit Program. This report contains a description of investigations conducted to delineate wetlands and streams, and to assess the value of surface waters found within the Facility. The report includes: a summary of findings; a description of wetland and stream delineation criteria; a summary of resource materials used to plan and conduct field activities; and descriptions of the wetlands and streams delineated within the Facility.

A surface water delineation report is a necessary component of determining whether an entity must submit permit applications to the USACE and/or the Ohio Environmental Protection Agency (Ohio EPA) for planned project activities. The USACE issues Clean Water Act (CWA) Section 404 permits, which are required for anyone who plans to discharge dredged or fill material into waters of the U.S., including non-isolated wetlands. The Ohio EPA issues CWA Section 401 water quality certifications, which must be obtained before a Section 404 permit can be granted. In the case of isolated wetlands, Ohio EPA has sole jurisdiction under its Isolated Wetlands Permit Program. In addition, Ohio EPA must verify all wetland and stream evaluations.

3.0 DELINEATION CRITERIA

Federal regulations define a jurisdictional wetland as an area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. According to current wetland criteria, a wetland has: (1) hydric (i.e., wetland) soils, (2) evidence of inundated or saturated conditions (wetland hydrology), and (3) a predominance of wetland vegetation. When all three of these criteria are met, a wetland is present and is subject to Federal and/or State regulations and permitting.

In wetland delineation, data are collected concerning the vegetation, soils, and hydrology present in various plant communities to determine if the criteria for a jurisdictional wetland are met, and the wetland/non-wetland boundaries are flagged. The wetland/non-wetland boundaries and the sample locations are then surveyed and placed on a Site map. From the wetland map, the acreage of each wetland can be calculated. A preliminary determination is also made as to whether each wetland is isolated and thus under the jurisdiction of the State of Ohio Isolated Wetland Permit Program, or non-isolated, and thus under federal Clean Water Act jurisdiction.

In stream delineation, the location and length of streams is determined from existing mapping information and/or via surveying streams in the field. Note that some streams too small to be included on U.S. Geological Survey (USGS) topographic maps may nevertheless be under CWA jurisdiction. Jurisdictional streams generally have a defined channel, an Ordinary High Water Mark and discernible bed and bank features, and may have other morphological features typical of streams including riffles and pools, meanders, and a floodplain.

Currently the USACE has sole authority to verify delineations of surface waters and to determine whether wetlands or other water bodies are isolated or non-isolated. Verification occurs after review of a delineation report, which typically includes a field visit by USACE staff. Delineations are typically valid for a period of five years from the date of the USACE delineation verification letter.



4.0 INVESTIGATION METHODS

4.1 General

Prior to visiting the Facility, Hull compiled the following existing information about the Facility. This information was compiled on a series of Figures (see Figures 1 through 19). Please note that figures may not be consecutively numbered.

- Natural Resources Conservation Service (NRCS) Soil Survey of Champaign County, Ohio – The soil survey identifies soil mapping units within the Facility, including hydric soil mapping units, non-hydric soil mapping units that may contain inclusions of hydric soil units, and non-hydric soil mapping units (see Soils Figures 1-19). Descriptions for each unit are available from the above mentioned reference.
- County Listings of Hydric Soils and Non-hydric Soils with Hydric Inclusions Hydric or non-hydric status for each soil unit was determined using the Natural Resources Conservation Service Web Soil Survey 2.0.
- United States Department of Interior National Wetlands Inventory (NWI) Maps – These data provide an indication of the presence of wetland and openwater areas across the Facility, as defined by the U.S. Fish and Wildlife Service (USFWS) classification system (Cowardin et al., 1979). The notation of a wetland on a NWI Map indicates that wetlands may occur or have occurred in the area. Often, those wetlands depicted on NWI maps are the wettest spots in a given area. NWI map information is used to supplement knowledge about a site and cannot take the place of field observations due to minimal ground truthing, map age, map scale, and wetland criteria that differ from USACE wetlands criteria. See Figures 2-18 for NWI mapped areas within the Facility.

Hull used this preliminary information to perform screening of the Facility to plan and focus onsite investigations. All areas of the Facility were examined using confirmatory soil sampling and wetland and stream data collection.

4.2 Wetland Delineation Methods

As previously indicated, field delineation activities performed during 2008 were conducted according to methods outlined in the 1987 US Army Corps of Engineer's wetlands delineation manual (Manual; Environmental Laboratory, 1987), while field activities performed during 2009 and 2011 were conducted according to the 1987 Manual plus the methods outlined in the 2008 Midwest Supplement. Hull located the wetland edges in the field using these procedures, subsequent USACE memoranda and regulatory guidance, and basic principles of plant community ecology. Plant communities within the Facility were characterized using the three-

criterion wetland delineation approach. The wetland indicator status of plant species was determined using Reed (1988). After characterizing the vegetation, hydrology, and soils of a plant stand type, and becoming familiar with the soil, vegetation, and/or hydrologic cues that indicate wetland edge, Hull flagged the wetland edges with collection of additional soil or hydrologic data where needed to refine the edge. Wetland delineation data sheets appear in Appendix B.

4.3 Hydrologic Indicators Observed within the Facility

Primary hydrologic indicators observed within wetlands during field activities included soil saturation within the upper 12 inches, water marks, water-stained leaves, sediment deposits, drift deposits and inundation. Secondary hydrologic indicators observed within some of the wetlands during field activities included the FAC-neutral test, geomorphic position, crayfish burrows, surface soil cracks, saturation visible on aerial imagery, drainage patterns, and local soil survey data.

4.4 Wetland Evaluation Methods

Hull performed an evaluation of wetlands using Ohio's Rapid Assessment Method for Wetlands (Mack, 2001), Final Version 5.0 (ORAM). The ORAM value assessment is based on review of resource materials, data obtained in the field, and the acreage as determined by delineation and mapping. The wetland value information is provided to the Ohio EPA for the purpose of placing wetlands into the appropriate wetland Category described in Ohio's Wetland Water Quality Standards (Sections 3745-1-05 and Sections 3745-1-50 through 3745-1-54). The ORAM wetland value information is included in Appendix C.

There are three possible Ohio Wetland Antidegradation tiers to which wetlands may be assigned:

- Category 1 Lowest value category. Generally limited to small, lowdiversity wetlands and wetlands with a predominance of nonnative invasive species.
- Category 2 Middle value category. Wetlands in this category are of moderate diversity but do not contain rare, threatened, or endangered species. They are generally degraded, but are capable of attaining higher value. Most wetlands in Ohio are expected to fall into this category.

Category 3 – **Highest value category.** Wetlands in this category may be large, diverse, represent rare plant community types, contain rare, threatened or endangered species, or any combination of these and several other factors.

4.5 Stream Delineation Methods

Streams identified on US Geological Survey (USGS) topographic maps are generally found to be under the Clean Water Act jurisdiction of the USACE. Additional streams may be identified in the field by the presence of a defined bed and bank, and Ordinary High Water Mark (OHWM) and other stream morphological features. Suspected stream channels are examined upstream to identify the source of water and downstream to determine if the channel ends in a wetland, a confluence with another stream, a culvert inlet, or another fate.

4.6 Stream Evaluation Methods

Hull evaluated streams within the Facility using the Ohio Qualitative Habitat Evaluation Index (QHEI) scoring method, or the Ohio Headwater Habitat Evaluation Index (HHEI) as applicable. Both methods yield a numerical score for the stream reach evaluated, which is then used to estimate the probable existing aquatic life use of each stream. The HHEI and the Ohio Headwater Macroinvertebrate Field Evaluation Index (HMFEI) are used on primary headwater habitat (PHWH) streams with drainage area less than one square mile and with maximum pool depths less than 40 centimeters. Headwater streams are small first-order swales, creeks, and streams that are the origin of most rivers. These small streams join together to form larger stream as a stream with a watershed less than or equal to 20 square miles. Many streams and drainage ways have a watershed of less than one square mile; these are referred to as primary headwater streams (Ohio EPA, 2002). There are three possible categories to which PHWH streams may be assigned:

- Class I Lowest value category. These streams are limited to intermittent or ephemeral streams with warm water conditions. They may contain ephemeral warm water communities, but are often dry for long periods of time.
- Class II Middle value category. These streams are perennial or intermittent with warm water conditions. They generally contain species of animals that are adapted to warm water streams, including certain amphibians and pioneering fish species, along with invertebrates such as odonate larvae.
Class III – Highest value category. These streams are perennial with cold water conditions, and are usually groundwater fed. They contain species of animals adapted to the year-round presence of cool water, including certain amphibians or fish species, along with insect larvae such as mayflies, stoneflies, and caddisflies.

In addition to natural channels, different classes of headwater streams can also have modified channels. Many primary headwater streams are being modified through channelization and/or riparian removal, as part of activities related to agricultural activities and urban/suburban development. Such modification is the primary origin of habitat degradation in smaller streams and a leading source of impairment to the water quality of larger streams into which they flow (Ohio EPA, 2002).

The QHEI is used for streams with drainage areas greater than one square mile and/or with pool depths greater than 40 centimeters. This index was designed to provide a measure of habitat quality that corresponds to physical factors that affect communities of fish and aquatic invertebrates, and is based on six main metrics: substrate, instream cover, channel morphology, channel and bank condition, pool and riffle quality, and gradient (Rankin, 1989). These larger and deeper streams have sufficient amounts of water throughout the year to support year-round fish communities. Scores from the QHEI are used to assign each stream to one or more of the following aquatic life use designations, as defined by Ohio Water Quality Standards Water Use Designations (OAC 3745-1-07):

- Warmwater Habitat (WWH) Capable of supporting and maintaining a balanced community of warmwater aquatic organisms. This is the most widely applied use designation assigned to rivers and streams in Ohio.
- Limited Warmwater Habitat (LWWH) Temporary aquatic life habitat use designation created in the 1978 Ohio Water Quality Standards for streams not meeting specific warmwater habitat criteria. This aquatic life use designation is being phased out
- Exceptional Warmwater Habitat (EWH) Capable of supporting and maintaining an exceptional or unusual community of warmwater aquatic organisms with the general characteristics of being highly intolerant of adverse water quality conditions and/or being rare, threatened, endangered, or of special status.
- Modified Warmwater Habitat (MWH) Incapable of supporting and maintaining a balanced community of warmwater aquatic organisms because of extensive and irretrievable modifications to the physical habitat

- Seasonal Salmonid Habitat (SSH) Capable of supporting the passage of salmonids from October to May, and large enough to support recreational fishing.
- Coldwater Habitat (CWH) Capable of supporting populations of coldwater aquatic organisms on an annual basis and/or put-and-take salmonid fishing. These water bodies are not necessarily capable of supporting the successful reproduction of salmonids and may be periodically stocked.
- Limited Resource Water (LRW) Incapable of supporting and maintaining a balanced community of aquatic organisms because of natural background conditions or irretrievable human-induced conditions.

4.7 Surveying and Mapping Methods

The boundaries of all wetland areas and sample points were captured in the field using Trimble GeoXT mapping-level portable Global Positioning System (GPS) receivers. Differentially corrected GPS data were determined to be accurate within 0.5 to 2.0 feet. The wetland areas and sample points were placed in a GIS database and assembled with other available geographically referenced information using ARC-GIS v.9.0 software.

4.8 Isolated Surface Waters

As a consequence of the 2001 Supreme Court decision in *SWANCC vs. US Army*, isolated wetlands and other isolated water bodies are no longer under USACE jurisdiction. Currently, the USACE has sole authority to determine the isolation status of wetlands and other surface waters, which is determined on a case-by-case basis in the field.

The June 2006 US Supreme Court decision in *Rapanos/Carabell vs. US* resulted in additional limitations on the extent of federal jurisdiction over wetlands and streams that are not immediately adjacent to navigable-in-fact surface waters (e.g., larger streams and rivers). The US Environmental Protection Agency (USEPA) and the USACE issued technical guidance for interpreting the Rapanos/Carabell decision in December 2008. Hull formed its opinion of isolation status of the wetlands and streams within the Facility based on our interpretation of the December 2008 Rapanos guidance. An April 2011 revision of this memorandum is under review at this time but it is not yet final.

5.0 DELINEATION RESULTS

The results of the surface water delineation appear in Table 1 (wetlands) and Table 2 (streams). These Tables reference maps organized within a map grid. A map grid index sheet appears as Figure 1. Wetlands and streams are depicted graphically on Figures 2 through 18 and a map key appears as Figure 19. Wetland delineation data sheets appear in Appendix B, and wetland assessment data sheets (ORAMs) appear in Appendix C. Stream assessment data sheets (HHEIs and QHEIs) appear in Appendix D.

5.1 Wetlands

The wetlands summarized in Table 1 are described below. Please note some wetlands delineated are more than 100 feet away from Facility features and there is no potential for project-related impacts. These wetlands are located along routes that had been proposed during Facility planning, and later removed during plan refinement to minimize impacts to environmental resources or for other design reasons. In an effort to maintain a clear and concise Surface Water Delineation Report, many resources that will not be in proximity to construction activities for the final Facility configuration have been removed from this report.

5.1.1 Wetland A

Wetland A is an emergent isolated wetland with a small shrub component, and is dominated by black willow (*Salix nigra*; FACW+) and beggar's ticks (*Bidens frondosa*; FACW). Wetland A is located in an area mapped as Celina silt loam 2-6% slopes, a non-hydric unit that may contain inclusions of the hydric Brookston unit in depressions. Samples were taken in the central portion of the wetland (SP1); soils were saturated within the upper 12 inches. Hydrology for the wetland is provided by direct precipitation.

Wetland A is a Modified Ohio Category 2 wetland. The ORAM score was strongly influenced by its small size, hydrology, and limited habitat development.

5.1.2 Wetland B

Wetland B is a non-isolated emergent/scrub-shrub wetland dominated by sand bar willow (*Salix exigua*; OBL), gray dogwood (*Cornus racemosa*; FAC-), and broad leaved cattail (*Typha latifolia*; OBL). Wetland B is located in an area mapped as Brookston silty clay loam 0-2%

slopes, a hydric soil unit. Samples were taken in the eastern portion of the wetland (SP3). Hydrology for the wetland is provided by direct precipitation.

Wetland B is a Modified Ohio Category 2 wetland. The ORAM score was strongly influenced by its small size and limited habitat development.

5.1.3 Wetland H

Wetland H is a non-isolated, emergent wetland dominated by fox sedge (*Carex vulpinoidea*; OBL) and is located in an area mapped as Brookston silty clay loam, 0-2% slopes, a hydric soil unit, and Miami silt loam, 6-12% slopes, moderately eroded, a non-hydric soil unit. Samples were taken in the central portion of the wetland (SP10); soils were saturated to the surface. Hydrology for the wetland is provided by direct precipitation and intermittent surface water.

Wetland H is an Ohio Modified Category 2 wetland. The ORAM score was strongly influenced by wide buffers, intensity of surrounding land use, and relative lack of habitat disturbance.

5.1.4 Wetland I

Wetland I is a ponded, non-isolated wetland that was created by damming a stream located to the west. It is dominated by duck weed (*Lemna minor*; OBL) and is in an area mapped as Miami silt loam, 2-6% slopes, Miami silt loam, 6-12% slopes, and Celina silt loam, 2-6% slopes. All three of these soil units are non-hydric, but may contain inclusions of the hydric Brookston silty clay loam unit in depressions. Soil analysis was not performed in the field, because the area was dominated by FACW and OBL vegetation and the wetland/upland boundary was abrupt (p. 62 of the 1987 Delineation Manual). The surface was inundated with approximately 24-48 inches of water; hydrology for the wetland is provided by direct precipitation and intermittent surface water.

Wetland I is an Ohio Modified Category 2 wetland. The ORAM score was strongly influenced by hydrology and relative lack of habitat disturbance.

5.1.5 Wetland J

Wetland J is an isolated emergent wetland dominated by reed canary grass and is in an area mapped as Algiers silt loam, a non-hydric soil unit that may contain inclusions of the Sloan hydric soil unit in depressions and oxbows. Samples were taken in the northern portion of the

wetland (SP4a); the surface was inundated with approximately 1 inch of water at the time of evaluation. Hydrology for the wetland is provided by direct precipitation.

Wetland J is an Ohio Category 1 wetland. The ORAM score was strongly influenced by lack of buffers, intensity of surrounding land use, and dominance by invasive species.

5.1.6 Wetland K

Wetland K is a nonisolated emergent wetland dominated by reed canary grass and an unidentified aster (*Aster* sp.; assumed FACW). Wetland K is located in an area mapped as Miami silt loam, 2 to 6 percent slopes, moderately eroded, and Miami silt loam, 6 to 12 percent slopes, moderately eroded. Both soil units are non-hydric, but may contain inclusions of the hydric Brookston silty clay loam soil unit in depressions. Samples were taken in the southern portion of the wetland (SP5); the surface was inundated with approximately 1 inch of water at the time of evaluation. Hydrology for the wetland is provided by direct precipitation and intermittent surface water runoff from State Route 36 located directly north of the wetland.

Wetland K is an Ohio Category 1 wetland. The ORAM score was strongly influenced by lack of buffers, intensity of surrounding land use, and the presence of invasive species.

5.1.7 Wetland L

Wetland L is a non-isolated emergent wetland dominated by broad leaved cattail (*Typha latifolia*; OBL), calico aster (*Aster lateriflorus*; FACW-), and reed canary grass (*Phalaris arundinacea*; FACW+). Wetland L is located in an area mapped as Algiers silt loam, a nonhydric soil that may contain inclusions of the Sloan hydric soil unit in depressions and oxbows. Samples were taken in the central portion of the wetland (SP29); soils were saturated to the surface. Hydrology for the wetland is provided by direct precipitation and intermittent surface water.

Wetland L is in the Ohio Category 1/2 gray zone. The ORAM score was strongly influenced by wide buffers and intensity of surrounding land use.

5.1.8 Wetland M

Wetland M is an isolated emergent wetland dominated by reed canary grass (*Phalaris arundinacea*; FACW+). Wetland M is located in an area mapped as Brookston silty clay loam,

0-2% slopes, a hydric soil unit. Samples were taken in the western portion of the wetland (SP32); the soils of this wetland had a depleted matrix while the surface of the wetland showed primary signs of hydrology with water-stained leaves present. Hydrology for the wetland is provided by direct precipitation.

Wetland M is an Ohio Category 1 wetland. The ORAM score was strongly influenced by the intensity of surrounding land use and the dominance of invasive species coupled with isolation.

5.1.9 Wetland N

Wetland N is a non-isolated emergent wetland dominated by rough barnyard grass (*Echinochloa muricata*; FACW+). Wetland N is located in an area mapped as Brookston silty clay loam, 0-2% slopes, a hydric soil unit. Samples were taken in the northwestern portion of the wetland (SP33); the surface was dry at the time of evaluation, however, primary and secondary signs of hydrology were observed. The soils for this wetland were recently disturbed or mixed during tile installation and swale configuration; this wetland accepts field drain tiles from the surrounding row crop agriculture fields. Hydrology for the wetland is provided by direct precipitation and field drainage tiles.

Wetland N is an Ohio Category 1 wetland. The ORAM score was strongly influenced by lack of buffers, intensity of surrounding land use, and recent disturbances to vegetation (mowing) and soils.

5.1.10 Wetland Q

Wetland Q is a non-isolated emergent wetland dominated by yellow nut-sedge (*Cyperus esculentus*; FACW) and calico aster (*Aster lateriflorus*; FACW). Wetland Q is located in an area mapped as Miami Silt Loam 12-18% slopes, a non-hydric soil that may contain inclusions of the Brookston hydric soil unit in drainageways. Samples were taken in the south central portion of the wetland (SP39). Hydrology for the wetland is provided by direct precipitation and surface runoff from surrounding upland areas.

Wetland Q is an Ohio Category 1 wetland. The ORAM score was strongly influenced by having poor habitat and recent disturbances.

5.1.11 Wetland T

Wetland T is an isolated emergent wetland dominated by broad-leafed cattail (*Typha latifolia; OBL*). Wetland T is located in an area mapped as Brookston silty clay loam 0-2% slopes, a hydric soil. Samples were taken in the southwest portion of the wetland (SP43). Hydrology for the wetland is provided by direct precipitation and a seep from a probable broken field drain tile.

Wetland T is an Ohio Category 1 wetland. The ORAM score was strongly influenced by lack of buffers, having a high intensity of surrounding land use, and recent habitat and substrate disturbances from farming activities.

5.1.12 Wetland U

Wetland U is an isolated emergent wetland dominated broad-leaved cattail (*Typha latifolia*; *OBL*) and purple-leaved willow-herb (*Eplilobium coloratum*). Wetland U is located in an area mapped as Brookston silty clay loam 0-2% slopes hydric soil. Samples were taken in the southern portion of the wetland (SP44). Hydrology for the wetland is provided by direct precipitation.

Wetland U is an Ohio Category 1 wetland. The ORAM score was strongly influenced by having small size, narrow buffers and a high intensity of surrounding land use from farming activities.

5.1.13 Wetland V

Wetland V is an isolated emergent wetland dominated by broad-leaved cattail (*Typha latifolia; OBL*) and rough barnyard grass (*Echinochloa muricata*; FACW+). Wetland V is located in an area mapped as Wea silt loam 0-3% slopes, a non-hydric soil. Samples were taken in the central portion of the wetland (SP45); the surface was inundated with approximately 12 inches of water at the time of evaluation. This wetland is spring-fed which provides its hydrology as well as direct precipitation.

Wetland V is an Ohio Category 1 wetland. The ORAM score was strongly influenced by having very narrow buffers, recent disturbances and high intensity of surrounding land use because this wetland was located within an open cow pasture.



5.1.14 Wetland W

Wetland W is an emergent isolated wetland dominated by stick tight (*Bidens cernua*; OBL), barnyard grass (*Echinocloa crus-galli*; FACU), blunt spike-rush (*Eleocharis obtusa*; OBL), and mild water-pepper (*Polygonum hydropiperoides*; OBL). Wetland W is located in an area mapped as Brookston silty clay loam 0-2% slopes (BsA), a hydric soil unit. Samples were taken in the central portion of the wetland (SP46). Hydric soils were confirmed by the presence of a thick dark surface (Indicator A12). Surface inundation and soil saturation were lacking at the time of evaluation. However, the presence of wetland hydrology was confirmed by saturation observed on aerial imagery, geomorphic position and a positive FAC neutral test. The combination of these three secondary indicators confirms the presence of wetland hydrology. Hydrology for the wetland is provided by direct precipitation.

Wetland W is an Ohio Category 1 wetland. The ORAM score was strongly influenced by its small size, hydrology, lack of buffers, surrounding land use, limited habitat development and predominance of invasive plant species.

5.1.15 Wetland FF

Wetland FF is a non-isolated emergent/scrub-shrub wetland dominated by reed canary grass (*Phalaris arundinacea*; FACW) and cottonwood (*Populus deltoids*; FACW). Wetland FF is located in an area mapped as Brookston silty clay loam, 0-2% slopes (BsA), Crosby silt loam, 2-6% slopes (CsB), and Miami silt loam, 6-12% slopes (MIC2). Brookston silty clay loam is a hydric soil unit. The Crosby silt loam and Miami silt loam units are non-hydric; however, they may contain inclusions of the hydric Brookston unit in depressions and drainage ways. Samples were taken in the eastern portion of the wetland (SP57). Hydric soils were confirmed by the presence of a depleted matrix (Indicator F3). Hydrology for the wetland is provided by direct precipitation. Surface inundation and soil saturation were lacking at the time of evaluation. However, the presence of wetland hydrology was confirmed by the presence of drainage patterns and a positive FAC neutral test.

Wetland FF is an Ohio Category 1 wetland. The ORAM score was strongly influenced by narrow buffers, the intensity of surrounding land use, hydrology, lack of habitat development and the predominance of invasive species.



5.1.16 Wetland GG

Wetland GG is a non-isolated emergent/scrub-shrub wetland dominated by reed canary grass (*Phalaris arundinacea*; FACW), sandbar willow (*Salix exigua; OBL*) and black willow (*Salix nigra, FACW*). Wetland GG is located in an area mapped as Miami silt loam 2-6% slopes, a non-hydric soil that may contain inclusions of the Brookston Silty clay loam hydric soil unit in drainageways. Samples were taken in the eastern portion of the wetland (SP58). Hydrology for the wetland is provided by direct precipitation and soil was saturated to the surface at the time of evaluation.

Wetland GG is an Ohio Category 1 wetland. The ORAM score was strongly influenced by having fairly narrow buffers and a high percent coverage of invasive plants.

5.1.17 Wetland JJ

Wetland JJ is a non-isolated emergent wetland dominated by calico aster (*Aster lateriflorus*; FACW), and sandbar willow (*Salix exigua*; *OBL*). Wetland JJ is located in an area mapped as Miami silt loam 2-6% slopes, a non-hydric soil that may contain inclusions of the Brookston hydric soil unit in drainageways. Samples were taken in the northwest portion of the wetland (SP62). Hydrology for the wetland is provided by direct precipitation, soil was saturated to the surface and there was surface water up to 3 inches at the time of evaluation.

Wetland JJ is an Ohio Category 1 wetland. The ORAM score was strongly influenced by being small in size, having very narrow buffers and a moderately high intensity of surrounding land use.

5.1.18 Wetland KK

Wetland KK is a non-isolated forested wetland dominated by creeping bentgrass (*Agrostis stolonifera*; FACW) and green ash (*Fraxinus pennsylvanica*; FACW). Wetland KK is located in an area mapped as Brookston silty clay loam 0-2% slopes, a hydric soil unit. Samples were taken in the southwest portion of the wetland (SP63). Hydrology for the wetland is provided by direct precipitation, soil was saturated and there were pockets of surface water at the time of evaluation.



Wetland KK is an Ohio Category 2 wetland. The ORAM score was strongly influenced by having good habitat development and habitat that has recovered from past alteration.

5.1.19 Wetland NN

Wetland NN is a non-isolated emergent wetland with a forested component dominated by broadleaf cattail (*Typha latifolia*; OBL) and black willow (*Salix nigra*; FACW+). Wetland NN is located in an area mapped as Miami silt loam 2-6% slopes, a non-hydric soil that may contain inclusions of the Brookston Silty clay loam hydric soil unit in drainageways. Samples were taken in the southwest portion of the wetland (SP66). Hydrology for the wetland is provided by direct precipitation, soil was saturated to the surface and there was up to 3 inches of surface water at the time of evaluation.

Wetland NN is an Ohio Category 1 wetland. The ORAM score was strongly influenced by having high to moderately high surrounding land use, narrow buffers and moderate amounts of invasive plant cover.

5.1.20 Wetland KA

Wetland KA is an isolated emergent/scrub-shrub wetland dominated by narrowleaf cattail (*Typha angustifolia*; OBL) and black willow (*Salix nigra*; FACW). Wetland KA is located in an area mapped as Crosby silt loam 2-6% slopes, a non-hydric soil. A soil sample was taken in the southwest portion of the wetland (WET-KA). Hydrology for the wetland is provided by direct precipitation, soil was saturated to the surface and there was up to 1 inch of surface water at the time of evaluation.

Wetland KA is an Ohio Category 1 wetland. The ORAM score was strongly negatively influenced by having high surrounding land use, very narrow buffers and moderate amounts of invasive plant cover.

5.1.21 Wetland KB

Wetland KB is a non-isolated emergent/scrub-shrub wetland dominated by narrowleaf cattail (*Typha latifolia*; OBL) and black willow (*Salix nigra*; FACW). Wetland KB is located in an area mapped as Crosby silt loam 2-6% slopes, a non-hydric soil. A soil sample was taken in the southwest portion of the wetland (WET-KB). Hydrology for the wetland is provided by direct

precipitation, soil was saturated to the surface and there was up to 2 inches of surface water at the time of evaluation.

Wetland KB is an Ohio Category 1 wetland. The ORAM score was strongly negatively influenced by having high surrounding land use, narrow buffers and moderate amounts of invasive plant cover.

5.2 Streams

The streams summarized in Table 2 are described below. All 43 stream segments within the Facility were preliminarily determined to be under federal jurisdiction, with the exception of Stream GG.

5.2.1 Stream B

Stream B is an unnamed primary headwaters stream. Stream B has a watershed area of 0.46 square miles and a maximum pool depth of 25.4 cm, and was therefore evaluated using the HHEI. Stream B does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. While the HHEI score for Stream B identifies it as a potential Modified Class III PHWH stream, the HMFEI score (11) indicates that Stream B is appropriately classified as a Modified Class II intermittent PHWH stream. The lower existing use may be due to organic enrichment from runoff from adjacent agricultural fields. Substrates within the assessed reach consisted primarily of gravel and sand.

5.2.2 Stream B-2

Stream B-2 is an unnamed primary headwaters stream located south of Urbana Woodstock Pike. Stream B-2 has a watershed area of 0.32 square miles and a maximum pool depth of 4 cm, and was therefore evaluated using the HHEI. Stream B-2 does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 50 for Stream B-2 identifies it as a Modified Class II PHWH stream. Substrates within the assessed reach consisted primarily of gravel and muck.

5.2.3 Stream D-2

Stream D-2 is an unnamed primary headwaters stream. Stream D-2 has a watershed area of 0.55 square miles and was therefore evaluated using the HHEI. Stream D does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life

and chemical parameters. The HHEI score for Stream D-2 (49) identifies it as a Modified Class II PHWH ephemeral stream. Substrates within the assessed reach consisted primarily of clay hardpan with lesser amounts of gravel sand and silt.

5.2.4 Stream E

Stream E is a named intermittent stream (Dugan Run). Although Stream E has a watershed area of 2.73 square miles, it was dry during an earlier assessment and was initially evaluated using the HHEI. The stream had water and was flowing during the June 2011 field reconnaissance and was therefore also evaluated with the QHEI. In 2005, the Ohio EPA recommended that Dugan Run be given a Cold Water Habitat aquatic life use designation but this has not yet been promulgated in rule. The sampled reach of Stream E lacks the features necessary for a Cold Water Habitat designation (i.e. substrate types of bedrock, boulder, boulder slabs, and cobble comprising >20% of the substrate and presence of a natural channel), and the HHEI score is less than 70 and the QHEI score was 44. The HHEI score for Stream E identifies it as a Modified Class II PHWH intermittent stream and the QHEI score indicates a Modified Warmwater Habitat, which likely constitutes the stream's existing use.

5.2.5 Stream F

Stream F is an unnamed primary headwaters stream. Stream F has a watershed area of 0.24 square miles and a maximum pool depth of 20 cm, and therefore was evaluated using the HHEI. Stream F does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. While the HHEI score for Stream F identifies it as a potential Modified Class III perennial PHWH stream, the HMFEI score (14), and a lack of amphibians observed during the VES indicate that Stream F is a Modified Class II perennial PHWH stream. The lower existing use may be due to organic enrichment from runoff from adjacent agricultural fields. Substrates within the assessed reach consisted primarily of gravel and sand.

5.2.6 Stream J

Stream J is a named stream (Dugan Run). Stream J has a watershed area of 1.05 square miles and was dry during the assessment, and was therefore evaluated using the HHEI. Stream J does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream J identifies it as a

Modified Class II PHWH intermittent stream, which constitutes the stream's existing use. The assessed reach contained substrate consisting primarily of silt, gravel, and sand.

5.2.7 Stream J-2

Stream J-2 is an unnamed intermittent stream. Stream J-2 has a watershed area of 0.65 square miles and a maximum pool depth of 80 cm, and was therefore evaluated using the QHEI. Stream J-2 does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The QHEI score of 72 for Stream J-2 identifies it as a Warmwater Habitat stream. Substrates within the assessed reach consisted primarily of cobble and gravel.

5.2.8 Stream K

Stream K is an unnamed primary headwaters stream. Stream K has a watershed area of 0.24 square miles and was dry during the assessment, and was therefore evaluated using the HHEI. Stream K does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream K identifies it as a Modified Class I PHWH ephemeral stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of clay hardpan.

5.2.9 Stream L

Stream L is a named primary headwaters stream (Little Darby Creek). Stream L has a watershed area of 1.95 square miles and was dry during the assessment, and was therefore evaluated using both the HHEI and QHEI. Stream L has assigned Aquatic Life Use designations of Exceptional Warm Water Habitat and Cold Water Habitat based on evaluation by Ohio EPA in 2004. The HHEI score for Stream L identifies it as a Class II PHWH intermittent stream and the QHEI score indicates a Warmwater Habitat resource, but this assessment is overridden by the promulgated rule. Interstitial perennial flow is assumed to be present. Substrates within the assessed reach consisted primarily of silt, sand, and gravel.

5.2.10 Stream O

Stream O is a named perennial stream (East Fork Buck Creek). Stream O has a watershed area of 4.11 square miles and a maximum pool depth greater than 40 cm; therefore was evaluated using the QHEI. Stream O has an assigned Aquatic Life Use designation of Cold Water Habitat which was verified based on field data collected by the Ohio EPA in 2005. The

QHEI score of 46.5 for Stream O places it in the "fair" narrative range and suggests that the stream habitat in this reach is not capable of supporting cold-water aquatic communities; however this assessment is overridden by the promulgated rule.

5.2.11 Stream O-2

Stream O-2 is a named perennial stream (East Fork Buck Creek). Stream O-2 has a watershed area of 3.98 square miles and a maximum pool depth of 33 cm; therefore it was evaluated using the QHEI. Stream O-2 has an assigned Aquatic Life Use designation of Cold Water Habitat which was verified based on field data collected by the Ohio EPA in 2005. The QHEI score of 39 for Stream O-2 places it in the "poor" narrative range and suggests that the stream habitat in this reach is not capable of supporting cold-water aquatic communities; however this assessment is overridden by the promulgated rule. Substrate within the assessed reach consisted primarily of gravel.

5.2.12 Stream P

Stream P is a named intermittent stream (Dugan Ditch). At the point of assessment, Stream P has a watershed area of 0.07 square miles and a maximum pool depth of 3 cm; therefore it was evaluated using the HHEI. Stream P has an assigned Aquatic Life Use Designation of Coldwater Habitat, although this use is not apparently attainable this far up in the watershed. The HHEI score for Stream P identifies it as a Modified Class I ephemeral PHWH stream, and suggests that the stream habitat in this reach is not capable of supporting cold-water aquatic communities; however this assessment is overridden by the promulgated rule. Substrates within the assessed reach consisted primarily of silt and leaf pack.

5.2.13 Stream Q

Stream Q is an unnamed primary headwaters stream. Stream Q has a watershed area of 0.07 square miles and a maximum pool depth of less than 40 cm (stream dry at time of evaluation), therefore was evaluated using the HHEI. Stream Q does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream Q identifies it as a Modified Class II intermittent PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted entirely of silt.

5.2.14 Stream R

Stream R is an unnamed primary headwaters stream. Stream R has a watershed area of 0.12 square miles and a maximum pool depth of less than 40 cm (stream dry at time of evaluation), therefore was evaluated using the HHEI. Stream R does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream R identifies it as a Class II intermittent PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of gravel and sand.

5.2.15 Stream S

Stream S is an unnamed primary headwaters stream. Stream S has a watershed area of 0.08 square miles and a maximum pool depth of 6 cm, therefore was evaluated using the HHEI. Stream S does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream S identifies it as a Modified Class I ephemeral PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted entirely of silt.

5.2.16 Stream V

Stream V is an unnamed primary headwaters stream. Stream V has a watershed area of 0.12 square miles and a maximum pool depth of 10 cm, therefore was evaluated using the HHEI. Stream V does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream V identifies it as a Modified Class II perennial PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of sand and silt.

5.2.17 Stream W

Stream W an unnamed primary headwaters stream. Stream W has a watershed area of 0.15 square miles and a maximum pool depth of 24 cm, therefore was evaluated using the HHEI. Stream W does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream W identifies it as a Modified Class II perennial PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of sand and silt.

5.2.18 Stream Y

Stream Y is a named intermittent stream (Buck Creek). Stream Y has a watershed area of 5.56 square miles and a maximum pool depth greater than 40 cm (stream dry at time of evaluation), therefore was evaluated using the QHEI. Stream Y has an assigned Aquatic Life Use designation of Cold Water Habitat (CWH) which was verified based on field data collected by the Ohio EPA in 2005. The QHEI score for Stream Y places it in the fair narrative range and suggests that the stream habitat in this reach is not capable of supporting cold-water aquatic communities; however this assessment is overridden by the promulgated use designation in rule.

5.2.19 Stream Y-2

Stream Y-2 is a named intermittent stream (Buck Creek). Stream Y-2 has a watershed area of 3.51 square miles and was therefore evaluated using the QHEI. Stream Y-2 has an assigned Aquatic Life Use designation of Cold Water Habitat (CWH) which was verified based on field data collected by the Ohio EPA in 2005. The combination of the stream being a dry channel at the time of evaluation along with a QHEI score of 27.4 for Stream Y-2 places it in the "very poor" narrative range and suggests the stream habitat in this reach is not capable of supporting coldwater aquatic communities; however this assessment is overridden by the promulgated use designation in rule. Substrate within the assessed reach consisted primarily of silt.

5.2.20 Stream Y-3

Stream Y-3 is a named intermittent stream (Buck Creek). Stream Y-3 has a watershed area of 3.51 square miles and was therefore evaluated using the QHEI. Stream Y-3 has an assigned Aquatic Life Use designation of Cold Water Habitat which was verified based on field data collected by the Ohio EPA in 2005. The combination of the stream being a dry channel at the time of evaluation along with a QHEI score of 22 for Stream Y-3 places it in the "very poor" narrative range and suggests the stream habitat in this reach is not capable of supporting coldwater aquatic communities; however this assessment is overridden by the promulgated use designation in rule. Substrate within the assessed reach consisted primarily of silt.

5.2.21 Stream Y-4

Stream Y-4 is a named stream (Buck Creek). Stream Y-4 has a watershed area of 1.85 square miles therefore was evaluated using the QHE!. Stream Y-4 has an assigned Aquatic Life Use designation of Cold Water Habitat which was verified based on field data collected by the Ohio EPA in 2005. The QHEI score of 33 for Stream Y-4 identifies it as a Modified Warm Water

Habitat stream; however, this assessment is overridden by the promulgated use designation in rule. Substrates within the assessed reach consisted primarily of clay hardpan and gravel with lesser amounts of cobble, sand and silt.

5.2.22 Stream AA

Stream AA is a named primary headwaters stream (Buck Creek) located east of Mutual Union Road. Stream AA has a watershed area of 0.26 square miles and a maximum pool depth of 7 cm, therefore was evaluated using the HHEI. Stream AA has an assigned Aquatic Life Use designation of Cold Water Habitat which was verified based on field data collected by the Ohio EPA in 2005. The HHEI score for Stream AA identifies it as a Modified Class II intermittent PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of clay hardpan and silt. Note: during field investigations conducted during the beginning of this project, this stream was identified as an upland drainage ditch through agriculture fields with no discernable bed and bank and was dominated by upland species of herbaceous vegetation. Recently, the drainage ditch was cleaned out and excavated to a deeper depth for agricultural drainage purposes and now has a defined bed and bank and was flowing during the June 2011 field season.

5.2.23 Stream BB

Stream BB is a named intermittent stream (Treacle Creek) located west of Yocum Road. Stream BB has a watershed area of 1.11 square miles and was flowing during the assessment. Due to the perceived small drainage area and borderline pool depths measured during the June 2011 field reconnaissance; this stream was evaluated with both the QHEI and HHEI. Stream BB has an assigned Aquatic Life Use designation of Exceptional Warm Water Habitat based on evaluations by Ohio EPA in 2004. The HHEI score for Stream BB identifies it as a Modified Class II PHWH intermittent stream and the QHEI score indicates it is likely a Modified Warmwater Habitat; however, these assessments are overridden by the promulgated rule. Substrates within the assessed reach consisted primarily of cobble, sand, clay hardpan, and gravel.

5.2.24 Stream BB-3

Stream BB-3 is a named ephemeral stream (Treacle Creek). Stream BB-3 has a watershed area of 0.15 square miles and was flowing during the assessment. Due to the small drainage area this stream was evaluated with the HHEI. Stream BB-3 has an assigned Aquatic Life Use

designation of Exceptional Warm Water Habitat based on evaluations by Ohio EPA in 2005. The HHEI score of 61 indicates it is likely Modified Class II PHWH stream, however, this assessment is overridden by the promulgated use designation in rule. Substrates within the assessed reach consisted primarily of gravel and sand with lesser amounts of cobble, leaf pack/woody debris, boulder and silt.

5.2.25 Stream CC

Stream CC is an unnamed primary headwaters stream (unnamed tributary to Buck Creek) located north of State Route 29. Stream CC has a watershed area of 0.63 square miles but was dry during the site visit; therefore this stream was evaluated using the HHEI. Stream CC does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream CC identifies it as a Modified Class I ephemeral PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of cobble and clay hardpan.

5.2.26 Stream DD

Stream DD is an unnamed primary headwaters stream (unnamed tributary to Little Darby Creek). Stream DD has a watershed area of 0.068 square miles with a dry stream channel, and was therefore evaluated using the HHEI. Stream DD does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream DD identifies it as a Modified Class I ephemeral PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of cobble and clay hardpan. Note: Stream DD drains to Stream L (Little Darby Creek) which was also dry during this investigation.

5.2.27 Stream EE

Stream EE is an unnamed primary headwaters stream (unnamed tributary to East Fork Buck Creek). Stream EE has a watershed area of 0.31 square miles with a dry stream channel, and was therefore evaluated using the HHEI. Stream EE does not have an assigned aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score for Stream EE identifies it as a Modified Class II ephemeral PHWH stream, which constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of gravel and silt.

5.2.28 Stream GG

Stream GG is an isolated unnamed primary headwaters stream. Stream GG has a watershed area of 0.19 square miles and was therefore evaluated using the HHEI. Stream GG flows into an excavated pond with no outlet. Stream GG does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. Stream GG is classified as an isolated Modified Class II ephemeral PHWH stream due to an HHEI score of 45. Substrates within the assessed reach consisted primarily of cobble and gravel. Since Stream GG is an isolated stream, it is not under federal jurisdiction.

5.2.29 Stream HH

Stream HH is an unnamed primary headwaters stream. Stream HH has a watershed area of 0.25 square miles, therefore was evaluated using the HHEI. Stream HH does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. Stream HH scored a 22 on the HHEI and is therefore classified as a Modified Class I intermittent PHWH stream. Substrates within the assessed reach consisted primarily of cobble and silt.

5.2.30 Stream II

Stream II is an unnamed primary headwaters stream. Stream II was a dry channel at the time of evaluation and has a watershed area of 0.04 square miles and was therefore evaluated using the HHEI. Stream II does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. Stream II is classified as a Modified Class I intermittent PHWH stream with an HHEI score of 25. Substrate within the assessed reach consisted primarily of silt.

5.2.31 Stream JJ

Stream JJ is an unnamed stream. Stream JJ has a watershed area of 1.08 square miles and was therefore evaluated using the QHEI. Stream JJ does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The QHEI score of 36.5 for Stream JJ identifies it as a Modified WWH stream. Substrates within the assessed reach consisted primarily of cobble and gravel.

5.2.32 Stream LL

Stream LL is an unnamed primary headwaters stream. Stream LL has a watershed area of 0.05 square miles and was therefore evaluated using the HHEI. Stream LL does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 32 for Stream LL identifies it as a Class I PHWH stream. Substrates within the assessed reach consisted primarily of clay hardpan and cobble.

5.2.33 Stream MM

Stream MM is an unnamed primary headwaters stream. Stream MM was a dry channel at the time of evaluation and has a watershed area of 0.13 square miles therefore was evaluated using the HHEI. Stream MM does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 29 for Stream MM identifies it as a Modified Class I PHWH stream. Substrate within the assessed reach consisted primarily of silt.

5.2.34 Stream NN

Stream NN is an unnamed stream. Stream NN was a dry channel at the time of evaluation and has a watershed area of 0.51 square miles and a maximum pool depth of 25.4 cm, therefore it was evaluated using the HHEI. Stream NN does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 46 for Stream NN identifies it as a Modified Class II PHWH stream. Substrates within the assessed reach consisted primarily of gravel and cobble.

5.2.35 Stream OO

Stream OO is an unnamed primary headwaters stream. Stream OO was a dry channel at the time of evaluation and has a watershed area of 0.69 square miles therefore it was evaluated using the HHEI. Stream OO does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 36 for Stream OO identifies it as a Modified Class II PHWH stream. Substrates within the assessed reach consisted primarily of gravel and silt.

5.2.36 Stream PP

Stream PP is an unnamed ephemeral stream (UT to Little Darby Creek). Stream PP has a watershed area of less than 0.10 square mile and was dry during this assessment; thus Stream PP was evaluated using the HHEI. Stream PP does not have an assigned Aquatic Life Use

designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 15 for Stream PP identifies it as a Modified Class I PHWH ephemeral stream, which likely constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of silt with minor amounts of cobble, clay hardpan, and boulder.

5.2.37 Stream QQ

Stream QQ is an unnamed ephemeral stream (UT to Treacle Creek) located west of Yocum Road. Stream QQ has a watershed area of 0.20 square mile and was dry during this assessment; thus Stream QQ was evaluated using the HHEI. Stream QQ does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 15 for Stream QQ identifies it as a Modified Class I PHWH ephemeral stream, which likely constitutes the stream's existing use. Substrates within the assessed reach consisted primarily of silt with minor amounts of clay hardpan, cobble, and gravel.

5.2.38 Stream WW

Stream WW is an unnamed primary headwaters stream. Stream WW was a dry channel at the time of evaluation and has a watershed area of 0.42 square miles therefore it was evaluated using the HHEI. Stream WW does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 42 for Stream WW identifies it as a Modified Class II PHWH stream. Substrates within the assessed reach consisted primarily of gravel.

5.2.39 Stream XX

Stream XX is an unnamed primary headwaters stream. Stream XX was a dry channel at the time of evaluation and has a watershed area of 0.01 square miles therefore it was evaluated using the HHEI. Stream XX does not have an assigned Aquatic Life Use designation and has not been monitored by Ohio EPA for aquatic life and chemical parameters. The HHEI score of 38 for Stream XX identifies it as a Modified Class II PHWH stream. Substrates within the assessed reach consisted primarily of gravel with lesser amounts of silt and clay hardpan.

5.2.40 Stream YY

Stream YY is an unnamed primary headwaters stream (UT to Little Darby Creek). Stream YY has a watershed area of 0.02 square miles and was dry at time of assessment therefore was evaluated using the HHEI. Stream YY does not have an assigned aquatic Life Use designation