

BEFORE
THE OHIO POWER SITING BOARD

In the Matter of the Application of Republic)	
Wind, LLC, for a Certificate to Site Wind)	Case No. 17-2295-EL-BGN
Powered Electric Generating Facilities in)	
Seneca and Sandusky Counties, Ohio)	

LOCAL RESIDENTS’ SUPPLEMENTAL POST-HEARING REPLY BRIEF

This Supplemental Post-Hearing Reply Brief is filed on behalf of Local Resident Intervenor Joseph & Diane Anderson, Denise Bell, Aaron & Carrie Boes, Richard & Linda Bollenbacher, Rob & Mary Chappell, Thomas & Kathleen Fries, Leslie Hackenburg, Jeffrey & DeeAnne Hamilton, Mary and Allen Hassellbach, Duane & Deb Hay, Ethan & Crystal Hoepf, Gary & Dawn Hoepf, Jason & Michelle Hoepf, Taylor Hoepf, David P. Hoover, Jeffrey A. Hoover, Kenneth & Debra Hossler, Greg & Laura Jess, Leonard & Beverly Kubitz, Gary & Michelle Miller, Steven & Kelley Miller, Kim Mitchell, Charles & Linda Morsher, Patricia Motry, Steven & Linda Mulligan, Doug & Jennifer Myers, Linda Niederkohr, Kevin & Jennifer Oney, Nicholas & Michelle Reiter, Tom & Lori Scheele, Elaine Schultz, James & Victoria Seliga, Eugene & JoAnn Smith, James & Elaine Steinmetz, Herman & Patricia Studer, Christine Vogt, Mark Weber & Cindra Riley, Charles & Rhonda Weyer, Ann Wright, and Chris & Danielle Zeman (collectively referred to as the “Residents”). This supplemental reply brief discusses the evidence introduced during the supplemental evidentiary hearing on September 30, 2020.¹

¹ As directed by the ALJs, Residents’ counsel has checked their post-hearing reply brief of January 13, 2020 (attached hereto) and has determined that no language needs to be stricken from that brief in light of the new evidence in the supplemental hearing.

I. Because The Discovery Of The N&F Nest Demonstrates That Bald Eagles Will Continue To Establish New Nests Throughout And Near The Project Area, The Board Should Not Approve The Republic Wind Project. If The Board Does Approve The Project, The Board Should Establish A 2.5-Mile Buffer Between All Turbines And Any Existing Or Future Eagle Nest.

In its prior Post-Hearing Brief on December 23, 2019 (at 43) and in its prior Post-Hearing Reply Brief on January 13, 2020 (at 60-62), Republic Wind opposed Staff proposed Condition 40 on the grounds that, *inter alia*, Republic Wind's eagle surveys are adequate and that the surveys demonstrate low risk of eagle collision with turbines. Proposed Condition 40 would require Republic Wind to prepare and implement an Eagle Conservation Plan ("ECP") if recommended by the U.S. Fish and Wildlife Service ("USFWS"), but Republic Wind contended prior to the supplemental hearing that an ECP is unnecessary.

Republic Wind now has done an about-face on its position on Condition 40. In its Supplemental Initial Post-Hearing Brief, the company represents (at 20) that the discovery of the N&F Nest has led to its working with USFWS to decide what if any additional eagle mitigation measures will be included in its ECP. Republic Wind has also finally admitted (at 20) that it is not unusual for new eagle nests to be created during a project's lifetime, after vigorously maintaining in its prior filings that its obsolete eagle surveys were adequate to characterize eagle populations in the Project's vicinity. Thus, rather than opposing Condition 40, Republic Wind now argues that Condition 40 enables the Project to represent the minimum adverse environmental impact under R.C. 4906.10(A)(3).

This reversal of position exposes the lack of credibility of Republic Wind and its wildlife experts. The N&F Nest, along with the Weller Nest discovered in the Project Area just before

the original hearing, has revealed the falsity of their expert opinions about the adequacy of their Bald Eagle studies and the Project's threat to the growing Bald Eagle population.

In contrast, the Residents have not changed their position that Condition 40 is useful. However, it is not adequate. For one thing, Condition 40 requires an ECP only if USFWS recommends one, so Condition 40 should be modified to require an ECP regardless of USFWS' position. Second, a buffer of 2.5 miles is necessary to prevent eagle collisions with turbines.

Republic Wind is correct in its statement (at 20) that the ECP does not implement the half mean inter-nest distance as a buffer zone between eagle nests and wind turbines. However, this exposes a serious weakness in USFWS' eagle protections. OPSB cannot rely on USFWS to perform the Board's duty, as required by R.C. 4906.10(A)(3) and R.C. 4906.10(A)(6), to protect the eagles by establishing its own buffer zone.

Republic Wind's reference to a half-mean inter-nest distance of 1.17 miles also ignores the new evidence adduced in the reopened hearing. USFWS now uses the distance between all eagle nests within two miles, instead of 10 miles, to calculate the half-mean inter-nest distance. Shieldcastle, Tr. 1702, Line 24 to 1703, Line 7. The half-mean inter-nest distance for the Republic Wind Project Area is now 1.85 miles or more. *Id.*, Tr. 1703, Lines 2-7. Twelve proposed turbine site are located within 1.85 miles of the N&F Nest. Hoepf Suppl. Direct Testimony, Exh. C. The N&F eagles are in danger if these turbines are constructed, and an ECP will not avoid this threat.

The 2.5-mile buffer advocated by Mark Shieldcastle is based on 40 years of Bald Eagle data on the distances that the eagles travel in Ohio for foraging. Shieldcastle, Tr. 1706, Lines 3-9. The Weller Nest eagles routinely fly for three miles from the nest. *Id.*, Lines 10-14. Instead

of abdicating its authority and responsibility to the USFWS, the Board should exercise its authority to protect these eagles and future eagles with a buffer zone of 2.5 miles.

II. OPSB Should Preserve The Safety And Economic Viability Of Local Airports Whose Airspace Is Threatened By Republic's Proposed Turbines.

The Residents agree with the Staff's assessment that several airports would be harmed by the Project as currently designed. If that were not the case, the airport managers would not be concerned about the Project's threats to aircraft safety and the airports' economic viability. Importantly, while the perception by the Office of Aviation of Ohio Department of Transportation ("ODOT") of the extent of its legal authority may have changed, ODOT's assessment of the turbines' threats to aviation has not. While ODOT may have lost some of its legal authority due to an unfavorable court decision, its Office of Aviation still has the technical expertise necessary to evaluate these threats to aviation.

Nevertheless, the Staff's revised positions on the certificate's conditions fail to prevent the threats to aviation. Rather than taking proactive action to reduce aviation threats by eliminating and shortening some of the turbines, the Staff requests only that Republic Wind comply with whatever FAA instructs the company to do. This is the same FAA that pettily ignored Fostoria's comments on aviation safety, thus sacrificing a thorough safety evaluation, simply because the airport was technically late with its comments. Deferring to and depending on such an agency does not protect the safety and economic vitality of the local airports.

In summary, the supplemental hearing did nothing to reduce the turbines' threat to aviation. If eliminating and shortening some turbines were necessary to protect aviation before the court decision about ODOT's jurisdiction, these limitations are still necessary. While the court decision may have handicapped ODOT's authority, it has not reduced OPSB's authority and mandates under R. C. 4906.10(A)(3) and R. C. 4906.10(A)(6). The Board should exercise

this authority by adopting the conditions recommended by the Staff and ODOT during the original hearing of this case.

Respectfully submitted,

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CERTIFICATE OF SERVICE

On November 13, 2020, the docketing division's e-filing system will electronically serve notice of the filing of this document on the following counsel for the parties: Sally W. Bloomfield (sbloomfield@bricker.com), Dylan Borchers (dborchers@bricker.com), Joshua D. Clark (jclark@senecapros.org), Leah F. Curtis (lcurtis@ofbf.org), Chad A. Endsley (cendsley@ofbf.org), Miranda Leppla (mleppla@theoec.org), Amy M. Milam (amilam@ofbf.org), Mark Mulligan (mulligan_mark@co.sandusky.oh.us), Devin D. Parram (dparram@bricker.com), Chris Tavenor (ctavenor@theoec.org), Trent Dougherty (theoec.org), Dane Stinson (dstinson@bricker.com), Derek Devine (dwd@senecapros.org), and Jodi Bair (jodi.bair@ohioattorneygeneral.gov). On the same date, I served a copy of this filing by electronic mail on the above-listed counsel, Dennis Hackenburg at Dennyh7@frontier.com, and Mike and Tiffany Kessler at mkessler7@gmail.com.

/s/ Jack A. Van Kley
Jack A. Van Kley

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I. Republic Wind’s Irresponsible Selection Of The Location For Its Wind Project Will Cause Serious Harm To Local Residents And The Natural Environment.

Republic Wind LLC (“Republic”) attempts to paint (at 27-28, 31) a rosy picture of its wind project (the “Project”) that will bestow enormous benefits to and be loved by the

community. The opposite is true. If this Project were so beneficial and valued, Seneca County and the townships in which the Project would be located would not be opposing the Project.

While Republic states (at 27) that “[o]ver half” of the public comments submitted to OPSB’s docket support the Project, the cross-examination of Dalton Carr revealed that Republic manipulated the public comments to provide the false appearance of widespread support. Republic wrote form letters in support of the Project and then invited people to dinners and parties to sign them. Carr, Transcript (“Tr.”) 299:1 to 302:5. The people signing these letters did not even bother to send to letters to OPSB themselves; Republic sent them. *Id.*, Tr. 303:15 to 304:3. Even the Staff expressed concern about the lack of meaningfulness of comments that were not submitted by the persons signing them. Butler, Tr. 1432:15 to 1433:24.

Mr. Carr could not say how many of the letters supporting the Project were signed by participating landowners being paid by Republic. *Id.*, Tr. 298:11-20. Similarly, his direct testimony states that 14 residents in the Project Area testified in favor of the Project, but he could not say how many of them were participating landowners or their relatives. RW Exh. 13, Carr Direct Testimony, p. 12, A.24, lines 18-22; Tr. 111:4-24. In essence, Republic paid people to support its Project.

Republic augmented the appearance of its support by employing high-pressure methods to recruit supporters. Robert Chappell’s testimony described the pressure that Republic put on him to sign a “Good Neighbor Agreement” to waive his rights to oppose the Project and to waive setback requirements in exchange for payments of \$500 per year. LR Exh. 17, Chappell Direct Testimony, p. 9, A.19, lines 19-21. Three persons identifying themselves as Apex Clean Energy representatives visited Mr. Chappell’s home on separate occasions. *Id.*, lines 16-17. Two of them came to Mr. Chappell’s home without appointments and the third left a business card

requesting to speak with him. *Id.*, lines 17-18. All three Apex representatives used high-pressure tactics in attempts to bludgeon Mr. Chappell into signing an agreement. *Id.*, p 10, A.22, lines 7-19. One of them even became belligerent and accused Mr. Chappell of not caring about what she referred to as “our” children or community, notwithstanding that her Florida license plates revealed that she lived out of state. *Id.*, lines 12-16. Such tactics bring into question the amount of genuine support that exists for Republic’s Project, as opposed to support that is the product of Republic’s monetary payments and pressure tactics.

Republic recites (at 31) the support of witness Gary Baldosser as evidence that the Project will be good for the community. But Mr. Baldosser’s testimony is motivated by self-interest, not the community’s welfare, since he hopes to host seven turbines on his land. Baldosser, Tr. 932:3-14.

Republic also asserts (at 27-28) that the Project will bestow economic benefit on the community, citing the testimony of Susan Rice. Ms. Rice prepared a socioeconomic report for Republic using a JEDI model that was designed by the U.S. Department of Energy, whose mission is to promote renewable energy. Rice, Tr. 125:12 to 126:8. This model only looks for economic benefits, not the costs suffered by the community from the wind project’s damage to its businesses and residents. *Id.*, Tr. 127:12-21, 128:11-17, 129:2-10, 129:20 to 130:4. Nor did Ms. Rice do any independent research to identify the economic disadvantages to the community to the public. *Id.*, Tr. 126:13-21. Thus, for example, Ms. Rice did not know whether the Project would receive government subsidies or tax abatements, which would be a cost to the public rather than a benefit. Rice, Tr. 120:16 to 122:1. She did not know whether the turbines and other equipment will be manufactured in Ohio or even in the United States. *Id.*, Tr. 122:2-8. Republic’s socioeconomic report, which is based on the JEDI model, contains no evidence that

the Project's damaging social and economic costs to the community were considered, much less quantified. Amd. Applic., Exh. G. Accordingly, Republic's one-sided socioeconomic report does not demonstrate that the Project is even a net benefit to the community. The evidence of widespread damage anticipated to the community and the environment, as detailed in the Residents' opening brief and in the sections below, shows that the Project will cause serious damage.

In OPSB's rulemaking exercises, OPSB has advised that an applicant's assertion of its project's economic benefit is not a premise for reducing the Board's protection of the public from the project:

Further, the Board emphasizes that an applicant's assertion that there is a particular economic benefit to the community regarding a proposed wind-energy facility will not be an offset to the public protection.

In the Matter of the Power Siting Bd.'s Adoption of Chapter 4906-17 of the Ohio Admin. Code & the Amendment of Certain Rules in Chapters 4906-1, 4906-5 & Rule 4906-7-17 of the Ohio Admin. Code to Implement Certification Requirements for Elec. Generating Wind Facilities., OPSB No. 08-1024-EL-ORD, 2008 WL 4822923 (Oct. 28, 2008), ¶ 40. Also see Paragraphs 39, 128, and 129 of that decision.

The following sections of this brief, along with the Residents' opening brief, explain how Republic's Project will harm the Residents and the community as a whole. The Board should deny a certificate to this Project.

II. The Turbines In Their Proposed Locations Are Too Close To Neighboring Homes And Will Inflict Loud, Abnoxious Noise On Them.¹

A. Republic's Poor Site Selection Has Incentivized Republic To Follow Deceptive Practices To Disguise The Harmful Noise Impacts Of Its Turbines.

¹ The Residents' reply brief is organized with the same headings provided in the same order as their opening brief to expedite the Board's review.

The other parties' opening briefs contain no argument addressing this point.

B. Republic's Proposed 46 dBA Operational Noise Limit Exceeds Republic's Measured Project Area Ambient Nighttime Average Sound Level By Five A-Weighted Decibels, Which Violates The Operational Noise Standard In OAC 4906-4-09(F)(2).

As it did in the Amended Application, Republic advocates (at 20-21) a nighttime noise limit that is five dBA above the project area ambient nighttime average, instead of requesting a limit that complies with the mandate in OAC 4906-4-09(F)(2). As explained in the Residents' opening brief, this rule states that a wind project shall be operated so that its noise "does not result in noise levels ... that exceed the project area ambient nighttime average sound level (Leq) by five A-weighted decibels."

C. Sound Measurements Outside Of The Project Area Must Not Be Used To Calculate The Ambient Nighttime Average Sound Level Of The Project Area.

The other parties' opening briefs contain no argument addressing this point.

D. OPSB Should Exclude Ambient Sound Measurements Collected In Noisy Areas That Skew The Project-Wide Average Sound Level And That Would Allow Republic's Turbines To Create Large Noise Increases In The Community.

The other parties' opening briefs contain no argument addressing this point.

E. The World Health Organization Has Determined That Long-Time Exposure To Turbine Noise At Levels Of 40 dBA Or Higher Causes Harmful Health Effects.

The other parties' opening briefs contain no argument addressing this point.

F. The 2018 Sound Measurements From The Western One-Third Of The Project Area Must Be Individually Incorporated Into The Project Area Ambient Nighttime Average Sound Level In Order To Produce An Average That Is Representative Of The Entire Project Area, Contrary To The Suggested Approach of Staff Condition 60 To Combine Them Into One Data Point.

The Staff's proposed Condition 60 is unreasonable, but not for the reasons listed in Republic's brief (at 55-56). As explained (at 15-20) in the Residents' opening brief, OPSB should use the data from the three western monitors as three separate data points, and average them with the data from the two legitimate monitoring stations elsewhere in the Project Area. The Staff agrees that the western part of the Project Area did not include a monitoring station and that the inclusion of data from this area "provides a more complete picture of the wind generation project area ambient nighttime Leq." Staff Exh. 16, Bellamy Supp. Direct Testimony, p. 2, A.8, lines 16-22. However, the Staff's proposal to combine the data from the three monitoring stations would skew the ambient sound average in the Project Area and would result in a limit that will destroy the residents' ability to sleep and relax at night in much of the Project Area.

Republic contends (at 56) that R.C. 4906.07(C) requires the Staff to "prepare its report and recommend conditions to the Board based on the application before it." But R.C. 4906.07(C) does not limit the Board's consideration to only the information contained in an application, as shown by the statute's language:

The chairperson of the power siting board shall cause each application filed with the board to be investigated and shall, not less than fifteen days prior to the date any application is set for hearing submit a written report to the board and to the applicant. A copy of such report shall be made available to any person upon request. Such report shall set forth the nature of the investigation, and shall contain recommended findings with regard to division (A) of section 4906.10 of the Revised Code and shall become part of the record and served upon all parties to the proceeding.

This statute requires the Staff to investigate the application, but it does not limit the Board's investigation to the four corners of the application. If accepted, Republic's position would prevent the Staff from looking for and using evidence demonstrating that an application is inaccurate or incomplete, thus placing the Staff and the public at the mercy of an unscrupulous or

careless applicant. The Staff's role to investigate is not so limited, as shown by the grant of authority in R.C. 4906.03(B) to "[c]onduct any studies or investigations that it considers necessary or appropriate to carry out its responsibilities under this chapter."

Republic also relies (at 56) on R.C. 4906.10(A) for the proposition that the Staff must base any conditions and modifications on the existing application filed in the case and not evidence from another proceeding. But R.C. 4906.10(A) states otherwise:

The power siting board shall render a decision upon the record either granting or denying the application as filed, or granting it upon such terms, conditions, or modifications of the construction, operation, or maintenance of the major utility facility as the board considers appropriate. The certificate shall be conditioned upon the facility being in compliance with standards and rules adopted under section 4561.32 and Chapters 3704., 3734., and 6111. of the Revised Code. An applicant may withdraw an application if the board grants a certificate on terms, conditions, or modifications other than those proposed by the applicant in the application.

Emphasis added. This statute provides that the certificate must be based "upon the record" and may include any terms, conditions, and modifications considered appropriate. The "record" is defined in the previous section of the Code, which states that "[a] record shall be made of the hearing and of all testimony taken." R.C. 4906.09. Similarly, OPSB's interpretive rule provides that "the board shall issue a final decision based only on the record, including such additional evidence as it shall order admitted." OAC 4906-2-30 (emphasis added). Thus, the Board's decision is not based solely on an application's contents, but must consider all relevant evidence collected during the *de novo* hearing. For that reason, for example, OPSB in other cases has admitted and considered ambient sound measurements from intervenors rather than restricting ambient sound measurements to those in an application. See *In re Champaign Wind, LLC*, OPSB No. 12-160-EL-BGN, 2013 WL 2446463, at *48 (May 28, 2013); *In re Buckeye Wind, LLC*, OPSB No. 08-666-EL-BGN, 2010 WL 1258698 at § V.F.8.c.ii (Mar. 22, 2010). Accordingly,

ambient sound measurements in the Project Area are admissible regardless of their source or original purpose.

Republic asserts (at 56) that the western monitoring sites were chosen to examine the transmission line corridor and not the entire Project Area. But the company offers no evidence that these sites are not suitable for evaluating the ambient sound in the western one-third of the Project Area. In fact, the evidence proves the opposite. The proposed transmission corridor slices through the middle of the western Project Area. LR Exh. 12, p. 7, Fig. 2. The monitors were about 2.4 miles apart, so they did not over-represent any discrete area. Bellamy, Tr. 1520:12-20. And RSG sited each of the three monitors in a different soundscape. *Id.*, Tr. 1521:18 to 1522:11.

Without including the three western data points in the Project-wide average, Republic's selection of noisy sites in the rest of the Project Area would skew the average so badly that it would allow noise increases of 14 dBA (or 13.5 dBA under Mr. Bellamy's position) in the quietest area of the Project Area. Allowing Republic to get away with this scheme would produce an especially egregious problem in light of the fact that a 10 dBA increase doubles the sound perceived by the listener and a five dBA increase may result in complaints.

If OPSB decides that it lacks the authority to consider Republic's ambient measurements from the western one-third of the Project Area, then the Board has other options. Since it lacks ambient measurements from one-third of the Project Area, OPSB may return the application to Republic as incomplete. After all, OAC 4906-4-08(A)(3)(e) requires an applicant to "[s]ubmit a preconstruction background noise study of the project area," not submit a study of just part of a project area. Emphasis added. Or the Board should deny the certificate, since Republic has not submitted an application containing the information necessary to demonstrate that the Project

represents the minimum adverse environmental impact under R.C. 4906.10(A)(3) and serves the public interest, convenience, and necessity under R.C. § 4906.10(A)(6).

G. Conclusions

As explained above and in the Residents' opening brief, the evidence demonstrates that turbines that produce 45.5 dBA or 46 dBA of noise or that increase the existing noise level by five dBA or more would not meet the statutory criteria in R.C. 4906.10 for representing the minimum adverse environmental impact under R.C. 4906.10(A)(3) and serving the public interest, convenience, and necessity under R.C. § 4906.10(A)(6). OPSB should return the application or deny the certificate.

III. OPSB Should Accept The Staff's Proposed Condition 58 To Cure Republic's Failure To Comply With OAC 4906-4-08(A)(3)(c) With Respect To Turbine 37.

Republic admits (at 51) that it omitted non-participating receptors from its noise report. Ten households were deprived of their right to comment on the noise impacts on them from proposed turbine 37. Republic belittles (at 50-51) these citizens' due process rights, contending that their comments would not have changed the 46 dBA noise limit anyway.

It is not true, notwithstanding Republic's position (at 51), that turbine 37's compliance with a 41 dBA Leq standard would "completely eliminate" all noise impacts for the victims of Republic's mistake. Even at the noisy ambient monitoring site, where the Leq was 51 dBA, the background sound is below 34 dBA for 50% of the time. RW Exh. 1E, Attach. B, p. 19, Table 2 (showing the L50 at the Mixed Residential site to be 34 dBA). Given the inaccurately high Leq average of 41 dBA set by Republic's inaccurate ambient sound study, the receptors near turbine 37 will be exposed to plenty of turbine noise about which they were deprived their right to comment.

Republic also errs (at 51-52) in suggesting that OPSB's acceptance of a 46 dBA noise limit would moot any public comments from those affected by turbine 37. Without actually seeing the comments that otherwise may have come from those households, no one knows what those comments might have been.

Republic states (at 51) that the Staff's recommendation would vary from Board precedent. However, it is the deprivation of the public's comment rights that would vary from Board precedent. Republic's "no harm, no foul" approach to eliminating the public's comment rights in itself would create a dangerous precedent. This approach would encourage applicants to leave important information out of the application, as Republic did in this case, and allow them to get away with these errors or intentional omissions by contending that complying with their legal requirements would not have changed the case's outcome. The Board should not encourage this behavior.

IV. Republic's Plans To Install Turbines On Karst Could Pollute Or Cut Off The Community's Water Supplies.

A. Clean, Uninterrupted Groundwater Is Essential To The Residents In And Around The Project Area.

The Residents' opening brief notes that three source water protection areas ("SWPAs") have been established for water recharge areas in the Project Area supplying three public water systems that are vulnerable to pollution. Amd. Applic., Exh. F, p. 4; Amd. Applic., p. 73; Sasowsky, Tr. 1207:4-14. Republic acknowledges (at 10) the existence of these SWPAs. Republic states (at 10) that Exhibit F of the Amended Application explains how the Project "will comply with any drinking water source protection plans near the project area." However, the application does not identify any requirements in the SWPAs that would protect groundwater supplies from contamination caused by turbines. See Amd. Applic., Exh. F, p. 5, 1st paragraph.

Thus, Republic's promise to comply with SWPA requirements that are nonexistent is meaningless. As the Residents' opening brief explains, Republic's request for authorization to construct turbines in karst areas could contaminate and block the recharge of groundwater flows on which the landowners depend.

B. Republic And The Staff, In The Absence Of A Groundwater Investigation, Have Mistakenly Opined That The Turbines Cannot Damage The Community's Water Supply Wells Simply Because The Turbines Are About 1371 Feet From The Wells.

The other parties' opening briefs contain no argument addressing this point.

C. The Protection Of The Karst Geology That Dominates The Project Area Is Necessary To Protect The Community's Groundwater Supplies.

Republic's opening brief contains no argument addressing this point. The brief of Seneca County and the townships concurs (at 6-8) in the necessity to protect the area's karst geology and groundwater supplies. The Staff's brief recommends (at 12) that no construction occur on karst.

D. As Confirmed By Dr. Ira Sasowsky's Extensive Field Experience With Karst In And Near The Project Area, The Groundwater Flows Rapidly Throughout The Bedrock In The Area Whether Or Not Karst Features Are Noticeable On The Land Surface.

Republic states (at 11) that its civil engineer contractor, Shawn McGee, and his team visited "numerous" turbine sites in the Project Area to view the land. Actually, Mr. McGee admitted that he and his team had visited only "at least half of them." McGee, Tr. 818:6-10.

Even for that limited number of turbine sites, Mr. McGee's observations served no useful purpose. First of all, Mr. McGee is a civil engineer whose experience is limited to evaluating soils for foundation stability, not a hydrogeologist skilled in evaluating risks to groundwater. RW Exh. 27, McGee Direct Testimony, p. 2, A.2 & A.3; McGee, Tr. 839:10-14. So he would not recognize any threats to groundwater where they exist, in contrast to Dr. Ira Sasowsky's extensive personal experience with karst geology and hydrogeology in the Project Area.

Second, merely looking at the ground surface, as Mr. McGee did, provides little information about the existence of karst or underground streams or aquifers. Mr. McGee saw no sinkholes or other signs of karst when he looked at the turbine sites. McGee, Tr. 818:14-20. However, this does not mean the karst is not there; instead, it means that Mr. McGee missed the karst that was there. This is not surprising, since Dr. Sasowsky discovered that the absence or rarity of surficial karst features such as sinkholes does not indicate that karst is absent, after he conducted dye tracing, well videos, statistical analysis of drilling records, geophysical investigations, and geochemical modeling to find them. LR 24, Sasowsky Direct Testimony, p. 7, A.12, pp. 11-12, A.17. Mr. McGee himself admitted that he knows that underground groundwater pathways are present at turbine sites, even though Republic has done no hydrogeological study or bedrock borings. McGee, Tr. 851:18 to 852:2. The existing karst map for the area from the Ohio Geological Survey shows widespread karst throughout much of the Project Area. Amd. Applic., Exh. F, p. 3 & Fig. 4. This evidence indicates that Mr. McGee's superficial field observations missed the karst that was there, so Republic cannot rely on these observations to argue that placing turbines here represents the minimum adverse environmental impact under R.C. 4906.10(A)(3).

E. Karst Openings Can Develop Under And Collapse Wind Turbines.

Republic's Amended Application warns that a "[s]udden collapse of an underground cavern or opening of a sinkhole can cause surface subsidence that can severely damage or destroy any overlying structure such as a building, bridge, or highway." Amd. Applic., Exh. J, p. 4-2, § 4.2.2 (Pt. 1/33). Yet Republic's brief does not address this threat to its proposed turbines, except to promise that it will drill borings after certification to evaluate the soils' stability. This

promise fails to satisfy Republic's duty to demonstrate now that the Project represents the minimum adverse environmental impact under R.C. 4906.10(A)(3).

F. Constructing Turbines In A Karst Area Can Pollute The Water Supply, But Republic Has Conducted No Studies To Determine Whether Its Project Will Pollute The Neighbors' Water Supplies.

Republic contends (at 11, second paragraph) that, although landowners in the Project Area use groundwater as their water supplies, Mr. McGee testified that the Project will not modify surface water drainage patterns. However, Mr. McGee made this statement with no support from any field work -- since Republic has done none -- and with no professional experience or education in hydrogeology -- since Mr. McGee has none. The Residents' opening brief contains additional information about the risk of groundwater contamination through the modification of surface and subsurface drainage patterns.

G. The Project May Increase Flooding Hazards In The Area.

Republic asserts (at 10) that Exhibit F of the Amended Application analyzes the prospects for floods in the Project Area and "describe[s] plans to mitigate any likely adverse consequences." While Exhibit F acknowledges flooding problems in the Project Area, it for the most part does not prescribe any means to mitigate them. The only identified mitigation is found in the first paragraph on Page 4 of Exhibit F, which recommends precautions for installing underground electrical lines in streams and floodplains. Amd. Applic., Exh. F, p. 4.

As explained in the Residents' opening brief, the main threat of flooding is the blockage of karst openings, such as sinkholes, with turbine foundations, sediment, and grout. Republic's Amended Application notes that "[s]urface drainage on the plain is very limited, and many of the streams which are present disappear into sinkholes called swallow holes." Amd. Applic., Exh. J, p. 4-3, § 4.2.2 (Pt. 1/33). If Republic fills, grouts, or causes sediment to clog such openings, the

water would have nowhere to go except to flood the area. Republic's Amended Application identifies no precautions to prevent this threat, but instead threatens to create flooding by installing turbines upon karst formations.

H. Republic's Plans To Install Turbine Foundations In Shallow Bedrock And To Grout Karst Openings May Obstruct The Groundwater Flow Necessary To Recharge The Community's Water Supply Wells.

Republic contends (at 11, second paragraph) that, although landowners in the Project Area use groundwater as their water supplies, the Project will not modify surface water drainage patterns. This argument ignores the greatest threat to groundwater supplies from turbines constructed on karst, the construction of turbine foundations in groundwater pathways and the use of grout to obstruct the flow of groundwater needed to replenish the community's wells. The Residents' opening brief describes this threat in more detail.

I. The Certificate, If Issued, Should Prohibit Turbine Construction On Karst Geology And Should Prohibit The Grouting Of Karst Openings.

Republic's Amended Application and opening brief contain no meaningful information about the karst features at the turbine sites, other than to warn that karst may be there. Instead, Republic promises (at 11) to drill borings after certification to find out where the karst exists and to likely plug the karst openings with grout where found.

The Residents' opening brief provides several reasons why siting turbines on karst, and especially grouting the karst openings, will threaten water supplies. Because karst is present in 70% to 100% of the Project Area (Sasowsky, Tr. 1207:18 to 1209:22), OPSB should deny the certificate. If a certificate is issued, the Residents urge the Board to prohibit turbine construction on any site found to possess karst features or found to threaten groundwater supplies, and to prohibit the plugging of karst openings with grout or any other substance.

The Staff's brief recommends (at 12) that no construction occur where karst features are identified. If a certificate is issued, the Board should add a condition prohibiting turbine construction in or above karst features and prohibiting the filling of karst features.

V. Blade Shear Can Throw Blade Parts As Far As 1640 Feet.

A. The Setback Between Turbines And Neighboring Properties And Roads Should Be At Least 1640 Feet To Prevent Injuries And Property Damage From Flying Blade Parts.

As explained in the Residents' opening brief, blade shear can send turbine blade pieces flying for 1640 feet. The safety manual of turbine manufacturer Nordex reveals that fact. Republic attempts (at 18) to disguise the inadequacy of the 1371-foot setback in the Amended Application by stating that its turbines sites and the nearest residences are between 1471 and 2549 feet apart and are an average of 1800 feet apart. Republic also states that the turbine sites are 1375 to 2396 feet away from non-participating property lines and are an average of 1500 feet apart. The 1800-foot average distance between turbines and residences does not protect the residences located between 1471 and 1640 feet. Nor does the separation distances from non-participating property lines protect the persons present in their yards or fields that are 1375 to 1640 feet away. OPSB should require a 1640-foot setback between turbines and non-participating property lines.

B. A Certificate, If Issued, Should Require Republic To Install The Latest Safety Equipment On Its Turbines.

Republic's brief uses (at 17-18) the same noncommittal language as the application in describing the safety equipment that is "anticipated" rather than required by the Amended Application or Staff-recommended conditions. The Board should issue a condition to mandate state-of-the-art safety equipment and the most stringent certification available, rather than

naively trusting Republic to take these actions to which Republic avoids committal with the craftily composed language of its Amended Application.

VI. The Project Will Delay Life-Saving Air Ambulance Transportation.

Robert Chappell, a paramedic and fireman with 20 years of experience in emergency response, testified that a delay of just minutes in EMT arrival can make the difference between a patient's survival or death. Chappell, Tr. 982:5 to 983:6. Republic's response (at 30) to this threat to public safety is to note that its witness Francis Marcotte testified that there should be no significant delays "[d]uring a flight with clear weather, good visibility and ceilings above 1,000 feet." RW Exh. Marcotte Direct Testimony, p. 4, A.13, lines 93-95. This argument misses the point of Mr. Chappell's testimony, in which he explained that delays would occur in bad weather, when a low cloud ceiling prevents helicopters from flying above the turbines to take a direct flight to the victims' locations. Chappell, Tr. 977:17-23. Redirecting or altering a helicopter's direct flight path can add minutes to the time it would take to reach an ill or injured patient, as well as to add time to the flight to the hospital. *Id.*, Tr. 981:1-11. And it is a commonly known fact that accidents are more likely to occur during bad weather with poor visibility.

Mr. Marcotte admitted that the lack of good visibility could delay a helicopter's arrival in the presence of the turbines. Marcotte, Tr. 695:4-7. He said that then "the question becomes whether that's a significant delay in the interest of safety." *Id.*, lines 7-9. He also contended that flying halfway around a 10-mile long turbine area would lose only a minute and a half of time. *Id.*, Tr. 708:12-25. Mr. Marcotte's answers betrayed his ignorance of the realities of emergency response. If a helicopter loses one and a half minutes traveling from a hospital to circumvent turbines enroute to the patient, it will lose another minute and a half on the route back to the

hospital. Mere minutes in delay can doom a patient. Mr. Marcotte also failed to account for the extra time it would take the emergency responders on the ground to transport a patient to a helicopter that landed outside the Project Area in weather precluding the helicopter from flying over the turbines to land inside the Project Area. Mr. Marcotte's failure to account for these realities undoubtedly stems from the fact that he is not, and has never been, a paramedic or EMT, unlike Mr. Chappell. RW Exh. 24, Marcotte Direct Testimony, p. 1, A.2, lines 5-11.

VII. The Turbines Will Cast Unlawful Amounts Of Shadow Flicker On Neighboring Properties.

Republic touts (at 19-20) the results of its shadow flicker modeling submitted to OPSB on June 25, 2019 as showing that not more than 27 non-participating homes will be exposed to more than 30 hours of shadow flicker per year. This is not a correct statement. This model evaluated only the flickering from the Vestas V136 model, which as the smallest proposed turbine model produces the least amount of flicker. RW Exh. 1E, Notice of Project Modifications, Attachment A, pp. 3-4 & Table 1; Carr, Tr. 351:11-16. And Republic plans to install larger turbine models at all but 10 turbine locations. *Id.*, lines 17-24.

Recognizing that the Project as designed does not comply with OPSB's shadow flicker limit, Republic concludes its commentary (at 20) on shadow flicker by promising to do something to comply after certification. This does not satisfy Republic's burden to demonstrate in this proceeding that its Project represents the minimum adverse environmental impact under R.C. 4906.10(A)(3) and serves the public interest, convenience, and necessity under R.C. § 4906.10(A)(6). OPSB may not approve a certificate unless and until the applicant produces a Project design that demonstrates compliance with the Board's requirements.

VIII. The Wind Turbines Will Be A Visual Blight On The Community.

Republic's brief says little in defense of the turbines' visual damage to the community, because this impairment of the residents' quality of life is indefensible. Republic offers "siting of facilities" and "technology in turbine selection with greater generating capacity" as two means by which the company has reduced the turbines' visual impact. By "siting of facilities," Republic refers (at 9) to Matthew Robinson's testimony that the turbines are located in a zone with "a relatively low density of viewers." RW Exh. 21, p. 15, A.23, lines 1-4. By "technology in turbine selection with greater generating capacity," Republic refers (at 9) to Mr. Robinson's testimony that selecting turbines with greater generating capacity, *i.e.*, larger turbines, will reduce the turbines' numbers. *Id.*, lines 7-9. These arguments have a common theme: Republic believes it is okay to harm its neighbors as long as there are not a multitude of neighbors. However, it is not okay to harm anyone, no matter how many are affected.

Moreover, the premise for Mr. Robinson's assertions are inaccurate. While the Project may not be located in the midst of a major municipality, it is located in a well-populated area. Although the Amended Application does not reveal the number of citizens who will see the turbines from their homes, the fact that 3625 nonparticipating homes are close enough to be exposed to the turbines' noise discloses how populated this area is. *See* RW Exh. 1E, Notice of Project Modifications of June 28, 2019 ("Notice of Modification"), Attachment B, Table 8, pp. 68-176 (listing the noise's non-participating "receivers") and Old, Tr. 227:14 to 228:6 (stating that these receivers are homes on land not leased to Republic). The turbines' visual damage is not just local, since the turbines can be seen for 10 miles. LR 21, Robinson Direct Testimony, p. 11, A.22, lines 24-25.

Republic represents (at 7) that the Project will not physically impact any recreational facilities. It further warrants (at 7) that no federally owned parks, forests, landmarks, and wildlife refuges are located in the 10-mile study area. To the contrary, locally owned natural recreational areas are located within the Project Area, such as Bowen Nature Preserve, and they will be physically damaged by the turbines' destruction of their views. In the case of Bowen Nature Preserve, Republic's Amended Application failed to evaluate the turbines' visual impact on the park or to even identify the park on its map of ecological resources. This violates the mandatory requirement of OAC 4906-4-08(B)(1)(a)(iii). Republic's failures to lawfully and properly analyze the visual impacts on recreational and wildlife areas are described in more detail in Section V of the opening brief of Seneca County and the townships, which the Residents incorporate herein by reference.

The Staff offers (at 5) that placing turbines in fields and next to farm silos and woodlots will minimize the community's visualization of the turbines. These rationalizations defy common sense. The tallest turbine model being considered by Republic, at 602 feet tall, and the other giant turbine models under consideration will tower above the mature 50-foot tall trees in the area. Robinson, Tr. 561:10-17. Silos are even shorter than trees. A turbine in an open field has no screening whatsoever.

Republic's towering machines will inflict a visual blight on the Residents and the rest of the community. Consequently, this Project does not represent the minimum adverse environmental impact under R.C. 4906.10(A)(3) or serve the public interest, convenience, and necessity under R.C. § 4906.10(A)(6).

IX. OPSB Should Preserve The Safety And Economic Viability Of Local Airports Whose Airspace Is Threatened By Republic's Proposed Turbines.

In their opening brief, the Residents agreed with and incorporated by reference the arguments made in Section III of the post-hearing brief filed by Seneca County and the townships on aviation issues. The Residents also agree with and incorporate by reference the positions and arguments made by the Staff on aviation issues in Section I.E.2 of its opening brief and support the proposed Staff Conditions 52-57 and 59.

The Residents also would note that, notwithstanding Republic's arguments that the Ohio Department of Transportation's ("ODOT's") authority over aviation has certain limitations, OPSB's responsibility to protect aviation in this case is not constrained by any limits on ODOT's authority. OPSB has a separate duty to protect aviation and airports under its duty in R.C. 4906.10(A)(6) to protect the public interest, convenience, and necessity.

X. Republic's Past Bat Surveys Are Faulty And Outdated, And OPSB Should Require The Submission Of New, Accurate Bat Surveys Before Acting On Republic's Application.

Republic's Amended Application admits that this Project could kill 980 to 2,200 bats per year. Amd. Applic., p. 137. The Ohio Department of Natural Resources ("ODNR") has figured that the actual number of bat deaths may be larger, because the Project Area has five to eight times as much forest as other wind project areas. Staff Exh. 1, Staff Report, p. 29. Republic claims (at 13) that the Technical Assistance Letter ("TAL") it received from the U.S. Fish and Wildlife Service ("USFWS") will protect the Indiana bat, northern long-eared bat ("NLEB"), and other bat species. However, the TAL does nothing to protect bat species other than the Indiana bat during the summertime. The Residents further address this claim in their discussion below of proposed Condition 26.

XI. Republic's Flawed, Outdated Bird Surveys Do Not Provide The Board With Sufficient Information To Issue A Certificate.

A. The Project Area Is Located In An Important Migratory Pathway That Must Be Kept Free Of Dangerous Obstacles, Such As Wind Turbines, To Avoid Bird Mortalities.

Republic falsely contends (at 14) that studies demonstrate “low levels of such fatalities at most sites and relatively minimal impact compared with other sources of avian mortality,” citing the Amended Application including Table 8-09. While Republic may argue that these studies follow ODNR and USFWS protocols, those generalized protocols merely identify the types of studies to be performed rather than designing the studies. Shieldcastle, Tr. 1004:24 to 1006:9, 1031:18-25. Thus, the wind companies’ observance of the protocols does not mean that its studies were designed or implemented in a manner that produced accurate results. And the wind companies’ study designs are written in a manner that produces inaccurate counts of bird mortalities. *Id.*, Tr. 1005:7-13.

The wind companies have mostly concealed their operating mortality data from the public. *Id.*, Tr. 1035:9-14. However, Mr. Shieldcastle was able to obtain access to mortality data for the Timber Road wind project in western Ohio, and he discovered that the wind company had manipulated the data on the human efficiency rate and scavenger rate to reduce the reported fatalities. *Id.*, Tr. 1035:20 to 1038:21, 1041:16-23, 1044:11 to 1046:7. The wind company also had searched for carcasses in a 98-meter radius around the turbines, whereas the kill zone is much larger. *Id.*, Tr. 1043:4-16.

The same ecological consultant that manipulates the Timber Road mortality data also conducts the post-construction mortality studies in most of this part of the country. *Id.*, Tr. 1046:2-7. For example, that company is using the same type of manipulation at another Ohio wind project to underestimate mortalities. *Id.*, Tr. 1046:8-13. Since wind companies do not

share their mortality methodology and reports with the public, the cherry-picked data they choose to publicize through their paid consultants cannot be trusted. Without doubt, they are providing the public with a false impression as to the amount of birds and bats they kill.

Republic also promises (at 14) to institute a bird and bat mortality plan to count the victims of its turbine operations. The certificate, if issued, should require these results and methodology to be made public so that Republic is accountable for any ecological damage it causes.

Birds are at risk from turbines, because they fly in large part at altitudes occupied by whirling turbine blades. The turbine models being considered for the Project are as tall as 602 feet. RW Exh. 1E, Notice of Modifications, second page, Table 1. Migrating songbirds fly at variable altitudes, and as low as 10 feet above the ground. Kerlinger, Tr. 603:12-21. Most nighttime migrating songbirds generally fly between 400 and 2000 feet above the ground. *Id.*, Tr. 606:6-11. Most nocturnally migrating shorebirds generally fly between 400 or 500 feet to 3500 feet above land. *Id.*, 606:12-19. Migrating soaring birds such as hawks generally fly as low as 300 feet above ground. *Id.*, 607:12 to 608:2.² Thus, birds are at risk to turbine collisions in this important migratory area.

Republic and its wildlife witness, Paul Kerlinger, attempt to downplay these risks. However, during a more candid time, Mr. Kerlinger wrote these words in his book about bird migration:

A single Chicago skyscraper was once responsible for the death of fifteen hundred migrants each year, birds on their way north up into the vast bird-

² Mr. Kerlinger referred to his book's discussion of these altitudes as "heuristic" (*id.*, Tr. 609:22 to 610:5), *i.e.*, practical information not guaranteed to be perfect, but sufficient for the immediate goals. The identified altitudes are not meant to reflect all the heights with perfect accuracy, but they are "relatively accurate." *Id.* During Mr. Kerlinger's redirect testimony, he contended that nocturnal migrants generally fly 700 to 2500 feet above ground. *Id.*, Tr. 769:22 to 770:3. This blatant deviation from his prior testimony and his own book has no credibility. Subsequently, Mr. Kerlinger stated that he was not backtracking on his earlier testimony about the migrating altitudes of nocturnally migrating birds. *Id.*, Tr. 783:19 to 785:2.

breeding northern forests; now a city program is succeeding with a lights-out policy. In Toronto, Ring-billed Gulls would even come in to eat fallen birds off the sidewalks near the skyscrapers as the dazed birds tried to become airborne again. Add to this the growing number of wind turbines in rural areas, and you do indeed have a problem.

Kerlinger, Tr. 786:17 to 787:6 (emphasis added). Since diagnosing this problem in his book, Mr. Kerlinger has testified in roughly 40 cases, every one of them on behalf of wind developers. *Id.*, 728:21 to 729:9. 787:4-6. His candid opinion on wind turbine threats to wildlife in 1995 is more credible than the opinion that Republic is paying him to give in this case.

B. Republic's Bird Surveys Were Designed To Avoid The Detection Of Most Birds, Not To Find Them.

The other parties' opening briefs contain no argument addressing this point.

C. Republic Did Not Conduct The Survey Necessary To Quantify Passerine Migration At Night, When Most Of The Passerines Are Flying Over The Project Area.

See Section XI. A above and Section XI. D below.

D. All Of Republic's Bird Surveys For Migrating And Breeding Passerines And Raptors Are Fatally Flawed And Need To Be Redone.

Republic states (at 13) that it conducted 11 avian studies over seven years. However, these numbers are not at all impressive when examined more closely. Republic argues (at 14) that the "vast majority" of the counted avian species were "non-listed, common species." As explained below, these studies (1) in large part were conducted in the wrong areas, (2) used flawed methodology designed to miss the uncommon birds, and (3) are outdated.

First, five of these studies were conducted in the area considered for the Emerson West Wind Project. Each one of them covered only a small percentage, if any, of the Republic Wind Project area. See the slight overlap in territory between the two projects as depicted in Figure 1

of RW Exh. 23. Conducting bird surveys within the wrong footprint does not produce valid results. LR Exh. 23, Shieldcastle Direct Testimony, A.8, p. 4, lines 2-3; A.11, p. 6, lines 20-21; A.11, p. 9, lines 6-8.

Republic touts an email from Erin Hazelton of ODNR to Jennie Geiger of Apex of January 25, 2018 as evidence that its surveys comply with ODNR's protocols. RW Exh. 23, p. 1; Kerlinger, Tr. 732:3 to 733:4. This email responded to a Republic letter asking her to concur that the Emerson West surveys adequately studied the portions of the Republic Project Area that once were included in the Emerson West project area. *Id.* Notably, Erin Hazelton's email of January 25, 2018 does not state that the Emerson West surveys apply to or are representative of bird life in the entire Republic Project Area. RW Exh. 23, p. 1. Her email only states that the Emerson West surveys met ODNR's protocols "for the new project boundary," *i.e.*, the small portions of the Emerson West project area that were being added to the Republic Project Area. Contrary to Republic's position, the Emerson West surveys did not update the surveys for eagles and other birds for most of the Republic Project Area. Thus, Republic's surveys for most of the Project Area are still obsolete.

Second, all of these studies employed technically deficient sampling methods designed to undercount the birds. *See* the Residents' opening brief, pages 54-66. While Republic may argue that these studies follow ODNR and USFWS protocols, those generalized protocols merely identify the types of studies to be performed rather than designing the studies. Shieldcastle, Tr. 1004:24 to 1006:9, 1031:18-25. Thus, Republic's observance of the protocols does not mean that its studies were designed or implemented in a manner that produced accurate results. In fact, even ODNR now realizes that its protocols are inadequate. Shieldcastle, Tr. 1049:4-17.

A major shortfall in Republic's surveying efforts was its decision not to survey migrating birds at night when most migratory flying occurs. Mr. Kerlinger admitted that his book on bird migration contained the following information:

After dark, millions upon millions of birds fly quietly through the night skies above our heads. Although some birds move in daylight, they account for only a small proportion of all migrants; the vast majority of birds migrate at night. The latest studies, which use radar to 'see' night migrants, indicate that a peak nighttime can feature hundreds of millions of birds passing a given point, in endless waves.

Mr. Kerlinger acknowledged that this information is still correct, except he would substitute "millions" for "hundreds of millions" in the last sentence. Kerlinger, Tr. 595:4-20. Mr. Kerlinger also admitted that these nocturnal migrants are likely to overpass the Project Area at night without stopping due to its inadequate feeding and resting habitat:

Q. ... We were talking about the quality of habitat for the stopovers and my question is whether you know how much abundance of stopover habitat is available for migrants in the Republic Wind project area.

A. Yes, I do.

Q. And would you explain that, please?

A. Yes. Approximately, in the documents that I'm referring to, some of those for the studies I read, it's about 85 percent of the area within the project boundary is tilled agriculture which is pretty much the opposite of forests that birds like; so, in other words, less than 15 percent of the entire boundary.

If you look at the footprint of the area, I believe the environmental assessment said 97 percent of the footprint was tilled agricultural; so, in other words, there isn't very much habitat area-wise for those birds, and the forests in that sit are very small, quite small.

In other words, if you look at a topographic map or a Google Earth, which I've done, those are isolated patches, so they're not really great for migrants.

Q. So what does that mean with respect to how many migrant birds will use the project area as a stopover?

A. It means that relatively few will. Small numbers. Much smaller numbers.

Kerlinger, Tr. 582:7 to 583:10. Similarly, he further testified:

Q. Okay. And that's another reason why a limited number of passerines use the project area as a stopover site?

A. That and the fact that cultivated fields, tilled fields occupy a vast majority of that project site, suggests that they won't be – there won't be large numbers of passerines. Passerines don't use corn fields or soybean fields; there's nothing there for them really.

Kerlinger, Tr. 617:18 to 618:1. Consequently, surveying migrants in the Project Area during daytime as Republic did is a purposeful ploy to miss the millions of birds flying over at night without stopping in the Project Area. Mr. Kerlinger admitted that nocturnally migrating birds are unlikely to stop in the Project Area due to its relative lack of attractive habitat. Since most of them fly over at night, and do not stop to be counted during the day, Republic's daytime migration surveys were useless for diagnosing the Project's threat to migrating birds.

Mr. Kerlinger admitted this fact, even while he was trying to justify Republic's failure to perform nighttime surveys by stating that daytime counts were adequate to count nocturnal migrants. Kerlinger, Tr. 612:23 to 613:6. As described above, he admitted that nocturnally migrating birds are likely to overpass the Project Area at night due to its inadequate feeding and resting habitat. Thus, he admitted that these birds were unlikely to be found in the Project Area during daytime when Republic was counting them:

Q. But if a bird flew over the count area the previous night and did not stop, that bird will be gone by the time you do your daytime count, correct?

A. Yes.

Kerlinger, Tr. 613:7-11. Thus, it is no surprise that, as stated (at 14) by Republic's brief, most species found by its studies were non-listed common species. In fact, Republic's migration survey was designed to find common daytime species instead of nocturnal migrants. LR Exh. 23, Shieldcastle Direct Testimony, p. 7, lines 12-13. But Mr. Kerlinger admitted that many

passerine species flying through northern Ohio have lower populations than common species like the red-winged blackbird. Kerlinger, Tr. 618:20 to 619:1. Because Republic did not use radar to count nocturnally migrating birds, its survey was a “scientific failure.” LR Exh. 23, Shieldcastle Direct Testimony, A.11, p. 7, lines 15-16. Republic missed the most important species and numbers of birds simply because it meant to do so. *Id.*, lines 19-22.

Third, most of the bird surveys in the Project Area were conducted in 2011 and 2012. The summary of surveys in RW Exh. 23, p. 5, Table 3, reveals that only raptor nest searches were conducted after 2012 for the Republic Project. Some of the bird studies conducted for the Emerson West wind project included an incidental amount of study in the Republic Project Area, but even those studies are as old as 2015, 2016, and 2017. Curiously, Republic still claims that its studies are current, even though their obsolescence caused Republic to be unaware of a more recently established bald eagle nest in the very center of the Project Area. Carr, Tr. 41:21 to 42:3, 43:16-20.

Accordingly, Republic’s assertion (at 13) that it adequately surveyed the birds to assess environmental risk is contradicted by the facts that the surveys were outdated, used flawed methods guaranteed to produce inaccurately low results, and in some cases were conducted in the wrong areas.

- E. **Republic’s Flawed And Outdated Bald Eagle Studies Do Not Provide The Board With The Information Necessary To Issue A Certificate.**
 - 1. **Republic’s Eagle Data Is Incomplete And Outdated, And A New Eagle Survey Should Be Conducted Before OPSB Acts On Republic’s Application.**

This topic is further developed in the discussion of proposed Condition 40 below.

- 2. **OPSB Should Establish A 2.5-Mile Buffer Around The Eagle Nest In The Project Area For The Eagles’ Safety.**

The other parties' opening briefs do not address this topic.

XII. OPSB Should Reject Republic's Unreasonable Proposed Revisions To The Staff's Recommended Conditions.

Republic has requested modifications to many of the Staff's recommended conditions. Some of Republic's requests are unreasonable, as explained below.

Condition 22

The language of the Staff's proposed Condition 22 would require a construction access plan to provide for the protection of "sensitive plant species, as identified by ODNR during Project construction. Republic wants (at 33) to change this language to protect only "state and federally listed threatened plant species as identified by the Ohio Department of Natural Resources (ODNR)." Emphasis added. Republic's language would protect only threatened plant species, and not endangered plant species and other listed plant species.

Proposed Condition 22 would implement OAC 4906-4-09(D)(3) and (6), which require the applicant to avoid and mitigate adverse impacts to "federal or state listed and protected species" and to "federal or state listed and protected species' habitats." The key term in OAC 4906-4-09(D)(3) and (6) and in the Staff's language is "listed," which includes both endangered and threatened species as well as other species whose waning populations are of concern. Zeto, Tr. 1383:16-23. Thus, Republic's Amended Application identifies the listed plant species potentially present in the Project Area, which include extirpated, endangered, threatened, and potentially threatened species. Amd. Applic., Exh. J, Appx. C ("RTE Species Information"), at the 19th and 21st page of the web site pdf (Pt. 6/33). In light of this information, the Residents recommend that OPSB delete "threatened" from Republic's proposed language to make Condition 22 protect "state and federally listed plant species as identified by the Ohio Department of Natural Resources (ODNR)."

Condition 25

Proposed Staff Condition 25 as Republic wants (at 34) to change it reads as follows:

The Applicant shall contact Staff, the ODNR, and the U.S. Fish and Wildlife Service (USFWS) within 24 hours if state or federal listed threatened and endangered species are encountered during construction, operation, or monitoring activities. Activities that could injure, harm, or kill ~~adversely impact~~ the identified plants or animals shall be immediately halted until an appropriate course of action has been agreed upon by the Applicant, Staff and the appropriate agencies. If the Applicant encounters any state or federal listed threatened and endangered plant or animal species prior to construction, the Applicant shall notify Staff of the location and how impacts would be avoided during construction.

Part of Condition 25 as proposed by the Staff without Republic's revisions would implement OAC 4906-4-09(D)(2), which provides:

The applicant shall contact board staff within twenty-four hours if federal or state listed species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be halted until an appropriate course of action has been agreed upon by the applicant, board staff, and other applicable administrative agencies.

Emphasis added. Republic's suggested revisions would unlawfully water down the mandatory requirements of this rule in two respects.

First, changing "listed species" to "listed threatened and endangered species" would unlawfully eliminate the protection of plant and animal species that are not yet threatened or endangered. OAC 4906-4-09(D)(2) specifically protects all "listed" species, not just "listed threatened and endangered species." The Staff report identifies the state and federal "listed" species whose presence is anticipated in the area, stating that "the following table of federal and state listed species" includes endangered species, threatened species, species of concern, and species of interest. Staff Exh. 1, Staff Report, pp. 28-29. This was confirmed by Staffer Grant Zeto, who also noted that federal "listed" species include candidate species as well as endangered and threatened species. Zeto, Tr. 1358:2-15, 1383:16-23.

The Amended Application also reveals that “listed” species include more than just threatened and endangered species. As explained under Condition 22 above, the vulnerable “listed” plants protected by rule include “potentially threatened species.” The same principle applies to “listed” animal species, as displayed in the Amended Application. ODNR has a publication, entitled “Ohio’s Listed Species,” that defines listed species as “wildlife that are considered to be endangered, threatened, species of concern, special interest, extirpated, or extinct in Ohio.” Amd. Applic., Exh. J, Appx. C (“RTE Species Information”), at the 22nd page of the web site pdf (Pt. 6/33). The next page defines the meaning of these categories of listed species. For example, a “species of concern” includes species “which might become threatened in Ohio under continued or increased stress.” *Id.*, at the 23rd page. The ensuing pages list the listed species, with the exception of plants, which are listed earlier in Appendix C of Exhibit J. All listed species need to be protected from Republic’s activities, and OAC 4906-4-09(D)(2) requires their protection.

Second, “adversely impact” should not be changed to “injure, harm, or kill,” because OAC 4906-4-09(D)(2) requires the halt of construction activities that could “adversely impact” the protected species until an action plan is devised to address the impact. A creature can be adversely impacted in situations other than physical harm, such as a nesting bird scared from its nest. Zeto, Tr. 1361:1-3. Although Republic suggests (at 35) that “adversely impact” is meant to stop only the activities that “take” a species as defined by the Endangered Species Act, that act defines “take” to encompass activities well beyond physical harm. The definition of “take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. 16 U.S.C. § 1532(19). “Harass” in the definition of “take” in the Act means “an intentional or negligent act or omission which creates the likelihood of injury to

wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. For example, chasing a breeding bird from its nest would constitute a take, even though the bird was not “injured, harmed, or killed.” OPSB should retain “adversely impact” in Condition 25, just as it is used in OAC 4906-4-09(D)(2), or use “take” as defined in the Endangered Species Act.

Condition 26

Republic objects (at 35-40) to the Staff’s recommendation that Condition 26 contain language that, in effect, would require the turbines’ blades to be feathered at wind speeds below 6.9 meters per second (m/s) during summertime at turbines within 2.5 miles of roost trees for the northern long-eared bat (NLEB).³ The Technical Assistance Letter (TAL) (attached to RW Exh. 13) obtained by Republic from the USFWS already requires this feathering regime within 2.5 miles of Indiana bat roosts, and the Staff has advised that the threatened NLEB should have the same protection. Feathering, also known as curtailment, alters the blade angles to stop or slow blade movement in low wind speeds. Amd. Applic., p. 137. Feathering reduces the number of NLEBs that perish by colliding with the blades or by suffering lung destruction from barotrauma.

Republic contends (at 35, 39) that the TAL already protects NLEBs during summertime, and that the company will follow these measures to protect them. However, the TAL contains no such summertime measures, except where NLEBs coincidentally happen to fly within 2.5 miles of Indiana bat roosts where summertime feathering is required to reduce risk to Indiana bats. The Staff has justifiably recommended feathering near NLEB roosts to fill this gap in protection.

³ The TAL also requires feathering beyond 2.5 miles of Indiana bat roosts at wind speeds below the manufacturer’s cut-in speed. This is the wind speed at which the turbine starts generating electricity, so that requirement does not have any negative effect on electricity generation and there is no good reason for the blades to rotate anyway.

Republic's objections to this common sense precaution are full of inconsistencies and inaccuracies. On one hand, Republic argues (at 39) that the summertime of feathering blades within 2.5 miles of NLEB roosts would result in a "significant" loss of power generation and revenues, implying that many turbines are near NLEB roosts. If that were the case, then many NLEBs must populate the Project Area. On the other hand, Republic represents (at 39) that NLEB numbers in the Project Area are "very small" based on Republic's bat surveys. If that is true, then the number of turbines affected by the Staff's feathering recommendation will be low or none, and Republic has no grounds to complain.

If Republic's low NLEB numbers are accurate, the bats' scarcity in bat surveys would not be surprising, since it is a threatened species whose numbers are being annihilated by white-nose syndrome. The NLEBs' rarity also could explain why NLEB mortalities found in post-construction monitoring at other wind projects are lower than other species of dead bats, although another explanation could be the notorious inaccuracy of the mortality monitoring as acknowledged by USFWS. 81 Fed. Reg. 1900, 1906 (Jan. 14, 2016) (noting that "detected carcasses are only a small percentage of total bat mortalities"). Nevertheless, the bats' scarcity makes it imperative that the NLEBs in the Project Area be protected as the Staff has recommended.

Republic asserts (at 38) that it makes sense not to feather for NLEBs in summertime, because they exhibit behavioral traits that avoid the blades. The only trait that Republic can identify (at 38) for this proposition is its claim that NLEBs stay closer to their roosts, which Republic guesses "may be due to the fact that NLEB are flexible and use a wide range of roosts and hibernacula sites." But the USFWS rulemaking preamble cited by Republic for this statement does not support it. It observes that NLEBs are flexible in roost selection and travel

only 40 to 50 miles during migration, but it does not state that they stay closer to their summertime roosts than any other bat species. 81 Fed. Reg. 24707, 24708 (Apr. 27, 2016). Moreover, while Paul Kerlinger opined that the Indiana bat's home range should not be imputed to the NLEB, he did not testify that the NLEB's range is any shorter. RW Exh. 22, p. 11, A.14, lines 13-16. So this argument does not support Republic's position that the NLEB will not wander into whirling turbine blades during the summer.

Republic also notes (at 37) that the USFWS has not forbidden the incidental take of NLEBs by wind turbines. However, the USFWS emphasized in its rulemaking that this lenience, for now, is based on the expectation that wind projects will employ feathering and other best management practices to limit NLEB deaths:

46. Comment: Commenter(s) requested that northern long-eared bat take be excepted for the purposes of renewable energy development and operation (wind energy).

Our Response: Incidental take resulting from wind energy development and operation is not prohibited, provided that the conservation measures set forth in this rule are followed to protect hibernacula and known, occupied maternity roost trees. We strongly encourage voluntary conservation measures and best management practices such as feathering or elevated cut-in speeds to reduce impacts to northern long-eared bats and other bats; however, we have not prohibited incidental take attributable to wind energy in this final rule.

81 Fed. Reg. 1900, 1917 (Jan. 14, 2016) (emphasis added).

The Staff, to their credit, have not naively relied on Republic to decide how it will protect NLEBs from mortality during summertime. In fact, Republic's resistance in this case to summertime feathering near NLEB roosts demonstrates that Republic has no intention to voluntarily limit NLEB mortalities in the summer. In this regard, the Staff have taken the advice of ODNR, which has requested that this feathering requirement be applied to NLEBs. Zeto, Tr. 1366:21 to 1368:3. ODNR advised:

The Applicant expects “collision risk to bats in the Project area is likely to be consistent with other wind energy projects in agricultural landscapes in the mid-west and estimates 980-2200 bat deaths per year (4.9-11 fatalities/MW/year). The DOW anticipates the mortality rate may be greater as this site has approximately five to eight times the amount of forested area as other operating projects in agricultural landscapes in Ohio. Specifically, active roost trees for the Indiana bat (state-listed as endangered) and northern long-eared bat (state-listed as threatened) have been documented both in and immediately adjacent to the project area during the most recent surveys by Copperhead Environmental Consulting in 2015 and 2016. Pursuant to Ohio Revised Codes §§ 1531, and 1533.08, the Division of Wildlife, under its jurisdiction, has the authority to protect, propagate, manage and preserve the game or wildlife of this State and to enforce, by proper actions and proceedings, the laws of the State of Ohio. While the placement and operation of turbines has been modified to reduce risk to the endangered Indiana bat, no such placement or operational modifications were described for the state-threatened northern long-eared bat. *The DOW recommends locating turbines away from known northern long-eared bat tree roosts and a curtailment regime in order to avoid take of this threatened species.*

RW Exh. 40, second page (emphasis in original); Staff Exh. 1, Staff Report, pp. 29-30.

Thus, ODNR, the state trustee for this state threatened species, has determined that a setback between NLEB roosts and turbines, and summertime feathering, are necessary for the bats’ protection. The Staff should have followed ODNR’s request for a setback between turbines and NLEB roosts, but did not do so. However, the Staff justifiably has accepted ODNR’s request to feather the turbines that are close to the roosts during summertime.

Republic’s complaint (at 39) that feathering for NLEBs will result in a significant loss of generation and revenue is contradicted in its own Amended Application. There, Republic acknowledged that the losses from feathering are insignificant, resulting in an economic loss of less than 1% when the cut-in speed was raised to as high as 5.0% to 6.5 m/s. Amd. Applic., pp. 137-38. In contrast to this tiny energy loss, a cut-in speed of 6.5 m/s results in a 78% reduction

in bat mortalities. *Id.*, p. 138. Such a tiny reduction in profits is a small price to pay for preserving a species that is an important component of the environment.

Condition 29

Staff proposed Condition 29 is a necessary precaution requiring Republic to rectify any “significant adverse impact to wild animals.” Grant Zeto testified that the term “wild animals” has the same meaning as provided in an ODNR rule, OAC 1501:31-1-02(AAAAAA). Zeto, Tr. 1371:8-17. Under that definition, “[w]ild animals’ includes mollusks, crustaceans, aquatic insects, fish, reptiles, amphibians, wild birds, wild quadrupeds, and all other wild mammals.”

Republic seeks (at 40-41) to dilute this condition to a point where it would have greatly reduced benefit. The company claims that “wild animals” is “so exceptionally broad” that its meaning is unclear. OPSB can easily remedy this objection by cross-referencing the citation to OAC 1501:31-1-02(AAAAAA) in the condition. That definition is crystal clear: everyone knows what mollusks, crustaceans, insects, fish, reptiles, amphibians, birds, and mammals are. The meaning of “wild quadrupeds” may be less common, but OAC 1501:31-1-02(EEEEEEE) defines that term to mean game quadrupeds and furbearing animals. Staff member Grant Zeto testified that he would not object to adding this definition to the condition. Zeto, Tr. 1371:18 to 1372:3.

Republic asks (at 41) that the condition address only a “significant mortality event” as defined in ODNR’s “On-Shore Bird and Bat Pre-and Post-Construction Monitoring Protocol for Commercial Wind Energy Facilities in Ohio” or as otherwise “agreed upon” by Republic, OPSB, ODNR and USFWS. The “agreed upon” language in Republic’s request would make the condition’s application uncertain. The ODNR protocol defines a “significant mortality event” as “>5 birds/bats at an individual turbine, and/or >20 birds and/or bats across the entire facility.”

RW Exh. 33, Exh. A, p. 4. Thus, Republic is trying to water down Condition 29 to make it apply only to birds and bats, and then only if large numbers of birds and/or bats are killed simultaneously. OPSB is entrusted with the responsibility to protect all wildlife, and it should use the language proposed by the Staff for Condition 29.

Condition 32

The Residents do not object to Republic's request that work be allowed in perennial streams where the appropriate environmental agencies find that it will not harm the environment. However, this work should be allowed only where both Ohio EPA and ODNR approve, not just ODNR, because Ohio EPA also has jurisdiction over these streams through its water quality authorities in R.C. Chapter 6111.

Conditions 33, 34, and 35

Staff proposed Conditions 33, 34, and 35 would prevent construction in the "preferred nesting habitat types" for the rare bird species of upland sandpiper, northern harrier, and loggerhead shrike during their nesting seasons, unless ODNR allows a different course of action. Grant Zeto testified that the "preferred nesting habitat types" are identified in ODNR's letter of April 27, 2018 to the Staff and that he would not object to incorporating the letter's definitions of nesting habitat types into these conditions. RW Exh. 40, 4th page; Zeto, Tr. 1378:13 to 1379:16; Tr. 1396:13-19 (marking Exh. 40).

Republic's requested edits of these conditions do not accomplish what Mr. Zeto agreed would be appropriate. Republic suggests (at 42) that the nesting habitat types be "as defined by ODNR," which Republic may have intended to refer to the habitat definitions in the ODNR letter of April 27, 2018 but which falls short of doing so. To prevent confusion, the added language

should be “as defined by ODNR in its letter from John Kessler to Ray Strom of April 27, 2018” or some other language that specifically references the habitat types.

Condition 36

As stated by Grant Zeto, Condition 36 is meant to provide for the signoff by an ODNR-approved herpetologist of any plan submitted for the protection of turtles affected by Project construction. Zeto, Tr. 1380:14 to 1381:10. Republic’s requested edit (at 43) does not provide for a herpetologist’s signoff, but would only require Republic to consult with a herpetologist. This would leave the plan’s details solely to Republic’s discretion, including the option to disregard the herpetologist’s advice. This condition should keep the Staff’s original language, or, if it is modified to allow Republic to prepare the plan, then the plan should be subject to the review and approval of an ODNR-approved herpetologist.

Condition 40

Staff proposed Condition 40 provides in part:

The Applicant shall coordinate with the USFWS to determine the adequacy of pre-construction eagle use surveys and assure that impacts to bald eagles are minimized. If recommended by the USFWS, the Applicant shall develop and implement an Eagle Conservation Plan.

Republic asks (at 66) for the elimination of this condition on three meritless grounds.

First, Republic argues (at 66) that Republic has performed adequate preconstruction eagle use surveys for the Project Area. Republic’s position is premised on Paul Kerlinger’s opinion that no more eagle studies are needed, which in turn is based largely on the fact that USFWS has not requested additional studies. RW Exh. 22, Kerlinger Direct Testimony, pp. 12-13, A.18. However, as chronicled in Mr. Kerlinger’s testimony, USFWS’ and ODNR’s communications on this point occurred in January 2018 and earlier. *Id.* In fact, the email from Erin Hazelton of

ODNR to Jennie Geiger of Apex of January 25, 2018, which Republic touts as evidence that its surveys comply with ODNR's protocols, is two years old. RW Exh. 23, p. 1.

Since that time, the bald eagle population in the Project Area has exploded. Shieldcastle, Tr.1016:24 to 1017:7. *Also see* the direct testimonies of Aaron Boes, Robert Chappell, Crystal Hoepf, Dawn Hoepf, Ann Wright, and Chris Zeman, LR Exhs. 22, 17, 18, 19, 20, and 21, respectively. The map of recent eagle sightings in Exhibit H of Crystal Hoepf's direct testimony shows that bald eagles are routinely sighted throughout the Project Area. LR Exh. 18, C. Hoepf Direct Testimony, p. 3, A. 6, lines 15-20, pp. 3-4, A.7, & Exh. H. An active bald eagle nest is located in the very center of the Project Area, and other nests have been found on the northwestern and eastern outskirts of the Project Area. LR 19, Dawn Hoepf Direct Testimony, p. 3, A.7, lines 9-15 & Exhibit D; LR 23, Shieldcastle Direct Testimony, A.16, p. 18, lines 7-9 & 20-22 & Exh. B; LR Exh. 18, C. Hoepf Direct Testimony, Exh. H; LR 17, Chappell Direct Testimony, A.12-A.14, p. 6, lines 13-21 & Exh. E.

In contrast, Paul Kerlinger has never visited the Project Area and did not know about the eagle nest in the center of the Project Area until reading about it in Dawn Hoepf's direct testimony. Kerlinger, Tr. 586:17-22, 589:18 to 590:4, 648:22 to 649:4. Thus, Mr. Kerlinger did not know about this eagle nest at the time he wrote his direct testimony prior to seeing Ms. Hoepf's. Republic did not even tell Mr. Kerlinger that a Republic-hired biologist had inspected the nest after Dawn Hoepf's testimony was filed. Kerlinger, Tr. 590:5-7; Carr, Tr. 42:4-5.

In contrast, Republic's 2011-2012 eagle surveys found eagles in the Project Area in only six sightings for a total of only 15 minutes. Amd. Applic., Exh. M, pp. 6-7. Perhaps the scarcity of eagle sightings in Republic's results resulted from point count surveys that were only 20 minutes each (Amd. Applic., Exh. M, p. 6), whereas USFWS' ECP guidance warns that the

likelihood of seeing even one eagle during 20 to 40 minute point counts “is extremely low in all but locales of greatest eagle activity.” LR Exh. 15, p. 54. The ECP guidance recommends that each point count last for “1, 2, or more hours duration.” *Id.* Or perhaps Republic’s point count surveys undercounted the eagles, because they were run for only year (from August 2011 to July 2012), while the ECP guidance recommends two years of monitoring. Amd. Applic., Exh. M, p. 6; LR Exh. 15, p. 57). This recognizes that wildlife populations vary from year-to-year, so multiple years of data are necessary to provide a representative eagle counts. Shieldcastle, Tr. 1014:16 to 1015:14. Republic’s eagle survey in the former Emerson West covered only 30% of the Republic Project Area, and it too was poorly performed. LR Exh. 23, Shieldcastle Direct Testimony, A.16, p. 19, line 13 to p. 21, line 2. Obviously, Republic did not follow the USFWS ECP protocol for eagle surveys, even though Kerlinger opined (at RW Exh. 22, p. 9, A.10) that it did.

Since its inadequate studies in 2011-2012, Republic has studiously avoided the finding of eagles in the Project Area. No eagle surveys have been conducted in most of the Project Area since that time. Republic did not bother to ask its participating landowners to report eagle sightings. Carr, Tr. 65:8-11, 66:2-4. Based on its inadequate and outdated eagle surveys, which Republic still claims to be current and accurate, Republic inaccurately represented in its responses to Staff data requests that “[t]here are no documented bald eagle nests within the project area” and that the closest eagle nest was 1.9 miles away. LR Exh. 1, 6th page, A.14.

The fact that Republic missed the widespread presence of bald eagles, and even three active eagle nests, inside and on the outskirts of the Project Area empirically proves two points. First, Republic’s old bird surveys do not accurately portray the current bird life in the Project Area. Second, the Emerson West bird surveys, despite their slight overlap of the Republic

Project Area, do not accurately portray the current bird life in the Project Area. Otherwise, the results of Republic's eagle surveys would not have been so dramatically different than the eagle life the community is observing every day.

With respect to the surveys' obsolescence, the eagle surveys on the Project Area were performed in 2011 and 2012. RW Exh. 22, Kerlinger Direct Testimony, p. 4, A.7, lines 11-30. Eagle searches were done in the Emerson West area in 2016 and 2017. RW Exh. 22, Kerlinger Direct Testimony, p. 6, line 8 to p. 7, line 3. However, the Emerson West searches covered only a small part of the Republic Project Area. RW Exh. 23, Fig. 1. That means that most of the Republic Project Area has not been surveyed since 2012. Notably, as explained earlier in this brief, Erin Hazelton's email of January 25, 2018 does not state that the Emerson West surveys apply to or are representative of bird life in the entire Republic Project Area, but only applied to the small portions of the Emerson West project area that were being added to the Republic Project Area. RW Exh. 23, p. 1. Contrary to Republic's position, the Emerson West surveys did not update the surveys for eagles and other birds for most of the Republic Project Area. And even the Emerson West surveys are now outdated, since they are three to four years old. Even Mr. Kerlinger acknowledged that, due to expanding bald eagle territories and populations, bald eagle studies must be conducted in Seneca County almost annually to reflect current eagle populations. Kerlinger, Tr. 660:23 to 661:7.

Second, Republic contends (at 66) that its eagle surveys demonstrate "very low risk" of bald eagle collision. Naturally, Republic's old surveys would lead to this conclusion, since they found few eagles in the Project Area. But that situation has changed drastically. It is no longer true, even if it ever was, that there is little risk of eagle collision in the Project Area.

Mr. Kerlinger asserted at the hearing that bald eagles rarely collide with wind turbines. However, the USFWS does not share Mr. Kerlinger's view. If it did, the USFWS would have removed the bald eagle from its Eagle Conservation Plan (ECP) guidance rather than continuing to recommend careful surveys to determine whether bald eagles are located near turbine sites. *See* LR Exh. 15. Moreover, the damage to bald eagles from nearby turbines is not limited to collisions. The ECP warns that wind turbines can cause other types of harm to eagles:

Second, disturbance from pre-construction, construction, or operation and maintenance activities might disturb eagles at concentration sites or and result in loss of productivity at nearby nests. Third, serious disturbance or mortality effects could result in the permanent or long term loss of a nesting territory. Additionally, disturbances near important eagle use areas or migration concentration sites might stress eagles so much that they suffer reproductive failure or mortality elsewhere, to a degree that could amount to a prohibited take.

LR Exh. 15, pp. ii-iii. The ECP states that a wind project is in Category 1, its highest risk category where there is “[h]igh risk to eagles, potential to avoid or mitigate impacts is low,” where, *inter alia*, it is located in an important eagle use area. *Id.*, p. x. Of particular application to this Project is the following ECP statement:

In addition, projects that have eagle nests within ½ the mean project area inter-nest distance of the project footprint should be carefully evaluated. If it is likely eagles occupying these territories use or pass through the project footprint, category 1 designation may be appropriate.

Id. (emphasis added). In this case, a bald eagle nest is located inside the Project footprint, not ½ the mean project area inter-nest distance away from the project boundary. And the Residents' observations of bald eagles, as documented in their direct testimonies, proves that eagles routinely fly through and inside the Project Area. The Project meets the definition of a Category 1 wind project under the ECP, and OPSB should require further study to ascertain the Project's likely effects on these eagles.

Third, Republic asserts (at 66) that the development of an ECP is voluntary and that it has not been recommended here. Mr. Kerlinger's testimony clarifies that "recommended here" means the USFWS has not recommended an ECP. RW Exh. 22, p. 13, A.18, lines 13-15. While this may be true, the USFWS has not, until now, been made aware of the expanded bald eagle population and the bald eagle nest inside the Project Area because of Republic's deficient studies. The currently proposed language of Condition 40 requires an ECP only if the USFWS recommends it based on this new information. Although the USFWS does not require ECPs even where illegal wildlife takings are expected, OPSB has an independent duty under R.C. 4906.10(A)(3) and (6) to ensure that the Project does not kill bald eagles. Mandating an ECP in light of the Project Area's newly discovered bald eagle populations and in light of Republic's failure to adequately survey for eagles is reasonable, and should be required even if the USFWS does not recommend it.

Condition 42

Republic maintains (at 44) that its proposed locations for turbines 10, 38, and 43 must be approved, even though Republic admits these sites do not comply with the setback from state and federal highways mandated by OAC 4906-4-08(C)(2)(b) for motorist safety. Republic argues that these sites comply with the obsolete setback formerly allowed by a repealed version of OAC 4906-4-08(C)(2)(c) replaced on April 26, 2018 with OAC 4906-4-08(C)(2)(b). Republic filed its original Application on February 2, 2018 before the repeal, followed by an Amended Application after the repeal on December 26, 2018 and an application modification on June 28, 2019.

Republic contends (at 44) that the Staff's "completeness" letter of May 15, 2018 to Republic "determined that the initial Application was deemed to be complete and in compliance

with the prior rules” and that “means the prior rules govern the initial application and the Amended Application.” The text of this letter does not support Republic’s assertion. Instead, the letter states:

This letter is to inform you that the above referenced application, filed with the Ohio Power Siting Board (Board) on March 27, 2018, has been found to comply with Chapters 4906-01, et seq., of the Ohio Administrative Code (OAC). This means the Board's Staff has received sufficient information to begin its review of this application.

The Staff’s letter discloses that the “completeness” determination meant only that the “Staff has received sufficient information to begin its review of this application.” The letter does not state that the Application complied with all legal requirements, nor does it opine that the Application complied with the Board’s rules as later amended. Republic is reading too much into this letter.

Moreover, Republic changed its turbine layout in its Amended Application of December 26, 2018, after the Staff’s completeness letter of May 15, 2018. The maps in the noise reports of the original and amended applications can be used to roughly identify the original and current turbine locations. Applic., Exh. H, p. 54, Fig. 49; Amd. Applic., Exh. H, p. 56, Fig. 49. As depicted therein, the currently proposed location for turbine 38 is in the northeast quadrant of the Project Area just west of State Highway 18, and just to the south of the intersection between State Highway 18 and County Road 14. Amd. Applic., Exh. H, p. 56, Fig. 49. No turbine was proposed for that location in the original Application, with the closest location in the original Application being F08 located to the east of and much farther from State Highway 18. Applic., Exh. H, p. 54, Fig. 49. The currently proposed location for turbine 43 is in the northeast quadrant of the Project Area just east of State Highway 18. Amd. Applic., Exh. H, p. 56, Fig. 49. No turbine was proposed for that location in the original Application, with the closest locations in the original Application being F04, F05, F06, and F07. Applic., Exh. H, p. 54, Fig. 49. The

currently proposed location for turbine 10 near State Highway 19 is near the former location for turbine E07, but it is not the same site, as explained in the next paragraph below.

The exact turbine locations proposed in the original Application and the Amended Application are revealed in the shadow flicker reports in these two applications by their GPS coordinates:

Current Proposed Turbine Location	Coordinates (East/North)	Closest Turbine Locations In Original Application	Coordinates (East/North)
T10	331,467/4,563,287	E07	331,449/4,563,293
T38	340,334/4,566,673	F08	342,205/4,566,679
T43	343,157/4,568,376	F04	342,338/4,569,123
		F05	343,076/4,568,128
		F06	343,488/4,568,393
		F07	343,683/4,568,071

Applic., Exh. I, Attach. B (“WindPRO Overview Reports and Calendars”), pp. 23-24 of 142 in the web site pdf; Amd. Applic., Exh. I, Attach. B (“WindPRO Overview Reports and Calendars”), pp. 29-30 of 332 in the web site pdf. These coordinates show that turbine locations 10, 38, and 43 were not proposed in the original Application of February 2, 2018. Because these turbine locations did not exist at the time of the Staff’s completeness letter of May 15, 2018, that letter could not have found that these locations complied with the rules. And by the time that Republic proposed these locations, OAC 4906-4-08(C)(2) had changed to require a setback of 1,125 feet plus a blade length from state and federal highways.

Republic’s position, if accepted, also would violate the law. R.C. 4906.20(B) provides:

(B) The board shall adopt rules governing the certificating of economically significant wind farms under this section. Initial rules shall be adopted within one hundred twenty days after June 24, 2008.

(2) ****

(a) The rules also shall prescribe a minimum setback for a wind turbine of an economically significant wind farm. That minimum shall be equal to a horizontal distance, from the turbine's base to the property line of the wind farm property, equal to one and one-tenth times the total height of the turbine structure as measured from its base to the tip of its highest blade and be at least one thousand one hundred twenty-five feet in horizontal distance from the tip of the turbine's nearest blade at ninety degrees to property line of the nearest adjacent property at the time of the certification application.

(b)

(i) For any existing certificates and amendments thereto, and existing certification applications that have been found by the chairperson to be in compliance with division (A) of section 4906.06 of the Revised Code before the effective date of the amendment of this section by H.B. 59 of the 130th general assembly, September 29, 2013, the distance shall be seven hundred fifty feet instead of one thousand one hundred twenty-five feet.

(ii) Any amendment made to an existing certificate after the effective date of the amendment of this section by H.B. 483 of the 130th general assembly shall be subject to the setback provision of this section as amended by that act. The amendments to this section by that act shall not be construed to limit or abridge any rights or remedies in equity or under the common law.

Emphasis added. R.C. 4906.201 echoes the requirement for the setback of 1,125 feet plus a blade length. As stated in R.C. 4906.20(B)(2)(i) and R.C. 4906.201(B)(1), only certification applications found complete before September 29, 2013 are entitled to a smaller setback instead of the setback of 1,125 feet plus a blade length. Republic's original and amended applications were both filed years after September 29, 2013.

Even if the setback of 1,125 feet plus a blade length (1,371 feet) in R.C. 4906.20(B) and OAC 4906-4-08(C)(2) did not apply, the Staff's recommendation to eliminate these three turbine sites still has a lawful and reasonable basis. As noted in Andrew Conway's testimony, a turbine fire at these locations would force emergency authorities to shut down the nearby state highway, because flying, burning turbine parts can travel at least 1,640 feet. Staff Exh. 5a, Conway Direct Testimony, pp. 9-10, A.13. Thus, Staff Condition 42 not only is required to comply with R.C.

4906.20 and 4906.201, but, without this condition, the Project does not represent the minimum adverse environmental impact under R.C. 4906.10(A)(3) or serve the public interest, convenience, and necessity under R.C. § 4906.10(A)(6).

XIII. Conclusion

This Project does not represent the minimum adverse environmental impact under R.C. 4906.10(A)(3) or serve the public interest, convenience, and necessity under R.C. § 4906.10(A)(6). OPSB should deny Republic's application for a certificate.

Respectfully submitted,

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CERTIFICATE OF SERVICE

On January 13, 2020, the docketing division's e-filing system will electronically serve notice of the filing of this document on the following counsel for the parties: Sally W. Bloomfield (sbloomfield@bricker.com), Dylan Borchers (dborchers@bricker.com), Joshua D. Clark (jclark@senecapros.org), Leah F. Curtis (lcurtis@ofbf.org), Chad A. Endsley (cendsley@ofbf.org), Miranda Leppla (mleppla@theoec.org), Amy M. Milam (amilam@ofbf.org), Mark Mulligan (mulligan_mark@co.sandusky.oh.us), Devin D. Parram (dparram@bricker.com), Chris Tavenor (ctavenor@theoec.org), Trent Dougherty (theoec.org), Dane Stinson (dstinson@bricker.com), Derek Devine (dwd@senecapros.org), Jodi Bair (jodi.bair@ohioattorneygeneral.gov), and William Cody. On the same date, I served a copy of

this filing by electronic mail on the above-listed counsel, Dennis Hackenburg at Dennyh7@frontier.com, and Mike and Tiffany Kessler at mkessler7@gmail.com.

/s/ Jack A. Van Kley
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