Submitted by Don Bauman
BSBO Conservation Committee Chair

The Black Swamp Bird Observatory generally supports the Ohio Power Siting Board's Staff Report of July 3, 2018 (though we have some reservations which will be discussed later) because we anticipate that good ecological science will prove that wind turbines do not belong in Globally Important Bird Areas. Just to be clear, BSBO does not now, nor have we ever, been in favor of this project. The Central Basin of Lake Erie, the proposed site of the Icebreaker project and potentially thousands more turbines, was designated as a Globally Important Bird Area because it is a passage route and foraging habitat for over 300 species of birds whose populations can be measured in the hundreds of millions every year, some of which, such as the Kirtland's Warbler, are in danger of extinction and have been designated as Endangered Species.

After the Icebreaker project's decade long history of scientific fumbling, misinterpretation, and ineptness, we see the OPSB Staff Report as the first proposed plan of action that is capable of developing a reasonable science of offshore wind ecology. The OPSB Staff Report would require the Icebreaker demonstration project to fulfill its ecological purpose of generating necessary and sufficient data to assess the ecological impact of offshore wind energy generation on Lake Erie and to inform the community at large of that impact.

We understand that the Icebreaker project is a demonstration project, and as such its primary purpose is to generate data. The generation of data is a fulltime effort, neither seasonal nor part time, and every effort should be made to continue the collection of data throughout the life of the project. Such is the nature of ecological science, where events take place on a larger scale than we might like; and studies, in order to be worthwhile, must be undertaken over longer time frames.

Therefore, we at BSBO respectfully request that the OPSB Staff Report be implemented without compromise to the economic or time constraints involved so as not to dilute and/or render ineffective the Staff Report's proposed scientific protocols and conditions; for to compromise or limit the Staff Report would be to undermine fulfilling the project's ecological purpose. We further state that if the OPSB Staff Report is compromised from its current form, as is being inferred by the list of issues filed by Icebreaker with the OPSB on July 10, 2018, then we withdraw any and all support for the Staff Report and urge that the procedural schedule be again halted until the impact of revisions can be investigated further.

Submitted by Mark Shieldcastle
BSBO Research Director

Good evening, my name is Mark Shieldcastle. I am presently Research Director for the Black Swamp Bird Observatory. I am retired from the Ohio DNR, Division of Wildlife with 32 years of service completing my tenure as Project Leader of Wetland Wildlife Research. Among my specialties of 45 years in the field has been scientific study design and implementation.

Black Swamp Bird Observatory's objective has always been to strive for sound science to inform those decisions that the regulatory agencies will have to make.

Tonight, my comments will focus on concerns with the Staff Report as well as potential solutions. Overall, the Staff Report is an impressive document. BSBO appreciates the immense

time and effort your staff has put into the report. We are supportive of the concept of the MOU with the ODNR. With some scientific revisions, we feel the MOU could become the standard for wind projects in the state of Ohio.

Let me quote a passage from the Staff Report*." The primary purpose of the Avian and Bat MOU is to establish a monitoring plan to assess the impacts of construction and operation to avian and bat species and resources.*

The goals of these assessments relative to this project are: Let me first say; Black Swamp Bird Observatory believe these to be admirable and appropriate goals.

Goal #1 - to document existing conditions and patterns of use of species of concern at the project site;

Goal #1 cannot be scientifically accomplished with one year of pre-construction data. You can't acquire an average without 2 years and cannot address normality without a minimum of 3 years.

To establish a pattern of use, with the variability of migration, requires multiple years. Let's not forget Icebreaker has had a decade to do something right and failed miserably. If "Species of Concern" here meets the intentions of the Endangered Species Act or the Bald and Golden Eagle Protection Act, then another layer of failure has been added to this project.

Very little has been offered in the methodology proposed for this project in the pre-construction phase that can address "species of concern," since nothing has been provided to identify species beyond the waterfowl survey. Detection methods can be added such as infra-red camera or telemetry that could get at that question to meet the goal, but so far, they haven't.

Goal #2 - to document changing conditions and patterns of species of concern and their associated habitats as a result of the project;

As with pre-construction, the post-construction conditions cannot address goal #2 for the same reason. Two years of study does not fulfill the Goal. If this is really an experiment, designed to inform decisions for future considerations, then this "experiment" should be studied every year of its existence. That is how you acquire the knowledge to achieve this goal. This doesn't even address mortality studies.

Goal #3 - to develop and implement effective mitigation and adaptive management strategies to minimize avian and bat resource impacts

Goal #3 cannot be achieved until the problems with Goals 1 and 2 have been addressed and resolved with scientific rigor and transparency.

Goal #4 – to evaluate the feasibility of various monitoring protocols in an offshore setting.

Goal #4 is obtainable. The question is, will it be based on scientifically sound sample design?

Another passage from the Staff Report states: *The Applicant has committed to continue coordination with wildlife agencies throughout the lifetime of the project to address any bird*

and bat issues that may arise.

If you only study for a couple of years, this commitment is hollow. This experiment should be treated as such and studied annually, at least until variability settles out.

We have additional concerns with the Staff Report and wish to request clarification pertaining to Condition 21. This condition states that if endangered or threatened species are encountered they are to be reported to the regulatory agencies. We concur with this condition, but question how this is to be accomplished.

As stated above, no methodology has to date been included by Icebreaker on how they will identify Threatened and Endangered species over open water during pre- or post-construction operations (which is required under the Endangered Species Act). There are methods available that can address this at least in part, and could meet this need scientifically if done properly.

Lastly, there are two segments under Condition 22 that we believe could use additional clarification or changes to meet the goals established by ODNR and OPSB. First, sub-condition (a). The condition recommends detection of a 10 gram vertebrate.

However, a large percentage of nocturnal migrating songbirds are in the 5-10 gram range. From data collected on more than 325,000 birds banded by BSBO research over the past 30 years, 33%, one-third, of all birds captured fall below the 10 gram limit, while only 0.05% fall below 5 gram. We recommend this condition be changed to read 5 gram minimum.

Second, sub-condition (c). We completely concur with the intent of this condition, which defines the conditions and extent for which the radar detection system must be operating. Migration volume and data inference can be heavily biased by only operating under clear nights (as has been done in the past on this and other projects).

Migration is highly variable and is closely associated with specific weather conditions. Where there is strong evidence of directed variability of wildlife activity, it is prudent scientifically to stratify study design. This ensures data collection is representative of reality and is not biased.

With 30 plus years of songbird migration data, BSBO can provide information to help develop a sound study design and the scientific support to clarify stratification on wind direction. We recommend that the Staff Report be clarified to indicate 80% or greater of all strata are met.

Analysis using stratification data will reduce bias of the whole and will give a truer representation of migration for that season.

To get at the Goals mentioned as the purpose of this experiment, multiple years must be completed to address multi-year variation.

We will be providing these comments, along with additional support, to OPSB.

Thank you for the opportunity to express our concerns and your willingness to consider sound science for this experiment.