

BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the :
Application of Republic :
Wind, LLC for a Certificate :
of Environmental :
Compatibility and Public : Case No. 17-2295-EL-BGN
Need for a Wind-Powered :
Electric Generating :
Facility in Seneca and :
Sandusky Counties, Ohio. :

- - -

PROCEEDINGS

before Mr. Jay S. Agranoff and Ms. Anna Sanyal,
Administrative Law Judges, at the Ohio Power Siting
Board, 180 East Broad Street, Room 11-A, Columbus,
Ohio, called at 9:00 a.m. on Wednesday, November 6,
2019.

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VOLUME III

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14 Intervenors.

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Wednesday Morning Session,
November 6, 2019.

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ALJ SANYAL: Good morning, everyone.
Just a brief procedural matter that we discovered
earlier today. So, yesterday, we admitted several
attachments that were the Company's exhibits, so
they're Applicant's Exhibits 1A through 1L that were
admitted yesterday. Some of them are confidential,
so I've made the Company aware, so I just want to
make sure they are appropriately admitted to --
appropriately put -- given to the court reporter
under seal if necessary. I do know some of those
exhibits, the Company is trying to see if they can be
made available publicly. So I just wanted to make
sure the record is clear.

MR. PARRAM: Yes, Your Honor. Thank you.

ALJ SANYAL: Okay. Are there any
questions? Just so the record is clear, the specific
exhibits that are confidential are Exhibits 1G
through 1L and that's what I have marked. If that's
incorrect, let me know.

MR. PARRAM: That's what I have, Your
Honor.

ALJ SANYAL: Okay. In that case, if the

1 Company is ready to proceed with their first witness
2 of the day.

3 MS. SHEELY: Yes, Your Honor. This is
4 Sommer Sheely with Bricker & Eckler, 100 South Third
5 Street, Columbus, Ohio 43215, on behalf of the
6 Company. We would like to call Matthew Robinson,
7 please.

8 ALJ SANYAL: Mr. Robinson, if you will
9 take this stand.

10 (Witness sworn.)

11 ALJ SANYAL: Okay. You may be seated.
12 And you may proceed whenever you're
13 ready.

14 (EXHIBIT MARKED FOR IDENTIFICATION.)

15 - - -

16 MATTHEW ROBINSON
17 being first duly sworn, as prescribed by law, was
18 examined and testified as follows:

19 DIRECT EXAMINATION

20 By Ms. Sheely:

21 Q. Good morning, Mr. Robinson. Can you
22 please state your full name for the record.

23 A. Matthew Michael Robinson.

24 Q. By whom are you employed?

25 A. Environmental Design & Research.

1 Q. In front of you should be a document -- I
2 gave out one too many copies as it turns out.

3 MS. SHEELY: Thank you.

4 MS. BAIR: Do you want this?

5 MS. SHEELY: I'm good. Thank you very
6 much. I appreciate it.

7 Q. (By Ms. Sheely) Okay. You have in front
8 of you a document marked Exhibit 21?

9 A. Yes.

10 Q. What is Exhibit 21?

11 A. It is my Direct Testimony.

12 Q. Was Exhibit 21 prepared by you or at your
13 direction?

14 A. Yes.

15 Q. If I were to ask you the same questions
16 that are contained in Exhibit 21 today, would your
17 answers be the same?

18 A. Yes.

19 Q. Do you have any modifications to
20 Exhibit 21?

21 A. No.

22 Q. Okay.

23 MS. SHEELY: So, Your Honors, I would
24 move for the admission of Exhibit 21, pending
25 cross-examination, and tender Mr. Robinson for

1 cross-examination.

2 ALJ SANYAL: Thank you, Ms. Sheely.

3 Before we do cross, just so I'm on the
4 same page, Mr. Robinson, you are tendering
5 Exhibit AA, correct?

6 THE WITNESS: Correct.

7 ALJ SANYAL: The Visual Impact Study.
8 Just so I can follow along, is that the one that was
9 filed on February 2nd or December -- there's a
10 December filing and then a February filing, which one
11 should I be looking at?

12 MS. SHEELY: December 2018.

13 ALJ SANYAL: Okay. I have that pulled
14 up.

15 Mr. Van Kley.

16 MR. DeVINE: Actually, with the Court's
17 permission, Mr. DeVine will do cross first if that's
18 okay? Thank you.

19 ALJ SANYAL: Yes.

20 ALJ AGRANOFF: If I can ask one
21 clarifying question. Was the February 2, 2018
22 version of AA also marked as an exhibit?

23 MS. SHEELY: Yes. They were both part of
24 the public record, both with the Applications, there
25 was just a later version in December 2018. They're

1 both marked Exhibit AA to the respective
2 Applications. Does that answer the question?

3 ALJ AGRANOFF: Well --

4 ALJ SANYAL: No.

5 ALJ AGRANOFF: -- we do have a specific
6 exhibit which is marked as Applicant Exhibit 1D which
7 I believe is --

8 ALJ SANYAL: That's the December 27.

9 ALJ AGRANOFF: That's the December 27,
10 2018.

11 MR. PARRAM: 1D is Exhibit AA to the
12 Amended Application filed on December 27, 2018.

13 ALJ AGRANOFF: Right. I'm just asking if
14 there is also the companion AA for the February 2,
15 2018 Application, whether or not that has been marked
16 as an exhibit separately.

17 MR. PARRAM: This is not -- it is not
18 specifically called out in -- AA is not the -- the
19 February 2, 2018 Exhibit AA is not a specific exhibit
20 but it is encompassed within Exhibit 1, Your Honor.

21 ALJ AGRANOFF: Okay. Thank you.

22 MR. PARRAM: Does that clarify?

23 ALJ AGRANOFF: Yeah, it does. Thank you.
24 We have a lot of paper, a lot of exhibits, and I just
25 want to make sure --

1 MR. PARRAM: I understand.

2 ALJ AGRANOFF: -- that when everybody has
3 to finally sit down and write these briefs, that
4 they're referring to the right documents.

5 MR. PARRAM: We're working on getting
6 you, the Bench, a comprehensive exhibit book --

7 ALJ AGRANOFF: Thank you.

8 MR. PARRAM: -- right now as we speak.

9 ALJ SANYAL: And, Mr. DeVine, thank you
10 for being patient.

11 - - -

12 CROSS-EXAMINATION

13 By Mr. DeVine:

14 Q. Good morning, sir.

15 A. Good morning.

16 Q. On page 5 of your testimony, you
17 reference three categories of viewer/user groups who
18 you identified for the visual study area, correct?

19 A. Yes.

20 Q. The first group you identified were local
21 residents. Did you speak to any local residents
22 about their views about the project?

23 A. I attended two open houses as part of
24 this project and was able to speak to the public. I
25 displayed my simulations there and explained to them

1 what I was trying to do with those representative
2 simulations, so I did interact with the public on two
3 occasions.

4 There was no real specific interaction
5 regarding, how do I say it, specific questions. It
6 was just an open-house-type setting; so whatever
7 somebody could ask me, they could ask me. I didn't
8 ask them questions.

9 Q. Who hosted the open house that you're
10 referencing?

11 A. Republic Wind.

12 Q. Are you aware there is an organized group
13 that goes by the name of Seneca Anti-Wind?

14 A. Yes.

15 Q. Did you ever attend any of their
16 meetings?

17 A. No.

18 Q. Did you ever speak directly to any
19 members of that organization?

20 A. Yes.

21 Q. And did you take their views into
22 consideration as you prepared your testimony today?

23 A. I take into view the local residents as
24 much as they are in the viewer groups. Specific
25 interactions, I didn't get any, like, specific "You

1 need to look at this, you need to look at that." It
2 was more of a general understanding of where the
3 residents were and how they would be affected.

4 Q. The second category of viewer/user you
5 identify in your testimony is through-travelers/
6 commuters. Did you speak to any through-travelers or
7 commuters?

8 A. Probably less than local residents. I
9 would not know if there were any commuters at the
10 open house specifically, but I imagine probably not.

11 Q. Okay. What about the third category, the
12 tourist or recreational users, did you speak to any
13 of them?

14 A. I did run into a few people when I was
15 out doing my research but nothing was formalized.

16 Q. Did you speak to anybody, during your
17 work on this project, who actively engages in bird
18 watching?

19 A. Not that I know of.

20 Q. Did you speak to anybody who actively
21 utilizes the local park system?

22 A. As I said, when was I out, traveling
23 through the local parks, I did see a few people using
24 them but I did not speak to them in a manner that I
25 was approaching them regarding this project.

1 Q. Okay. What local parks did you visit?

2 A. I would have to look exactly to see, but
 3 I went through the Steyer Preserve as we know for the
 4 Seneca County Parks, the Clinton Park. There was --
 5 let's see here -- the Sandusky Abbott's Bridge Scenic
 6 River Access, the Clyde Community Park, the Sandusky
 7 Wolf Creek Scenic River Access, the Sandusky Izaak
 8 Walton Scenic River Access, East Side Park, Robert L.
 9 Walsh Memorial Park, Roger Young Memorial Park,
 10 Apple-Jack Park, and the Castalia Quarry Reserve, as
 11 well as the Blue Heron Reserve, the Countryside Park.
 12 I have simulations also from the Kibby Preserve and,
 13 as I said, I went to the Steyer Preserve and the
 14 Clinton Preserve.

15 Q. How did you go about determining which
 16 parks you visited as part of your assessment?

17 A. So we do exhaustive research, before I go
 18 out into the field, based on available GIS data and
 19 databases that are out there; so we came up with over
 20 430 resources and put a viewshed analysis to those to
 21 try to narrow down which ones I should visit.

22 Unfortunately, in some of that research,
 23 there are local and community resources that are not
 24 in a database that we can get ahold of, so we
 25 hopefully find those during the field review and I

1 was able to come across and locate the Seneca County
2 Parklands and the Sandusky County Parklands and Erie
3 County Metro Parks over my studies throughout here,
4 so they have been represented and included in this.

5 So, to make that a little clearer, we
6 look at our viewshed analysis and our visually
7 sensitive resource list to find out where we're going
8 during our field review.

9 Q. During the course of your review, did you
10 do an assessment to determine a list of all of the
11 Seneca County Park District parks?

12 A. We did not.

13 Q. Do you know if the Seneca County Park
14 District has a website?

15 A. It does, yes.

16 Q. Did you visit that website?

17 A. I have, yes.

18 Q. Did you -- does that website provide a
19 list?

20 A. It certainly does, yes, and maps, as
21 well, that I used.

22 Q. Okay. Of all of the parks on the Seneca
23 County Park District roster of parks, which park
24 would be closest to the project area?

25 A. From my field review, I was not sure. I

1 have not done exact research into that so I do not
2 know.

3 Q. Wouldn't it be important to know which
4 park is closest to the project area?

5 A. It could be, but we do -- we're not
6 required to go to every single location. We provide
7 a representative view and we provide representative
8 views from within the foreground distance from like
9 landscape similarity zones to parks that would be
10 traveled on there.

11 MR. DeVINE: Permission to approach the
12 witness with an exhibit?

13 ALJ SANYAL: Yes.

14 MR. DeVINE: I forgot to give you one.
15 Too busy giving everybody else a copy.

16 (EXHIBIT MARKED FOR IDENTIFICATION.)

17 Q. (By Mr. DeVine) Sir, I'm showing you
18 what's been marked Seneca County Park District
19 Exhibit No. 2.

20 A. Yes.

21 Q. Okay. And I would represent to you that
22 this is a representation of the Seneca County Park
23 District parks located within Seneca County, Ohio; so
24 if you could assume that's true, could you tell me
25 which park is closest to the project area?

1 MS. SHEELY: Object to foundation.

2 ALJ SANYAL: I agree, so --

3 MR. DeVINE: I don't understand, Your
4 Honor, how -- that's fine. I'll start over.

5 Q. (By Mr. DeVine) Do you know where the
6 project area is for the project you're testifying for
7 here today?

8 A. I work on a visual study area which is a
9 little bit different than the project area. I do
10 know where the project area is and I also am aware of
11 the entire 10-mile visual study area.

12 Q. Which park is closest, on Exhibit 2, to
13 the visual study area?

14 MS. SHEELY: Objection. Same objection.
15 Lack of foundation. He's been asked to -- he's not
16 testified he's ever seen this document before or that
17 it has any accuracy.

18 MR. DeVINE: It's cross-examination. I'm
19 representing it's what it is. He can say it's not
20 true, he can say -- and I asked for leave to call a
21 witness from the Seneca Park District to testify this
22 is true so I can do cross-examination.

23 ALJ SANYAL: I'll give you some brief
24 follow-up if you wish.

25 MS. SHEELY: Okay. I'm sorry, just to

1 clarify. Do you -- you mean to respond?

2 ALJ SANYAL: Yes.

3 MS. SHEELY: Okay. So I guess the
4 objection is that we're about to ask a series of
5 questions that I'll assume the accuracy of this
6 document when he hasn't testified to have any
7 particular knowledge about this document. Of course
8 he can be asked questions about his knowledge of the
9 parks and that sort of thing and obviously the things
10 contained in his assessment, but this document is
11 just a document that hasn't been supported by
12 anything yet.

13 ALJ SANYAL: Mr. Robinson.

14 THE WITNESS: Yes.

15 ALJ SANYAL: Have you seen this map
16 before?

17 THE WITNESS: I have not seen this map
18 before.

19 ALJ SANYAL: But, as part of your work on
20 this project, are you aware of the general areas
21 where the nature preserves are located?

22 THE WITNESS: Yes.

23 ALJ SANYAL: Okay. And does this map
24 comport to that general knowledge? I'll give you
25 some time to look it over.

1 THE WITNESS: It does, yes.

2 ALJ SANYAL: Okay.

3 MS. SHEELY: That resolves my objection.

4 ALJ SANYAL: Mr. DeVine.

5 THE WITNESS: The Bowen Park looks the
6 closest from here.

7 Q. (By Mr. DeVine) Did you ever go to Bowen?

8 A. I did not.

9 Q. From your understanding of the project
10 area, will turbines be visible from Bowen?

11 A. I have not been on site. From my looking
12 at aerials and things and my experience in the field,
13 there would be areas along the trail network that
14 would have visibility.

15 Q. Can you explain to me why you would not
16 go to the park that's closest to the turbine area?

17 A. In our -- as I stated, in our research we
18 only can look at what is available documents, and the
19 research that was done for this, and I'd have to look
20 at where things were exactly picked, chosen from and
21 what GIS databases were used, those parks -- that
22 park did not show up on my list and it's not actually
23 in our visually sensitive resource list at all
24 because it doesn't show up on available GIS
25 databases. So, in my travels through there, I did

1 not recognize that as a park when I went past that
2 land. I did stop at other parks that I did recognize
3 that I did see signage for.

4 I'd also like to bring up that we did --
5 I did visit a lot of the available wildlife
6 management areas, protection areas, and other types
7 of resources that mimic and represent similar types
8 of Seneca park resources like this, that were
9 available on the GIS database, and it did allow me to
10 get representative photos from like landscape
11 similarity zones and distance zones.

12 Q. So you took photos, representative photos
13 from Steyer Nature Preserve?

14 A. I did.

15 Q. And am I understanding correctly that you
16 didn't believe that the turbines would be visible
17 from Steyer except from a parking area?

18 A. We did research into that, yes, we even
19 provided wire frame simulations, I believe from that
20 park, that show that the simulations, the turbines,
21 were blocked by the intervening hedgerows from most
22 of the trail network.

23 Q. And that's important for the use of the
24 Steyer Nature Preserve that the turbines not be
25 readily visible?

1 A. I don't know how to answer that question.

2 Q. You made the determination they weren't
3 visible.

4 A. From our research I believe that I said,
5 as you stated, they had the possibility of being
6 visible from certain areas like the parking lot, and
7 from our research and the provided wire frame
8 simulation it shows there's potential for the
9 hedgerows to block much of the visibility for most of
10 the trail network.

11 Q. Do you have any idea if turbines will be
12 visible at Bowen Nature Preserve if the project is
13 constructed as the Application sits now?

14 A. I have no viewshed analysis or anything
15 like that that can tell me, 100 percent. Like I
16 said, from my field review and from my understanding
17 of the park and from looking at it and its map and
18 the trail network and understanding what landscape
19 zone that is in and the different types of vegetation
20 and open areas associated with it, yes, I do believe
21 there would be potential for visibility of turbines
22 from there.

23 Q. How many turbines would be visible?

24 A. I don't have that research.

25 MR. DeVINE: Permission to approach with

1 Exhibit 1?

2 ALJ SANYAL: Yes, and you may do so
3 freely during your examination of this witness.

4 ALJ AGRANOFF: Exhibit 1 or Exhibit 2?

5 MR. DeVINE: Seneca County Park District
6 1.

7 ALJ AGRANOFF: Okay. The one from
8 yesterday?

9 MR. DeVINE: Yes. Yesterday or Monday.

10 ALJ SANYAL: If Counsel will give me a
11 moment to locate that. Is it this one?

12 MR. DeVINE: Yes.

13 Q. (By Mr. DeVine) Have you had a chance to
14 look at Seneca County Park District Exhibit 1?

15 A. I think I understand what it is showing.

16 Q. Okay. And what do you believe is being
17 depicted on that exhibit?

18 A. It is the Bowen Nature Preserve with
19 lines coming out of it, pointing where the proposed
20 turbines may be.

21 Q. And if I said there were 21 lines, would
22 you agree or disagree with that?

23 MS. SHEELY: Object to foundation. It's
24 a similar objection to the last one. We haven't laid
25 any foundation that he's seen this document or has

1 familiarity with what's contained in it other than
2 trying to interpret it right now.

3 ALJ SANYAL: Mr. DeVine, I believe you
4 can ask some questions, as I did previously, to make
5 this objection go away.

6 Q. (By Mr. DeVine) Does Seneca County Park
7 District 1 represent -- what's represented in Park
8 District 1, sir?

9 MS. SHEELY: Objection. Same issue.

10 A. I answered that question already, I
11 think.

12 Q. Okay. Are you familiar with the contents
13 of Exhibit 1 as it relates to the area depicted?

14 A. I guess so. You know, I have not counted
15 these lines.

16 Q. I'm asking about the area not the lines.

17 A. I'm aware of this area, yes.

18 Q. Okay. And does it fairly depict the
19 area?

20 A. It's an area of the photograph that I
21 assume is of the area, so I would assume that yes,
22 this is an aerial photograph that depicts the area.

23 Q. Okay. And it depicts Bowen Nature
24 Preserve and the area around the nature preserve?

25 A. Yes.

1 MS. SHEELY: He still hasn't said that
2 he's actually ever seen this before, so I guess that
3 was the one remaining issue. For purposes of the
4 record, I don't think that question has been asked if
5 he's ever actually seen the document.

6 Q. Have you seen the document you're holding
7 in your hand?

8 A. Not prior to this hearing.

9 Q. Have you seen it now?

10 A. Yes.

11 Q. Do you believe it fairly and accurately
12 depicts the area of the Bowen Nature Preserve?

13 A. As far as my knowledge, yes.

14 ALJ SANYAL: Does that take care of your
15 objection, Ms. Sheely?

16 MS. SHEELY: Yes.

17 Q. Exhibit 1 has lines to approximately 21
18 turbines.

19 ALJ AGRANOFF: Mr. DeVine, just so the
20 record is clear, there's a lot of Exhibit 1's --

21 MR. DEVINE: Sorry.

22 ALJ AGRANOFF: -- that have been thrown
23 about.

24 Q. Seneca County Park District Exhibit 1 has
25 approximately 21 lines to proposed turbine locations.

1 Do you acknowledge that many of those turbines will
2 be visible from the park district?

3 A. It's hard for me to say, without doing an
4 analysis, how many would actually be visible. From
5 my knowledge of the vegetation on site and from the
6 trail network from doing online research, I would say
7 there's potential for visibility of turbines. A
8 number, I could not tell you.

9 Q. Did you ever go to Bowen?

10 A. No.

11 Q. So you don't have a clue of what the
12 landscape is at Bowen?

13 MS. SHEELY: Objection.

14 A. I do have a clue.

15 Q. Well, how do you know what Bowen consists
16 of?

17 A. Because, during my evaluation of the
18 10-mile study area, we come up with landscape
19 similarity zones that describe the potential areas
20 and their characteristics. This area follows a lot
21 of those characteristics. It also follows a lot of
22 the characteristics of other sites that I visited
23 with the same types of trail networks through open
24 meadows with large vegetation and wooded forest.

25 ALJ SANYAL: Mr. Robinson, before you

1 proceed, just so your counsel can object when she
2 needs to after he asks a questions, give her a moment
3 before you launch into it. So if there's an
4 objection pending, don't answer until we clear it up.

5 MS. SHEELY: Thank you.

6 ALJ SANYAL: Okay.

7 Q. (By Mr. DeVine) On Exhibit AA to the
8 December 26, 2018 Application, do you have that in
9 front of you?

10 A. Yes.

11 Q. If you could flip to page 18.

12 A. I'm there.

13 Q. The last paragraph of page 18 is talking
14 about the Seneca County Park District, correct?

15 ALJ SANYAL: I'm sorry, where are you?

16 MR. DEVINE: Page 18.

17 ALJ SANYAL: Of?

18 MR. DEVINE: Exhibit AA of the
19 December 26, 2018 Application.

20 ALJ SANYAL: Thank you.

21 THE WITNESS: Yes.

22 ALJ SANYAL: I'm there. Thank you.

23 MR. DEVINE: Okay.

24 Q. (By Mr. DeVine) If you could flip to
25 page 19. The first full sentence of 19, states

1 "Scenic quality and viewer sensitivity in these areas
2 are considered to be relatively high."

3 A. Correct.

4 Q. What did you mean by that statement?

5 A. So, often when we talk about viewer
6 groups and we talk about tourists and recreational
7 users, they often have the potential for higher
8 sensitivity to changes in their landscape as to what
9 they're using. It depends on the user and it depends
10 on the trail and the specific area but, in general,
11 throughout projects, recreational users of lands like
12 this have a little bit of a higher sensitivity to
13 change in that landscape.

14 Q. Flipping now to Appendix B of that same
15 exhibit. Are you at Appendix B?

16 A. Yes, I am.

17 Q. Did Bowen Nature Preserve make it --
18 strike that. What is Appendix B?

19 A. Appendix B is our visually sensitive
20 resource viewshed analysis and distance analysis.
21 This comes from our online research and database
22 searching of available information for visually
23 sensitive resources within the 10-mile study area.

24 Q. Did Bowen Nature Preserve make it on
25 Exhibit B?

1 A. As I stated earlier --

2 Q. I'm sorry, Appendix B.

3 A. Yeah, sorry. As I stated earlier, when
4 we do our online database search and our GIS search,
5 often local and county parks do not have available
6 data for that, so no, the available data did not
7 provide that information for us.

8 Q. At the time you did your report, AA, you
9 knew Bowen Nature Preserve existed though, didn't
10 you?

11 A. Yes.

12 Q. Why didn't you add Bowen to Appendix B?

13 A. I would have to look into the databases
14 and understand what the GIS analysis was doing. I
15 assume it was because we did not have correct
16 footprints or a GIS database that had that available
17 information within it.

18 So my field review, as stated in the
19 report, covers that we did know that the Seneca
20 County Park District existed. We just did not have a
21 database for it.

22 Q. On page -- staying on Appendix B, 5 of
23 12.

24 A. Yes.

25 Q. And it runs over into, I believe, 6 of

1 12. You list various recreation sources with a
2 subheading of "Local Parks and Playgrounds"?

3 A. Yes.

4 Q. And, for example, you list Apple-Jack
5 Park as a local park or playground, correct?

6 A. If it is on there, it was listed as that
7 in a GIS database, yes.

8 Q. Okay. And you list a distance from the
9 nearest turbine for Apple-Jack Park as 8.4 miles,
10 correct?

11 A. Correct.

12 Q. But there's no data for Bowen Nature
13 Preserve which is within a proximity much closer than
14 Apple-Jack Park, correct?

15 A. It's not in this list because it was not
16 in our database, correct.

17 ALJ SANYAL: I just want to ask a
18 clarification question. So the reason why, just so I
19 understand this, the data was not in your database
20 was because there was no GIS data available for that
21 particular preserve?

22 THE WITNESS: That's what I would assume.
23 I would have to look and, like I said, discuss with
24 the GIS analyst who actually did it where -- what
25 they looked at that we do have a resource list. It

1 speaks to that, so I'm just guessing that whatever
2 available data was out there did not include that.

3 And this is where, if I can speak to it,
4 why our field review is also important as we did pick
5 up, through field review, there was a Sandusky park
6 system and we did include as much of that as we
7 could.

8 ALJ SANYAL: And because those parks,
9 those other parks in the Seneca County Park District,
10 had the data available?

11 THE WITNESS: They did not have data
12 available. I saw them during my field review and ran
13 into them during my field review.

14 ALJ SANYAL: Okay. Proceed.

15 Q. (By Mr. DeVine) So when you found the
16 Sandusky County Parks and the Seneca County Parks in
17 your field review, that was important information?

18 A. Absolutely.

19 Q. So why would you not go to the park that
20 is closest to a turbine for analysis for your report?

21 MS. SHEELY: Objection. Asked and
22 answered.

23 MR. DEVINE: I don't believe he's
24 answered.

25 ALJ SANYAL: I'm going to overrule it. I

1 can't remember.

2 A. In this particular instance, as I was
3 doing my field review, I came upon Seneca County
4 Parks and the ones that I saw I did go to.

5 When I got back to the office after field
6 review, I did additional research on these parks as
7 we included in our analysis in the written
8 testimony -- I mean in the written part of the
9 analysis that they were visited and they were looked
10 at and we did mention them and we -- we -- because we
11 had not visited that specific park, we included
12 representative simulations from like landscape
13 similarity zones and distances so people would be
14 able to understand the visual impact that the
15 turbines would have on that type of resource.

16 Q. Which park did you visit and analyze
17 that's comparable to Bowen Nature Preserve?

18 A. The Steyer Park. The original -- if we
19 look at the original layout, there were turbines that
20 were much closer to Steyer Park when I did my field
21 review. The layout has since changed from then but
22 that does not change the landscape similarity zone
23 and field review of the existing vegetation in the
24 context of these parks.

25 I also went to, as I stated, wildlife

1 management areas that are also available to the
2 public. They have very similar characteristics based
3 on the landscape and the vegetation and distance from
4 turbines as did the Bowen Preserve.

5 Q. How close did a turbine -- how close was
6 a turbine proposed to be to Steyer when you did your
7 analysis?

8 A. I would have to look back because I do
9 not remember exactly the distance the original ones
10 were, and it's also the same as the simulation
11 provided for Knobby's Creek.

12 During the original evaluation there were
13 turbines that were closer to both of these sites that
14 I did evaluate. And then, when they rearranged some
15 of the turbines, they were moved further from those
16 sites but that does not change the representative
17 simulations that we created from that distance and
18 landscape similarity zone.

19 Q. Were there proposed turbines within a
20 half mile of Steyer?

21 A. I'm not -- I can't answer that. I do
22 believe they were in the foreground distance zone
23 which would be up to a half mile or they were within
24 a mile. Again, I'd have to check exactly where they
25 were.

1 Q. When you say "foreground distance," what
2 do you mean by "foreground distance"?

3 A. We break the study area into distance
4 zones based off of prior methodology that has been
5 around and written about and stated in our resources.
6 They break down into 0 to .5 as the foreground
7 distance zone; .5 to -- let's see here. Let me just
8 look at it again to make sure I'm saying the right
9 thing.

10 Interesting. It appears there is not a
11 section on the distance zones but foreground is up to
12 .5; middle ground is .5 -- I mean to 1.5; and -- see,
13 I'm wrong with this. I don't know why it's not in
14 here. I'm sorry.

15 Q. Well, let me ask you a different
16 question. So what's the -- what's the importance of
17 objects in the foreground in your analysis?

18 A. Objects in the foreground have more
19 impact because you can -- you would get more contrast
20 and you can see them clearer so they have more impact
21 on a user to that area.

22 Q. And then I think you said middle ground
23 is from a half mile to a mile and a half?

24 A. There's -- yes, I believe so, and then
25 background is after that.

1 Q. And what's the -- what's your analysis as
2 it relates to items that are in the middle ground?

3 A. You start getting hedgerows to block
4 things more often because you get more distance to
5 the turbines. In the foreground zone, the turbines
6 tend to be taller than the hedgerows so you see them
7 over the existing wooded stands. In the middle
8 ground you start to have that -- it starts to
9 disappear and the project starts to get chopped off
10 more based off of vegetation.

11 Q. Calling your attention to page 13 of your
12 testimony. Going to line 13, you have a sentence
13 that starts "The Sandusky and Seneca County Park
14 System properties proved to have limited Project
15 visibility, with the majority of open views being
16 available from the parking areas rather than the
17 trail networks."

18 ALJ AGRANOFF: Mr. DeVine, what page are
19 you on?

20 MR. DeVINE: Page 13, line 13.

21 ALJ AGRANOFF: Thank you.

22 Q. That was your testimony?

23 A. Correct.

24 Q. If you could look on the Seneca County
25 Park District Exhibit 1. Hypothetically, I bring in

1 witnesses who identify that the turbine locations, as
2 marked on Seneca County Park Exhibit 1, are the
3 proposed locations for the turbines in this project,
4 is it your opinion, as it relates to Bowen Nature
5 Preserve, that it will have -- that property will
6 have limited project visibility with the majority of
7 open views being available from parking areas other
8 than from trail networks?

9 A. Without having actually fully been on
10 site, it would be hard to say about the trail
11 networks. Obviously most parking areas do have
12 visibility because of the lower vegetation and the
13 availability of seeing more.

14 I would assume, from looking at this,
15 that the grass areas would grow up during the summer
16 and be fairly tall which I experienced in the other
17 parks of similar style to this so, again, I'm not
18 positive as to how many turbines would be visible but
19 certainly, as I've said, there would be turbines
20 visible from this area.

21 Q. So would it be fair to say that somebody
22 who has spent time in Bowen Nature Preserve would be
23 better able to answer my last question than you?

24 A. I'm not sure, without the proper
25 analysis, they would be able to answer that fully as

1 well as I if we were doing the same analysis. Based
2 off of experience in the trails, they might be able
3 to point you to exact areas where the visibility
4 would be greater, but I'm not positive that they
5 would be able to tell me more information than I
6 know, no.

7 Q. But you didn't spend any time analyzing
8 Bowen as it relates to the proposed turbine sites in
9 this project, correct?

10 A. Not specifically, no.

11 Q. So anybody, who has spent time in Bowen,
12 would be able to provide better information related
13 to Bowen than you would.

14 A. Related to Bowen park, yes; related to
15 the project, no.

16 MR. DeVINE: I have no further questions
17 of this witness.

18 ALJ SANYAL: Mr. Van Kley.

19 MR. VAN KLEY: Thank you, Your Honor.

20 ALJ SANYAL: I don't know if your mic is
21 actually on. You might have to share.

22 - - -

23 CROSS-EXAMINATION

24 By Mr. Van Kley:

25 Q. Good morning, Mr. Robinson.

1 A. Good morning.

2 Q. Based on your report submitted in this
3 Application, is it true that there is no mitigation
4 that is feasible to hide turbines from off-site
5 receptors?

6 A. I don't believe I would have said that
7 exactly like that. Are you looking at a quote or?

8 Q. No. I'm just basing it on some
9 statements, general statements in your report that
10 discuss mitigation.

11 A. I would often say that it is challenging
12 to mitigate the entire visual impact of a wind
13 turbine from certain sites, but I would not say it is
14 impossible. It is very site-specific as to what can
15 be done.

16 Q. With respect to this project, what, if
17 any, mitigation measures would be effective?

18 A. I would have to know what site was being
19 considered right now. I have listed other mitigation
20 measures that are taken into consideration on a
21 project scale, but I do not know, like, individual
22 site-wise if there was a resource, that rose to a
23 level that needed to be mitigated, whether that could
24 happen or not on that site.

25 Q. Generally speaking, what types of

1 mitigation measures are available for mitigating the
2 views of turbines?

3 A. We look at what landscape similarity zone
4 they're located in, amount of adjacent resources,
5 distance to those adjacent resources, and visibility
6 from those resources.

7 Q. All right. So those are the factors you
8 use in determining what mitigation may be available?

9 A. It is looked at as part of the process,
10 yes.

11 Q. So specifically what types of mitigation
12 measures are available for a project of this nature?

13 A. As I just said, it's about where the
14 turbines are sited and how many adjacent resources
15 are in those areas. By siting things in certain
16 landscape similarity zones, you take the turbines
17 away from the majority of resources that may be
18 adjacent to it and within a proximity that would
19 create a larger impact.

20 Q. So you're talking about the siting
21 process.

22 A. Correct. Talking about mitigation with
23 wind turbines, as I stated, it really is a general
24 type, a whole project kind of idea as to where things
25 are going and based off of a larger type of area.

Individual mitigation measures would have to be chosen and taken up on an individual basis based on that property, so I do not know, but there is potential for mitigation from things, as discussed, like shadow flicker, with vegetation and with other types of treatment.

Q. Did you provide the Applicant with any advice on locations that could be used for the turbines that would cause less visual impact to off-site receptors?

A. At this point in the project, we have not been asked to provide that information.

Q. How far can a turbine in this project be seen from off site, assuming that there is no intervening obstruction of the view?

A. Based off of weather conditions and atmospheric conditions and things like that, turbines can be viewed up to 30 miles with no obstruction at all. This usually happens out west. The curvature of the earth will come into play when we're talking about these distances if there was no intervening vegetation or topography. We deal with this during offshore projects a lot. Turbines really start to disappear behind the horizon at the 17-mile mark and you start losing the whole turbine at that distance.

1 Q. Do you know whether the turbines in the
2 project area, once they're constructed, could be seen
3 from Lake Erie?

4 A. I have done research up on the shoreline
5 of Lake Erie, and I do not believe that they would be
6 seen from the shoreline of Lake Erie.

7 Q. And why do you believe that?

8 A. Based off of viewshed analysis and field
9 review.

10 Q. Do you know that the tallest turbine
11 model considered for this project currently is
12 602-feet tall?

13 A. Yes.

14 Q. And do you know how tall the mature trees
15 in the project area are?

16 A. From my field review, the majority of the
17 mature stands are in the 50-foot range, give or take.

18 Q. Would you go to page 52 of your report,
19 which I believe is identified as Company Exhibit 1D
20 and then Exhibit AA.

21 A. I'm there.

22 Q. Okay. Do you see a statement on that
23 page concerning the number of turbines that can be
24 seen from nonparticipating homes?

25 A. I'm looking at a page that has a

1 cumulative viewshed result summary on it.

2 Q. Okay. Is there a statement on that page
3 to the effect that the nonparticipating homes, near
4 the project area, can see anywhere between 1 and 45
5 turbines?

6 ALJ SANYAL: Will you please give us a
7 section? These paragraphs are numbered. Just so I
8 can also follow along?

9 Q. Well, let me just ask the question based
10 on your memory. Do you know what the maximum number
11 of turbines are that can be seen by a
12 nonparticipating landowner from that person's home?

13 A. I have the ability to tell you that. I
14 cannot tell you that from the information I have in
15 front of me.

16 Q. Okay. We'll just move on then.

17 Would you go to your testimony, please.
18 Directing you to page 5. I'm going to ask you a
19 question or two about Answer 13. Just tell me when
20 you found it

21 A. I have it.

22 Q. All right. The last sentence of the
23 bullet point labeled "Local Residents" that starts at
24 the third-to-last line of that paragraph. Starting
25 with the word "Residents' sensitivity."

1 A. Yes.

2 Q. Okay. That sentence reads: "Residents'
3 sensitivity to visual quality is variable; however it
4 is assumed that residents will be sensitive to
5 changes in particular views that are important to
6 them." What did you mean by the words "sensitivity"
7 and "sensitive"?

8 A. "Sensitive" and "sensitivity" are terms
9 that, in the visual world, are used to try to help
10 understand the impact that will be felt by that user
11 or that landscape similarity zone.

12 Q. Now, would you go to page 8 of your
13 testimony. I'd like to refer you to Answer 19. The
14 last sentence reads as follows on that page: "The
15 blade tip viewshed analysis indicates that
16 approximately 54.8 percent of the visual study area
17 could potential have views of some portion of a wind
18 turbine." You actually meant "potentially" there,
19 right?

20 A. Apparently, yes.

21 Q. So my question is: With regard to the
22 visual study area, what is the size of that area?

23 A. It's a 10-mile visual study area.

24 Q. Now, do you know what the percentage
25 would be for a 5-mile study area?

1 A. I don't believe it was broken down to
2 that. Let me check.

3 No, I do not believe it was broken into
4 5-mile.

5 Q. Was it broken down into a 1-mile study
6 area?

7 A. No.

8 Q. Broken down in any sized study area other
9 than the 10-mile study area?

10 A. No.

11 Q. Now, go to page 14 of your testimony.
12 Referring you to Answer 22 on page 14, I'd like to
13 look at lines 11 through 16 which state "Based on
14 experience with currently operating wind power
15 projects elsewhere, public reaction to the Project is
16 likely to be generally positive, but highly variable
17 based on proximity to the turbines, the affected
18 landscape, and personal attitude of the viewer
19 regarding wind power."

20 A. I see that.

21 Q. All right. So with regard to the
22 statement in the sentence that it's highly variable
23 based on proximity to the turbines, what's meant by
24 that statement?

25 A. Often residents or activities that are

1 happening closer to the turbines, have a higher
2 impact.

3 Q. That is they dislike it more than people
4 who are further away from the turbines?

5 A. I don't use that term. I say "impact."
6 It's -- it can go either way, but when they're in a
7 close proximity there's a stronger reaction.

8 Q. And what type of reaction or reactions
9 occur?

10 A. Positive and negative. It comes down to,
11 like I said, users in closer proximity will have more
12 of an impact on their relation with the turbines so
13 they will either like them or they will dislike them,
14 but that reaction will be heightened versus -- by
15 somebody at .5 miles versus somebody at 9.5 miles.

16 Q. The negative reaction would be heightened
17 at a shorter distance away from the project?

18 A. The reaction would be; I don't know if
19 it's positive or negative.

20 MR. VAN KLEY: I have no further
21 questions.

22 ALJ SANYAL: Ms. Leppla?

23 MS. LEPPLA: No, Your Honor.

24 ALJ SANYAL: Staff?

25 MS. BAIR: No questions.

1 ALJ SANYAL: Okay. Redirect?

2 MS. SHEELY: Could we take just a moment
3 with the witness?

4 ALJ SANYAL: Why don't we take five
5 minutes. Go off the record.

6 (Recess taken.)

7 ALJ SANYAL: We're now back on the
8 record, and Ms. Sheely has just confirmed she has no
9 redirect.

10 We have a few questions.

11 If you will turn to page 8 of your
12 testimony. So, on line 1, is there a reason why the
13 only turbines that you assumed would be part of the
14 project were those two models?

15 THE WITNESS: When we wrote this
16 actually, Nordex, I believe, had just bought Acciona
17 so it was just a slash.

18 ALJ SANYAL: Okay.

19 THE WITNESS: It's just Nordex now.

20 ALJ SANYAL: Okay.

21 THE WITNESS: So it was one model and
22 that was the tallest blade tip and also highest hub
23 height which for --

24 ALJ SANYAL: At that time.

25 THE WITNESS: At that time, which I

1 believe when this was updated this was what it's
2 supposed to be versus the shadow flicker which uses a
3 larger rotor usually because that's more impactful to
4 the visual. The hub height is more impactful so we
5 go with a higher hub height.

6 ALJ SANYAL: That's helpful.

7 THE WITNESS: So there's a reason why
8 different turbines are used in those different
9 analyses.

10 ALJ SANYAL: Okay.

11 ALJ AGRANOFF: And if I understood your
12 statement previously, you're saying your testimony
13 reflects the most-recent?

14 THE WITNESS: From that date from the
15 submittal. From when we submitted. So we did an
16 update from the January -- I mean from the February
17 submittal to the December one.

18 ALJ SANYAL: Just so we understand, your
19 testimony today is based on the December 2018 update.

20 THE WITNESS: Yes.

21 ALJ SANYAL: Okay.

22 ALJ AGRANOFF: And, to your knowledge,
23 are there other models that are now being considered
24 aside from the ones that are reflected in your
25 testimony?

1 THE WITNESS: No, not that I know of,
2 besides the smaller one which would not affect my
3 analysis because we always go with the taller one for
4 worst-case. So yes, there's a smaller one out there,
5 but I usually only think about the tallest ones.

6 ALJ SANYAL: We have one more question --

7 THE WITNESS: Sure.

8 ALJ SANYAL: -- but we're finding it.

9 Okay. Any questions based on our
10 questions?

11 MR. DeVINE: None from me.

12 MS. BAIR: None.

13 MS. SHEELY: Nothing.

14 ALJ SANYAL: Okay. Well, thank you very
15 much, Mr. Robinson.

16 THE WITNESS: Thank you.

17 MS. SHEELY: Could I ask that Exhibit 21
18 be admitted at this time?

19 ALJ SANYAL: Yes, you may.

20 Any objections to that?

21 Okay. Hearing none, Republic Wind
22 Exhibit 21 is admitted.

23 (EXHIBIT ADMITTED INTO EVIDENCE.)

24 ALJ SANYAL: And then, Mr. DeVine, what
25 are we doing with Seneca County Park District Exhibit

1 No. 2?

2 MR. DeVINE: I'd ask you to hold it with
3 No. 1 until next week.

4 ALJ SANYAL: Okay. We shall hold it.

5 MR. DeVINE: Or maybe the week after,
6 depending on the schedule.

7 ALJ SANYAL: Okay. Let's go off the
8 record briefly.

9 (Discussion off the record.)

10 ALJ SANYAL: Let's get back on the record
11 and you may --

12 MR. PARRAM: Which side?

13 ALJ SANYAL: We're just doing it based on
14 who is taking which witness, so I will be taking
15 Mr. Kerlinger.

16 Mr. Kerlinger, you may proceed and be
17 seated here.

18 (Witness sworn.)

19 ALJ SANYAL: And I'm really enjoying your
20 tie today, sir.

21 THE WITNESS: Thank you.

22 ALJ SANYAL: Ms. Flint, before you do
23 your brief direct, I know Mr. Kerlinger's testimony
24 refers to various studies on pages 4 through 8 and,
25 again, will you let me know where on the docket I can

1 find them so I can follow along? Because I'm sure
2 during cross --

3 MS. FLINT: I'll do my best. I would
4 hope whoever is crossing him can also direct us.

5 ALJ SANYAL: Sure. But do you know
6 generally where those studies are in his testimony?

7 MS. FLINT: I think so. I was kind of
8 flipping through the actual binders.

9 ALJ SANYAL: Okay. Is it in the
10 February -- I mean the December 2018 Updated
11 Application?

12 MS. FLINT: I believe so.

13 ALJ SANYAL: Okay.

14 ALJ AGRANOFF: Also, before we actually
15 begin with the direct, I know that Mr. Van Kley had
16 pointed out previously that there are studies
17 referenced within Mr. Kerlinger's testimony that are
18 not currently in the record. Are we going to address
19 that issue now before he actually testifies?

20 MR. VAN KLEY: I'm planning to mark two
21 of those as exhibits. That will get those two into
22 the record. And the third one I'm not going to have
23 any questions, so I don't plan to introduce that as
24 an exhibit.

25 ALJ SANYAL: Okay.

1 ALJ AGRANOFF: Are there just three?

2 ALJ SANYAL: There's several studies
3 referenced in pages 4 through 8.

4 MR. VAN KLEY: Yeah, I believe all the
5 rest of them are in the record.

6 ALJ SANYAL: Okay.

7 MR. VAN KLEY: As I question the witness
8 about those, I will provide you with the locations of
9 those studies in the record.

10 ALJ SANYAL: Okay. Perfect. Thank you.
11 You may proceed.

12 MS. FLINT: Thank you. Do I need to make
13 an appearance again?

14 ALJ SANYAL: No.

15 MS. FLINT: Okay. Thank you.

16 (EXHIBIT MARKED FOR IDENTIFICATION.)

17 - - -

18 PAUL KERLINGER, Ph.D.

19 being first duly sworn, as prescribed by law, was
20 examined and testified as follows:

21 DIRECT EXAMINATION

22 By Ms. Flint:

23 Q. Could you state your full legal name for
24 the record, sir.

25 A. Paul Kerlinger.

1 Q. Dr. Kerlinger, you have a document in
2 front of you, marked Exhibit 22. If you could take a
3 look at that.

4 A. Yes.

5 Q. What is Exhibit 22?

6 A. This is a copy of my Direct Testimony.

7 Q. Do you have any modifications or
8 corrections to that?

9 A. No.

10 MS. FLINT: Your Honors, I move for the
11 admission of Exhibit 22, pending cross-examination,
12 and I tender Dr. Kerlinger for any cross-examination.

13 ALJ SANYAL: Thank you.

14 Mr. Van Kley.

15 MR. VAN KLEY: Yes, Your Honor.

16 - - -

17 CROSS-EXAMINATION

18 By Mr. Van Kley:

19 Q. Mr. Kerlinger, where do you live?

20 A. I live in Cape May, New Jersey.

21 Q. How long have you lived there?

22 A. 20 years.

23 Q. Where did you live before that?

24 A. New York City for five years.

25 Q. Have you ever lived in Ohio?

1 A. No.

2 Q. Other than your work on the project that
3 we have the hearing on today, have you conducted any
4 other work related to birds in Ohio?

5 A. Yes, I have.

6 Q. Okay. Could you give me a general
7 overview of that work?

8 A. Yes. I worked on two different wind
9 projects in Ohio. One of them was in Logan County.
10 We did pre-construction avian risk assessment for
11 that project. I don't know what the status of it is.
12 And I worked on the LEEDCo Icebreaker project for a
13 number of years starting in 2008, I believe, and I
14 did avian risk assessment for that and other pieces
15 of work, pre-construction work for that.

16 Q. For either of these other two projects,
17 did you personally do any fieldwork related to the
18 bird studies?

19 A. No, I did not.

20 Q. Have you ever done any fieldwork related
21 to bird studies in Ohio?

22 A. No.

23 Q. Other than work-related activities that
24 involve birds, do you watch birds for recreational
25 purposes?

1 A. I do. May I -- I just realized I didn't
2 complete my -- the previous answer. May I do that
3 now?

4 Q. Sure.

5 A. Although I didn't personally do the field
6 studies, I directed field studies at the Logan
7 site -- the Logan County site and some for -- oh,
8 then there was one other project, Green Energy Ohio
9 hired my firm to do a feasibility study and I
10 directed fieldwork for that as well.

11 Q. But you didn't do any field studies
12 yourself in that project?

13 A. No, I did not.

14 Q. So with respect to the question that I
15 had pending, do you watch birds for recreational
16 purposes?

17 A. I do.

18 Q. Okay. And have you ever watched birds in
19 Ohio for recreation?

20 A. No.

21 Q. Are you aware of a natural area, near
22 Lake Erie, named Magee Marsh?

23 A. I'm very familiar with it.

24 Q. How did you become familiar with Magee
25 Marsh?

1 A. I did a study for the U.S. Fish and
2 Wildlife Service that ended up being used by the
3 nonprofit organizations that either own land or
4 control land or do their programs on land in that
5 area from Ottawa National Wildlife Refuge, west
6 several miles, Magee Marsh, and other parts of what
7 is called the Black Swamp.

8 I did an economic study of bird watching
9 in that area, what the impacts were. I did that in
10 1993, '94, and that was used for conservation
11 purposes in that area as well as elsewhere.

12 Q. Can you generally describe the economic
13 impacts of bird watching in that area?

14 A. When I did it there were fewer bird
15 watchers because it was the mid-90s. It's increased
16 since then. I've read about it. It's a
17 multimillion-dollar industry that benefits the local
18 communities as well as the agencies that are doing
19 their activity in that area as well.

20 Q. Are you aware of the reputation that
21 Magee Marsh has nationally with regard to bird
22 watching?

23 A. Yes, I do.

24 Q. Okay. And what is that reputation?

25 A. It's a very good bird-watching place

1 during some seasons of the year.

2 Q. What seasons are those?

3 A. Spring is the most important and other
4 seasons are generally less important, although there
5 is bird migration through that, you know, Erie, Lake
6 Erie Shore area in the fall as well.

7 Q. What is the general pathway that the
8 birds follow during the spring migration in order to
9 get to Magee Marsh?

10 A. The birds that arrive at Magee Marsh are
11 generally part of a broad-front migration from -- a
12 lot of them come across the Gulf of Mexico,
13 Mississippi, all the way to Louisiana and Texas and
14 then they go north, they spread out across the
15 landscape. This is called "broad-front migration."
16 You can read about it in my second book, "How Birds
17 Migrate."

18 As they come north, they're spread across
19 the landscape until they reach the lake or within a
20 mile, maybe two miles of the lake, at which time some
21 of them descend. Others continue to migrate as a
22 broad front over Lake Erie towards Canada. Those
23 that are dropping out at the shoreline tend to
24 congregate in those narrow forested or marshy areas
25 right on the edge of the lake.

1 Q. Is that what makes Magee Marsh such a
2 good area for bird watching?

3 A. I believe that's part of it.

4 Q. What's the rest of it?

5 A. It's the marshy habitats and the forested
6 and marshy habitats that are in that area right there
7 along the coastline.

8 Q. Is Magee Marsh an example of what you
9 would refer to as a stopover for migrants?

10 A. It's a stopover, correct.

11 Q. What is a stopover?

12 A. A stopover is a place where migrants stop
13 over during migration. They descend, they distribute
14 themselves in those local habitats so they can rest
15 and forage safely away from raptors for example, and
16 it's a fairly common phenomenon. One of the reasons
17 I live in Cape May is because it's a great stopover
18 area and it's good bird watching.

19 ALJ AGRANOFF: If I could just seek a
20 clarification. Is Magee Marsh in Ohio?

21 THE WITNESS: Yes.

22 Q. So the birds that stop at Magee Marsh,
23 arrive there, generally speaking, from a southern
24 direction? In other words, they're flying south to
25 Magee Marsh?

1 A. Generally speaking from the south. It
2 could be from the southwest; it could be from the
3 southeast.

4 Q. And you refer to, I think you said the
5 "broad"? What was the term you used?

6 A. It's called broad-front migration.

7 Q. Okay. Are you familiar with where Seneca
8 County, Ohio is relative to Magee Marsh?

9 A. I am.

10 Q. How far is it between Magee Marsh and
11 Seneca County?

12 A. I do not know the exact distance between
13 Magee Marsh and the lakeshore, but I do know it's
14 about 10 miles from the northernmost part of this
15 project area to the southernmost extension of Lake
16 Erie.

17 Q. Okay. And Magee Marsh actually is
18 located on the bank of Lake Erie, correct?

19 A. Yes, it's farther to the west.

20 Q. Okay. So part of or at least some of the
21 birds in this broad-front migration fly over Seneca
22 County?

23 A. All of Seneca County is covered with
24 broad-front migration, as are counties to the east
25 and the west.

1 Q. With respect to the stopover areas, do
2 the migrating birds choose those areas based on the
3 habitat?

4 A. I'm sorry, would you repeat that, please?
5 I missed something.

6 Q. Sure. Yeah.

7 When the migrating birds stop to rest and
8 forage, do they select a particular type of habitat
9 in which to do that stopover?

10 A. They do.

11 Q. Okay. And what kind of habitat do they
12 select?

13 A. It depends on the bird species in
14 question.

15 Q. Okay. So let's take, for example,
16 passerines. First of all, can you give us a
17 definition of what a passerine is?

18 A. Passerine is what's called a taxonomic
19 order of birds. These are called the songbirds;
20 things like the blackpoll warbler or white-throated
21 sparrow are different examples. Small birds in
22 general.

23 Q. Yeah. So with respect to passerines,
24 what kind of habitat do they choose for their
25 stopovers?

1 A. It, again, depends on the species. It's
2 a wide variety of habitat, although the primary
3 habitats are forested or at least brushy habitats.

4 Q. Okay. And Magee Marsh is full of that
5 type of habitat, correct?

6 A. It has some. It's not extensive habitat
7 there though.

8 Q. Is part of the reason why migrating birds
9 stop over at Magee Marsh the fact that it is on the
10 southern bank of Lake Erie?

11 A. Part of the reason they do is, yes, I
12 believe.

13 Q. And why do they -- why does that fact
14 that it's on Lake Erie matter or produce more
15 stopovers by the migrants in Magee Marsh?

16 A. Lake Erie is a water crossing and,
17 depending upon the time of night that birds encounter
18 the lake, they will either cross it if it's early in
19 the evening -- these are all nocturnal migrants I
20 assume you're speaking of -- they encounter the lake
21 and some will drop out especially later in the night,
22 2, 3, 4 in the morning they will drop out.

23 Early in the evening you will get some of
24 them dropping -- I mean -- I'm sorry.

25 If it's early in the evening, birds from

1 the south will continue out over Lake Erie going
2 directly to either Michigan on the other side or all
3 the way to Ontario. So they're reluctant to cross at
4 certain times of day and that's why they drop out in
5 that area. It concentrates those birds right near
6 the shoreline. It's a fairly vertical descent when
7 they do that sort of thing.

8 Q. Do they use Magee Marsh to rest before
9 the rigor of crossing the lake?

10 A. Some do.

11 Q. Okay. I believe that you just stated
12 that at least some of the migrants will drop out
13 vertically to get to Magee Marsh? Is that what you
14 said?

15 A. Yes.

16 Q. What did you mean by that?

17 A. It's a fairly steep descent. This has
18 been monitored in different ways but, in short, birds
19 that want to stop if they encounter the lake, for
20 example, they drop very vertically. I've watched
21 this on the Gulf of Mexico, birds arriving from Gulf
22 of Mexico, they do that sort of thing.

23 Q. Do some of the migrants descend gradually
24 before a stopover?

25 A. On occasion some will.

1 Q. Okay. With respect to stopover habitat,
2 do you know what the relative abundance of suitable
3 stopover habitat exists in the project area for the
4 Republic Wind project?

5 A. I missed the first part. I'm sorry.

6 Q. Yeah.

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

12 A. Yes, I do.

13 Q. And would you explain that, please?

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

21 If you look at the footprint of the area,
22 I believe the environmental assessment said
23 97 percent of the footprint was tilled agricultural;
24 so, in other words, there isn't very much habitat
25 area-wise for those birds, and the forests in that

1 site are very small, quite small.

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

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

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

11 Q. What distance does a migrating bird, a
12 passerine, typically travel between stopovers?

13 A. It varies. Some only 40, 50 miles.
14 Others 3-, 4-, 500 miles. It depends on where they
15 are. If there is an obstacle to migration like the
16 Gulf of Mexico, obviously, because they don't swim
17 very well, Lake Erie is another one, but if the
18 weather is not very good, if the winds aren't good
19 following winds, they'll only fly short distances if
20 they're over land.

21 Q. How far can a migrating bird, while it is
22 flying, see a body of water such as Lake Erie?

23 A. It's an interesting question and I don't
24 know the exact answer to that because there are lots
25 of variables.

1 Q. Okay. Is it possible that a bird passing
2 over the project area or actually approaching the
3 project area can see Lake Erie from that location?

4 A. What location?

5 Q. From just south of the project area.

6 A. I don't know. I don't know the visual
7 capabilities of birds migrating in the dark so I'm
8 sorry, I can't answer that question.

9 Q. Okay. Do you have any idea how many
10 people visit Magee Marsh per year?

11 A. I don't have that number in my head.

12 Q. Do you know that people from all over the
13 United States watch birds at Magee Marsh?

14 MS. FLINT: Objection. One, I'm not sure
15 why we're having all these questions about Magee
16 Marsh. It's obviously not in the project area and
17 Dr. Kerlinger also is not here to testify about
18 economics or how many people visit an area that is
19 not in this project.

20 MR. VAN KLEY: Well, my line of questions
21 so far have been relevant for two purposes. One is
22 to show that the birds flying over the project area
23 use that pathway to get to Magee Marsh which is
24 probative of the fact that they do migrate over the
25 project area.

1 The second reason is that, as the
2 Applicant's Application shows, the economics of the
3 project are a factor in the Board's consideration of
4 this Application, and to the extent that the project
5 may kill birds that otherwise would be enjoyed by the
6 vast population of people who come to Magee Marsh to
7 watch them, that is relevant to the economics of this
8 project.

9 ALJ SANYAL: I'll allow you a brief
10 response.

11 MS. FLINT: I would say, first of all,
12 Dr. Kerlinger has already testified as to migrant
13 birds migrate over the entirety of Seneca County.
14 That's already been established. And again,
15 Dr. Kerlinger is not here to testify about the
16 economics of the project.

17 ALJ SANYAL: So, Mr. Van Kley, I'm going
18 to give you some brief leeway. I'll let you ask some
19 more questions about the Magee Marsh and let you
20 finish with that topic, but we should move on soon.

21 MR. VAN KLEY: Sure.

22 ALJ SANYAL: And as Ms. Flint pointed
23 out, the witness can't answer any questions about
24 economics, so make sure you don't answer any
25 questions about that, and I'm sure she'll have

1 objections if you do.

2 MR. VAN KLEY: Yeah, I was not intending
3 to ask any questions about economics --

4 ALJ SANYAL: Perfect.

5 MR. VAN KLEY: -- other than the one that
6 was pending.

7 ALJ SANYAL: Do you need the question
8 reread, Mr. Kerlinger?

9 THE WITNESS: Yes, please.

10 ALJ SANYAL: Carolyn, if you could please
11 read back the question. Thank you.

12 (Record read.)

13 THE WITNESS: From the study I did, I
14 know that people travel. I don't know if it's all
15 over the United States but they do travel to Magee
16 Marsh and -- yeah, that's it.

17 Q. (By Mr. Van Kley) Have you personally
18 visited the Republic Wind project area?

19 A. No.

20 Q. Have you personally visited the Emerson
21 West project area?

22 A. No.

23 MR. VAN KLEY: Could we get -- I'll visit
24 that topic later.

25 Q. Your report or your testimony in this

1 case lists a number of studies that you have reviewed
2 for the purpose of your testimony, correct?

3 A. Yes.

4 Q. And if you would take out your testimony,
5 I would like to refer you to Answer 7, starting on
6 page 4, and that answer goes through page 8, correct?

7 A. Yes.

8 Q. And Answer 7 contains a list of study
9 reports that you reviewed for purposes of your
10 testimony?

11 A. There are study reports in there, yes.

12 Q. Okay. Did you review any bird study
13 reports relative to the Republic Wind project or the
14 Emerson West project other than those listed in
15 Answer 7 of your testimony?

16 A. No.

17 Q. Are you aware of the existence of any
18 other study reports?

19 A. Are you talking about empirical field
20 study reports? Is that what you're --

21 Q. Yes.

22 A. -- referring to?

23 Q. Yes.

24 A. I don't have any knowledge of others that
25 are directly applicable to the project.

1 Q. Other than the information contained in
2 the reports listed in Answer 7 of your testimony,
3 have you received any information about the birds in
4 or near the Republic Wind project area other than --
5 I better start over. I lost my microphone.

6 ALJ SANYAL: I'll grab you a new battery.

7 ALJ AGRANOFF: Why don't we go off the
8 record for a second.

9 (Off the record.)

10 ALJ SANYAL: Okay. Let's get back on the
11 record.

12 MR. VAN KLEY: All right. I'm going to
13 re-ask my question.

14 Q. (By Mr. Van Kley) Other than the reports
15 listed in Answer 7 of your testimony, have you
16 received any other information, whether it's in
17 writing or verbally, about birds that have been seen
18 in or near the project area for Republic Wind?

19 A. I have not specifically received, but I
20 have looked into the literature of that area and some
21 of the birds that might be there.

22 Q. Okay. And what was that literature?

23 A. Breeding Bird Atlas for Ohio and the
24 breeding bird studies. Actually they were summarized
25 in one of the documents, the breeding bird survey

1 that is. And I looked at North American Birds, it's
2 an online publication out of Cornell Laboratory of
3 Ornithology. I looked on eBird to see what birds,
4 the records of sightings.

5 ALJ AGRANOFF: And were those sources
6 used for the purposes of developing your testimony in
7 this case or was that separate and apart from your
8 testimony?

9 THE WITNESS: It was separate and apart
10 from my testimony. I just wanted to look into some
11 of the bird species to brush up. I hadn't seen some
12 of them in a couple years, that sort of thing. Also
13 to find out if there were records from that area that
14 could help me understand the testimony. I didn't
15 really cite it in here other than the Breeding Bird
16 Atlas but that was already in, I think, at least one
17 of the reports I looked at, maybe two of the reports.

18 Q. (By Mr. Van Kley) Have you received any
19 information concerning the discovery of eagle nests
20 in the Republic Wind project area that are not
21 described in reports listed in Answer 7 of your
22 testimony?

23 A. I received a copy of testimony from a
24 woman whose name I cannot pronounce, Hecht, Hoepf,
25 for this proceeding.

1 Q. Okay. Has Republic Wind provided you
2 with any information about that nest other than
3 Ms. Hoepf's testimony?

4 A. No.

5 Q. Are you aware that Republic Wind sent a
6 consultant to go look at the nest?

7 A. No.

8 Q. Other than the eagle nests described in
9 the reports in Answer 7 of your testimony, are you
10 aware of the presence of any eagle nests located in
11 the Emerson Wind project area?

12 A. I don't believe so. My knowledge is from
13 these reports.

14 Q. When you reviewed the reports that are in
15 Answer 7 of your testimony, did you ask Republic Wind
16 whether it possessed the -- whether it possessed any
17 field notes that may have been prepared by the
18 persons doing the field studies?

19 A. I never requested that.

20 Q. Have you received any such notes?

21 A. No.

22 Q. Do you have any information concerning
23 the expert qualifications of the persons who
24 performed the field surveys that are described in the
25 reports listed in Answer 7 of your testimony?

1 A. I know of the two different companies
2 that provided those reports. I've interacted with
3 people from those companies though not on this
4 project. Yes, I do know something about their
5 credentials.

6 Q. Well, do you know anything about the
7 credentials of the specific individual persons who
8 did the field surveys?

9 A. No.

10 Q. During the spring migration of
11 passerines, are you -- well, let me start over.

12 Are you aware of any instances in which
13 passerines, that are headed north for the spring
14 migration, actually backtrack and fly the opposite
15 direction in order to avoid bad weather?

16 A. I've actually seen footage of radar
17 images of that happening for fall and spring.

18 Q. Okay. And based on the information you
19 have, what distances do those passerines travel in
20 reverse?

21 A. I don't know the total distance.

22 Q. Do you have a range of distances or an
23 estimate of distances?

24 A. I have heard and seen radar that looks
25 like they may do 15 or even maybe 100 miles if the

1 weather is such. They do tend to fly downwind
2 frequently. And if you have a very strong north wind
3 in the spring or south wind in the fall, reverse
4 migration can occur.

5 Q. And during that reverse migration, do the
6 birds then stop over some place to wait out the
7 weather?

8 A. I believe yes.

9 ALJ AGRANOFF: And just so the record is
10 clear, when you say "reverse migration," if you could
11 give some context of what that is intended --

12 THE WITNESS: I'm sorry? My hearing
13 isn't what it was.

14 ALJ AGRANOFF: The reference you made to
15 reverse migration, if you could just define what that
16 is intended to represent.

17 THE WITNESS: Reverse migration?

18 ALJ AGRANOFF: Yes.

19 THE WITNESS: Reverse migration is when
20 birds are going 180 degrees or even 140 degrees
21 almost reverse of the direction that is seasonally
22 appropriate for migration. It doesn't occur that
23 often or they wouldn't get to their destinations.
24 Was that what you wanted?

25 ALJ AGRANOFF: Yes. Thank you.

1 Q. (By Mr. Van Kley) So some bird species
2 migrate during daylight; is that correct?

3 A. Yes.

4 Q. And some migrate at night during the
5 dark?

6 A. Yes.

7 Q. What is the relative percentage of birds
8 that migrate during dark?

9 A. I don't know what the percentage is, but
10 it's a large majority of small birds and even larger
11 birds like waterfowl and shorebirds.

12 Q. How about passerines, what percentage of
13 the passerines migrate during darkness?

14 A. Of the passerines that are migratory,
15 because some aren't, a very large portion migrate at
16 night and many of them also migrate in the daytime.

17 Q. Is it accurate to say that during the
18 peak of nighttime migration, hundreds of millions of
19 birds can pass a given point in endless ways?

20 A. That's a very general question. I'm not
21 sure you've given me enough guidance to answer it.

22 MR. VAN KLEY: Okay. May I approach the
23 witness?

24 ALJ SANYAL: Yes, you may.

25 MR. VAN KLEY: I'm going to mark my next

1 exhibit. Tell me what I'm up to.

2 ALJ SANYAL: I'm sorry, was that a
3 question for me?

4 MR. VAN KLEY: Yeah. What was the next
5 exhibit number? Because you keep better records than
6 I do.

7 ALJ SANYAL: I think this will be 13.
8 Yes.

9 (EXHIBIT MARKED FOR IDENTIFICATION.)

10 Q. (By Mr. Van Kley) All right. I've handed
11 you what's been marked as LR Exhibit 13. Do you
12 recognize this --

13 ALJ SANYAL: Do you have a copy of it?

14 THE WITNESS: No.

15 MR. VAN KLEY: I'm sorry, I forgot the
16 witness. My apologies. I forgot the most-important
17 person.

18 ALJ SANYAL: But I believe you wrote this
19 so perhaps you don't need it at all.

20 MR. VAN KLEY: I'll give you just a
21 moment to look through that.

22 Q. (By Mr. Van Kley) Have you had a chance
23 to look through it?

24 A. Yes.

25 Q. Okay. Exhibit LR 13 consists of excerpts

1 from a book you wrote, entitled "How Birds Migrate,"
2 correct?

3 A. Yes.

4 Q. I'd like to refer you to page 86 in that
5 document which is entitled "By Day or By Night?" And
6 I'm looking at the first paragraph on that page which
7 reads as follows: "After dark, millions upon millions
8 of birds fly quietly through the night skies above
9 our heads. Although some birds move in daylight,
10 they account for only a small proportion of all
11 migrants; the vast majority of birds migrate at
12 night. The latest studies, which use radar to 'see'
13 night migrants, indicate that a peak nighttime can
14 feature hundreds of millions of birds passing a given
15 point, in endless waves."

16 Do you believe that the statement that I
17 just read is accurate?

18 A. It is not entirely accurate. This is
19 a -- certainly millions. I don't know if hundreds of
20 millions pass a given point. This might be for a
21 place like Cape May, New Jersey. I don't think you
22 would get this in -- I wrote this in Cape May. It
23 was Cape May-centric. That is one of the largest
24 bird migration locations in North America or perhaps
25 even the world. This would be true perhaps for Cape

1 May. It may not be true for other places especially
2 where there is broad-front migration.

3 Q. Okay.

4 A. If you live in places like New York City
5 you might get similar migrations because of the
6 lights that attract the birds; huge, huge numbers.

7 Q. Okay. Other than perhaps substituting
8 "millions" for "hundreds of millions" in this
9 paragraph, the rest of the paragraph is still
10 considered to be accurate?

11 A. Yes.

12 Q. Is it true that some of the most common
13 bird species in the passerine group migrate during
14 the daytime?

15 A. Yes, and not necessarily entirely in the
16 daytime.

17 Q. Okay. So, for example, it is common to
18 see flocks of red-winged blackbirds migrate during
19 the daytime?

20 A. They also migrate at night, which we
21 can't see, but they'll also migrate crepuscularly
22 which means in that light area of dawn and dusk.

23 Q. If a person is out in the field looking
24 for birds, that person would be more likely to sight
25 a flock of birds flying in the distance than to see a

1 single bird flying in the distance?

2 A. That is likely.

3 Q. Based on the statement I just read you
4 from your book about studies that use radar to see
5 night migrants, am I correct in assuming that radar
6 can be used for that purpose?

7 A. It can be used for studying birds at
8 night, bats at night, and insects at night. Moths
9 are big migrants.

10 Q. Do any of the studies, that are listed in
11 Answer 7 of your testimony, reveal that any radar
12 studies were done for the project area or for the
13 Emerson West project area?

14 A. No.

15 Q. Do any of the studies, listed in Answer
16 7, reveal that any field surveys were conducted
17 during darkness?

18 A. No.

19 Q. Can you tell me what months of the year
20 the spring migration for passerines occurs in
21 northern Ohio?

22 A. 90 percent of the migration occurs in
23 April and May. You get a little tail into June. You
24 get some small amounts of migration, miniscule
25 compared to what happens in May and the later part of

1 April.

2 Q. How about March, do any species of
3 passerines migrate north in March?

4 A. They do.

5 Q. And what kind of species are those?

6 A. Things like yellow-rumped warblers and
7 sparrows.

8 Q. Does bird migration, whether it's
9 passerines or another type of bird, occur during
10 other times of the year?

11 A. I'm sorry, would you repeat that, please?

12 Q. Sure. I'll break it down a little bit.

13 With respect to birds traveling in a
14 northerly direction during migration, do any of them
15 travel north for that purpose during months other
16 than the ones that you've just identified for
17 passerine northern migration?

18 A. Yes.

19 Q. Okay. What months are those?

20 A. Well, if you're looking at waterfowl, it
21 can be much earlier, as early as January in some
22 cases. It's not all that common but it does occur.
23 Other birds, crows, migrate earlier sometimes. So,
24 night migrants, generally late April through May, the
25 vast majority.

1 Q. Okay. And some birds will migrate from
2 territories further north than Ohio, into Ohio for
3 the winter, correct?

4 A. Yes.

5 Q. That includes some of the owl species for
6 example?

7 A. I believe so, yes.

8 Q. So do any of those species of birds
9 travel further south for the winter than Seneca
10 County?

11 A. Yes.

12 Q. Okay. And during what month or months of
13 the year do those birds return to the north?

14 A. You're talking specifically about owls?

15 Q. Owls or any other species of bird that
16 would stay in Seneca County.

17 A. Owls migrate. I believe they start in
18 March, late March. April is a good month. Then
19 there are fewer of them in May, it tapers down.

20 But if you have other species like
21 white-throated sparrows, they'll migrate earlier and
22 a few other species will migrate earlier than
23 April 15, but the main bang for them is usually in
24 April. The most you'll see is in the month of April
25 right into May for those birds, as well, even though

1 they're going much farther north.

2 Q. Okay. And then during other months of
3 the year, Seneca County would experience birds flying
4 in a southerly direction through Seneca County?

5 A. Yes, just like the rest of Ohio.

6 Q. Yeah. And it looks like, based on your
7 book, you think that the term "fall migration" might
8 not be an entirely accurate term to describe that
9 movement of birds?

10 A. I'm sorry, I don't know what you're
11 referring to. I lost something there, my apologies.

12 Q. No problem.

13 Do you refer to the southerly migration
14 of birds, during the fall, as a "fall migration"? Is
15 that a correct term?

16 A. It's commonly called "fall migration,"
17 yes.

18 Q. Okay. During what months of the year
19 does fall migration of bird species occur?

20 A. Fall migration starts in July. Birds
21 heading south, different species, different, you
22 know, amounts right through August, September,
23 October, November, December, depending upon the
24 species.

25 Q. Okay. So based on all of your answers so

1 far, is it accurate to say there is some migration of
2 bird species occurring during every month of the
3 year?

4 A. Sometimes it's minute during some of
5 those months but yes, you can detect movements in
6 virtually every month of the year, going in one
7 direction or the other.

8 Q. During what months of the year would you
9 characterize the amount of migration as minute?

10 A. Beginning of July, end of June, December,
11 January into February maybe.

12 Q. Okay.

13 A. Compared to the overall migrations.

14 Q. I don't believe your answer was quite
15 clear. Are you saying from June through December, or
16 are you saying that during December and during June
17 the amount of migration is minute?

18 A. End of June into early July it's low,
19 minute in some, when you compare it to the vast
20 numbers of birds that migrate from late August
21 through early October to mid-October even. Depending
22 on your latitude of course. If you're farther north,
23 it's a little bit different.

24 But yeah, the main bang for fall would be
25 in that period. It would be minute in late June,

1 early July. And then in December again, late
2 December, things really taper off heavily into
3 January even into February.

4 Q. So between early July and late December,
5 the amount of migration occurring is significant?

6 A. Which months were significant again?

7 Q. From mid, I guess it would be mid-July
8 through mid-December?

9 A. No. It builds. It's not really common.
10 Only a couple species of warblers, for example,
11 three, four, five, six species of warblers out of the
12 30 are going to be seen and the numbers are going to
13 be relatively small in late July. Then it starts to
14 build through August and reaches a crescendo in
15 September generally into early October and then a
16 different suite of species comes in and then it
17 tapers off.

18 Q. When does it taper off?

19 A. Depending on the species, early October
20 to early November.

21 Q. At what altitude do migrating birds fly?

22 A. What type of birds?

23 Q. I'm just speaking generally. Can you
24 give me a range of altitudes at which migrating birds
25 fly during migration?

1 A. I'm reluctant to give that because you're
2 not being specific about what types of birds, what
3 time of day, what type of habitat.

4 Q. Okay. Well, maybe we can clarify things
5 by going back to your book excerpts which have been
6 labeled LR 13. Go to 165, the page that is numbered
7 165. Tell me when you've found that page.

8 A. I'm there.

9 Q. Okay. And I'd like to direct your
10 attention to the second paragraph on that page.

11 A. Yes.

12 Q. And I'll read the text of that that I
13 would like to ask you about where it says "There is
14 no simple answer to the question of how high birds
15 migrate. Most songbirds choose altitudes of
16 2,000 feet or less. But, for birds overall, 10 feet
17 (3 meters), 1,000 feet (300 meters), 10,000 feet,
18 (3,000 meters): all are correct, at least for some
19 birds, some of the time." Do you agree with that
20 statement today?

21 A. Yes, I do.

22 Q. And then at the end of that paragraph
23 there's a sentence that states as follows: "These
24 extremes within single species illustrate how
25 variable the height of migratory flight can be and

1 how birds change their behavior according to weather
2 and topography and in special situations." Do you
3 agree with that statement today?

4 A. Pretty much, yes.

5 Q. Okay. Now go to page 166 in
6 LR Exhibit 13, and at the end of the first partial
7 paragraph there's a sentence that says "Songbirds fly
8 lower, on average, than most ducks and shorebirds."
9 Do you see that sentence?

10 A. I do. I'm just reading the sentences
11 before it to make sure it's in context.

12 Q. Sure.

13 A. The sentence before that, did you read
14 the "Within minutes, birds using powered flight can
15 climb or descend to whatever level"?

16 Q. I did not read that one, but you can read
17 it if you'd like to.

18 A. They "can climb or descend to whatever
19 level of the atmosphere promotes the most efficient,
20 safe, and rapid flight - anywhere from one foot to
21 several thousand feet above the ground or water."
22 Okay?

23 Q. Uh-huh, all right. So in that context,
24 do you agree that songbirds fly lower on average than
25 most ducks and shorebirds?

1 A. Depends on time of day and what they're
2 doing --

3 Q. Sometimes --

4 A. -- but I generally agree, during the main
5 bang of flight, they are.

6 Q. Okay. Going to the middle of that
7 page 166 of LR 13 and you'll see a table there.

8 A. I see the figure, yes.

9 Q. Oh, figure? Okay. All right. So
10 explain to us how to read this figure.

11 A. Okay. Let's look at songbirds. The far
12 left bar, notice how it tapers up to the middle, very
13 thin line at the bottom. This is over water, by the
14 way. Do you have that?

15 Q. Yes.

16 A. That bar says very few migrants are below
17 1,000 feet over water in the daytime for songbirds.
18 They prefer to fly between 1,000 and 5,000 feet above
19 the water in daytime and then it tapers off after
20 that to smaller numbers up to 8,000 or even more
21 feet. Is that what you were looking for, sir?

22 Q. Yes.

23 So what does your figure show with regard
24 to the altitude that songbirds fly during the daytime
25 over land?

1 A. It shows that very few that are actively
2 migrating are below a couple hundred feet above the
3 ground. Most of the daytime songbird migrants over
4 land are below 1,000 feet and then it tapers down to
5 very little above 1,000 feet to 2,000 feet.

6 And for night migrants it shows that very
7 few are below about 400 feet, then it starts to be
8 more of them up to about 2,000 feet, that's where
9 that band, that altitudinal distribution between
10 about 4- or 500 feet and 2,000 feet, there's most of
11 those birds and then it tapers off above that.

12 Q. Okay. What does it show with regard to
13 the altitude that shorebirds fly over land at night?

14 A. It shows that shorebirds fly over land
15 from about 4- or 500 feet up to 3,500 feet higher
16 than songbirds.

17 Q. What does it show --

18 A. That's at night. They fly higher in the
19 daytime.

20 Q. What altitudes do they fly at during the
21 daytime?

22 A. They don't get generally below, during
23 migration, below about 800 or 900 feet and there's a
24 good number well up to 7,000 feet, 6,000 feet.

25 Remember these are generalities. I mean

1 this was a heuristic device to try to educate the
2 reader as to where birds are in the night or the
3 daytime sky when they're migrating.

4 Q. Okay. What about waterfowl?

5 A. Waterfowl over water --

6 Q. Over water.

7 A. -- during the day for water birds, quite
8 low. Below a thousand feet generally. Over land,
9 mostly fly higher especially at night, day or night,
10 they go upwards to 4 or 5,000 feet and they taper off
11 above that altitude.

12 Q. And what about soaring birds?

13 A. Soaring birds down to perhaps around
14 300 feet, maybe even less, and they average out at
15 about 21-, 2,200 feet. There's more and more of them
16 as you get higher up to about that height and then it
17 tapers down. Once they're over 4,000 feet, there are
18 fewer and fewer of them.

19 And on ridges, they're much lower. These
20 are ridges like in the eastern United States along
21 the Appalachians or even some of the western states
22 along the Rockies, they'll fly fairly low.

23 Q. What are the soaring birds that are
24 referred to in this figure?

25 A. Eagles, ospreys, hawks, also things like

1 gulls, but mostly for this one it's referring to
2 hawks.

3 Q. And the figure provides the altitudes for
4 thermals for soaring birds, correct?

5 A. Yes, one of the two bars is thermals and
6 the text actually explains the other bar. It's
7 barographic uplift. In other words, wind deflected
8 off ridges or hills.

9 Q. Are there thermals that are used by
10 soaring birds in Seneca County?

11 A. There are thermals everywhere. Over
12 Columbus, today, you'll get thermals.

13 Q. What is a thermal?

14 A. A thermal is a column or a bubble of air
15 that rises because of the differential temperature
16 and differential pressure. You get a warming of
17 asphalt parking lot for example, you'll get an
18 updraft of air there and gulls will soar in that, but
19 you can find thermals anywhere over the landscape.

20 Q. When the soaring birds are not using the
21 thermals to fly, then at what altitudes do they fly?

22 A. They frequently will sit in trees if
23 there are no thermals to use. It's just too
24 expensive physiologically to flap.

25 Q. What if they're just flying from location

1 to location?

2 A. Well, they will use thermals or they will
3 use flapping flight.

4 Q. And if they're using flapping flight, at
5 what altitude would they fly?

6 A. It depends on what they're trying to do
7 and what species is involved.

8 Q. So, general speaking, at what altitude do
9 they fly when they're flapping their wings?

10 A. Well, they have to flap to take off, but
11 each species is different in how far or how high they
12 engage in that type of flight, and the habitat is
13 important as well.

14 Q. Is the flapping flight of soaring birds
15 generally under 600 feet in altitude?

16 A. Much of it is, although you'll see birds,
17 at 1,000 feet, pump their wings once in a while or in
18 bursts.

19 Q. With regard to the figure on page 166
20 that we've been discussing, do you still believe that
21 this information is accurate today?

22 A. I think it's relatively accurate, yes.
23 It's -- remember this is a heuristic device. It's
24 not meant to reflect, to within 95-percent confidence
25 intervals, all the heights. This is not a textbook

1 in other words. This is not an empirical study.
 2 This is a generalization, trying to help people
 3 understand approximately what altitudes, under what
 4 conditions, and this chapter goes on to discuss some
 5 of that.

6 Q. If radar is being used to monitor flying
 7 birds at night, does that monitor show the altitudes
 8 at which the birds are flying?

9 A. It depends on the type of radar and how
 10 you're using it.

11 Q. Okay. So there are some types of radar
 12 that can identify the altitudes of the migrating bird
 13 at night?

14 A. If they can discern the difference
 15 between the birds, bats, and moths, yes. If they can
 16 also get the right atmospheric conditions to be able
 17 to actually see them clearly. It depends on the type
 18 of radar as well.

19 Q. Are you familiar with the term "point
 20 count" as used to survey birds?

21 A. Yes.

22 Q. Could you describe or define that term?

23 A. Point count is a location on the ground
 24 you go to and you look for birds and you count or
 25 measure the behaviors of birds. You can use devices

1 or you can just simply use your eye to approximate,
2 and point counts are generally restricted to some
3 diameter depending upon what type of information
4 you're looking for for what types of birds.

5 Q. And those point counts are done during
6 daylight hours?

7 A. Not necessarily entirely. They're done
8 from dawn sometimes where you have twilight or even
9 before dawn where you can have twilight conditions.
10 I've used that method to publish on certain types of
11 flight.

12 Q. Okay. Are they ever used during dark
13 conditions other than the conditions you see at dawn?

14 A. No, not generally. At least not for
15 counting.

16 Q. So if a point-count method is used to
17 look for birds in a particular area, would the
18 observer look for both flying birds and birds that
19 are on the ground or in vegetation?

20 A. It depends on the purpose of the study.

21 Q. But the point counts cannot be used to
22 identify the birds that are flying over a particular
23 area at night if those point counts are being
24 conducted during daytime hours, right?

25 MS. FLINT: Objection. I suppose if you

1 can understand the question but we need some clarity
2 on the question. It was extremely confusing to me.

3 ALJ SANYAL: Are you able to rephrase?

4 MR. VAN KLEY: Sure.

5 Q. (By Mr. Van Kley) If an observer is using
6 a point count during daylight hours to find birds in
7 a specific area, those point counts would not
8 identify the birds that had flown through the same
9 area during dark hours the night before, correct?

10 A. Actually, we do that and we do that for
11 what's called morning flight because many night
12 migrants continue flight after dawn. I've published
13 on this in Cape May and elsewhere. These are night
14 nocturnal migrants that land in the night and then
15 take off again at dawn or just before dawn and fly
16 until 10:00 a.m. The passerine migration studies
17 that were done for Republic used that methodology
18 because it reflects what was migrating the previous
19 night.

20 Q. And that methodology would count the
21 birds that actually stopped over in the area that's
22 being counted, right?

23 A. Well, the birds that were actually flying
24 are not stopping over at that site, but the birds
25 that you can count in the trees are likely to be the

1 same ones that were flying the previous night and
2 arrived the previous night or the night before that,
3 and that's what the purpose of those passerine
4 migration studies was, because it's an index of
5 what's going to be going over a site, for example,
6 and using the site to rest and forage.

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

11 A. Yes.

12 Q. Let's take a look at some of the studies
13 you reviewed for purposes of your testimony. I think
14 we'll start with the studies related to passerine
15 migration.

16 So the first study I would like to look
17 at would be listed on page 5 of your testimony and
18 it's the first report listed on that page which is
19 entitled "Results of the passerine migration survey,
20 Republic Wind Farm, Seneca and Sandusky Counties
21 Ohio. December 2011," by BHE Environmental, Inc.

22 Now, in front of you should be a whole
23 bunch of binders that contain the Application in this
24 case. You can find this particular report in
25 Exhibit J of the Application of December 26, 2018,

1 starting at the twenty-fifth page of part 7 of 33,
2 for those of you who are trying to access this
3 online.

4 ALJ SANYAL: Thank you. That was very
5 helpful.

6 MR. VAN KLEY: You're welcome.

7 MR. PARRAM: Exhibit N?

8 MR. VAN KLEY: It would be Exhibit J,
9 part 7 of 33. Although his copy probably does not
10 have dividers for the different parts.

11 Have you found the report?

12 MR. PARRAM: Is that for the
13 Environmental Assessment Report?

14 ALJ SANYAL: The page I'm on starts with
15 Summer Breeding Bird Survey. It has a ton of
16 pictures. Am I looking at the right part,
17 Mr. Van Kley?

18 MR. VAN KLEY: It doesn't sound like it.
19 Let me just pull out a copy of it to show you.

20 ALJ AGRANOFF: Why don't we go off the
21 record.

22 (Off the record.)

23 ALJ SANYAL: Let's get back on the
24 record. I think we've all found the document we're
25 looking for, so you may proceed, Mr. Van Kley, when

1 you're ready.

2 MR. VAN KLEY: All right. I'm ready.

3 Q. (By Mr. Van Kley) Is this one of the
4 reports that you reviewed for your testimony?

5 A. Yes.

6 Q. I'd like to refer you to the Executive
7 Summary of that report, which you'll find on page 1.

8 A. Yes.

9 Q. Now, this is a study that was done on the
10 Republic Wind project area, correct?

11 A. Yes.

12 Q. And this study was performed for purposes
13 of evaluating migration of passerines, right?

14 A. Correct.

15 Q. And the study period was from April 4
16 through May 30, in the spring, correct?

17 A. Yes.

18 Q. And from -- from August 18 through
19 November 18, 2011, during the fall, right?

20 A. Correct.

21 Q. Further down in that page, I'd like to
22 direct you to the last paragraph of that page, the
23 second sentence, which reads as follows: "Due to the
24 limited size of woodlots, wetlands, open water, and
25 potential stopover sites, and due to an availability

1 of similar habitat in northwestern Ohio, the Project
2 Area does not represent a unique resource for large
3 numbers of passerines during migration." Do you see
4 that sentence?

5 A. Yes.

6 Q. Do you agree with that sentence?

7 A. I do.

8 Q. Okay. Let me ask you a few questions
9 about the meaning of that sentence. First of all,
10 that sentence says that there are limited potential
11 stopover sites in the project area, right?

12 A. Yes.

13 Q. In other words --

14 A. Actually it says due to the limited size
15 of woodlots, and due to an availability of similar
16 habitat in northwestern Ohio.

17 Q. Okay. I see how you're reading that. So
18 it's saying that the potential stopover sites are
19 limited in size; is that how you're reading that
20 sentence?

21 A. Yes.

22 Q. Okay. And because the potential stopover
23 sites, and open water, wetlands, and woodlots are
24 limited in size, that means that only a limited
25 number of migrant passerines are going to stop in the

1 project area during migration, correct?

2 A. That is correct.

3 Q. And where the sentence refers to "an
4 availability of similar habitat in northwestern
5 Ohio," it is referring to Magee Marsh and other
6 natural areas near Lake Erie?

7 A. That's a very, very small percentage of
8 that northwestern Ohio area. In fact, I would say
9 it's probably less than 1 percent is the Magee Marsh.
10 This, to me, is referring to other agricultural
11 habitats in northwest Ohio with these very small
12 patches of forest. Also there's no lake.

13 Q. Oh, okay, I see how you're reading that.
14 You're reading it to say that other habitat in
15 northwest Ohio is similar to that in the project
16 area; is that correct?

17 A. That's what the sentence says.

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

21 A. That and the fact that cultivated fields,
22 tilled fields occupy a vast majority of that project
23 site, suggests that they won't be -- there won't be
24 large numbers of passerines. Passerines don't use
25 corn fields or soybean fields; there's nothing there

1 for them really.

2 Q. Would you go to page 2 of this document.
3 I'd like to refer you to the third paragraph of the
4 report. The first sentence states "Passerines appear
5 to be especially vulnerable to collision with wind
6 turbines, and in one synthesis, were found to
7 represent 74 percent of all fatalities recorded in
8 existing data sets (Strickland 2008.)" Do you agree
9 with that sentence?

10 A. There's two ways to look at this
11 sentence. The first is, when you say "especially
12 vulnerable," that could mean that the largest numbers
13 of birds killed by wind turbines are these passerines
14 but it doesn't tell me anything about the absolute
15 numbers. And also you have to realize that those
16 birds are more numerous than the other birds. So,
17 "especially vulnerable," I agree with this sentence
18 kind of in general but it's not very specific,
19 telling me what I need to know.

20 Q. Now, there are many species of passerines
21 that fly through northern Ohio, correct?

22 A. Yes.

23 Q. And many of those species have more
24 limited populations than some of the more-common
25 species like the red-winged blackbird, correct?

1 A. Yes.

2 Q. Moving down page 2 to Section 2.1.

3 A. Yes.

4 Q. It states there that point counts were
5 conducted at 11 points in the project area?

6 A. Yes.

7 Q. Would you go to Figure 1 of this report.
8 That's a map showing the Republic Wind project area?

9 ALJ SANYAL: Where is Figure 1?

10 MR. VAN KLEY: It would be after page --
11 the figures start after page 9. Then there's a title
12 page that simply states "Figure."

13 ALJ SANYAL: Thank you. I've located it.

14 MR. VAN KLEY: And the next page would be
15 Figure 1.

16 Q. (By Mr. Van Kley) So this Figure 1 shows
17 the project area for the Republic Wind project as it
18 was configured in 2011 when this report was written,
19 correct?

20 A. I believe so.

21 Q. Are you familiar with the location of the
22 project area under its current configuration?

23 A. Yes.

24 Q. Okay. The project area shown in Figure 1
25 of this report is different than the current project

1 area footprint, correct?

2 A. It appears to be.

3 Q. Do you know how many of the point count
4 locations in this report are located outside of the
5 current footprint?

6 A. No.

7 MR. VAN KLEY: Okay. I would like to
8 move to the next document. Would you like to take a
9 lunch break at this time?

10 ALJ SANYAL: Let's go off the record.

11 (Discussion off the record.)

12 (At 11:58 a.m. a lunch recess was taken
13 until 1:00 p.m.)

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1 Wednesday Afternoon Session,
2 November 6, 2019.

3 - - -

4 ALJ SANYAL: Let's get back on the
5 record.

6 Mr. Van Kley, if you could just identify
7 the document we're looking at for the record.

8 MR. VAN KLEY: Yes, Your Honor. The next
9 document that we're going to look at is Exhibit K to
10 the Amended Application of December 26, 2018, and it
11 is the report that is the first listed report in
12 Answer 7 of the witness's testimony. It is the
13 Diurnal Bird/Raptor Migration Survey for Republic
14 Wind Farm, dated December 2011, and prepared by BHE.

15 - - -

16 PAUL KERLINGER, Ph.D.
17 being previously duly sworn, as prescribed by law,
18 was examined and further testified as follows:

19 CROSS EXAMINATION (Continued)

20 By Mr. Van Kley:

21 Q. Mr. Kerlinger, are you familiar with this
22 document?

23 A. Yes, I am.

24 Q. It's one of the reports that you studied
25 for purposes of your testimony, correct?

1 A. Yes.

2 Q. And this is a migration survey?

3 A. Yes, it is.

4 Q. Okay. And it was conducted in 2011; is
5 that correct?

6 A. Correct.

7 Q. If you would go to page 2 of the report
8 under Section 2.1, labeled "Diurnal Bird/Raptor
9 Migration Survey." Do you see in the paragraph,
10 underneath that title, the days of the survey?

11 A. That was Section 2.1 under Methods?

12 Q. Yes. Go about two-thirds of the way down
13 in the paragraph.

14 A. "Due to species-specific differences" is
15 that where you're talking about?

16 Q. Yes, sir.

17 A. Okay.

18 Q. Now, according to that sentence there
19 were 20 days of surveys conducted from March 17
20 through April 30, and 22 days of surveys completed
21 from September 4 through October 28, 2011, correct?

22 A. Yes.

23 Q. Is there a difference in the scope of
24 this migration survey compared to the scope of the
25 passerine migration survey that we discussed

1 previously today?

2 A. I'd have to go back and look, but I
3 believe -- why don't you let me look for a second.

4 Q. Sure.

5 A. The other one was Exhibit N, passerine
6 migration. I have it.

7 Q. Okay.

8 A. There are differences.

9 Q. Okay. What are the differences?

10 A. First of all, the passerine migration
11 survey captured morning flight of passerines. It
12 started at dawn and went until about 10 a.m. This
13 study went from 9 in the morning until 4 in the
14 afternoon.

15 Q. Are there any other differences in scope?

16 A. There may be. I'd have to look more.

17 Q. Aren't the birds, that were surveyed in
18 Exhibit K, broader in nature than the birds that were
19 surveyed in Exhibit N. Maybe to help you out --

20 A. I don't -- when you say "broader," do you
21 mean species-wise?

22 Q. Yes.

23 A. Not really. There are probably more
24 passerine migrant numbers, in fact overall numbers
25 and numbers of species than there are diurnal and

1 raptor species, you know, out there in the world.

2 Q. Well, in Exhibit N, that study evaluated
3 the migrating passerines, correct?

4 A. Yes.

5 Q. Okay. And Exhibit K looks at not only
6 passerines but raptors and other types of categories
7 of birds as well, right?

8 A. Yes.

9 Q. Okay. So does that explain why the
10 report, labeled as Exhibit K, was performed?

11 A. Would you repeat that, please?

12 Q. Yeah. Is the difference in the scope of
13 the species evaluated the only explanation for the
14 reason why the study in Exhibit K was performed?

15 A. I'm not sure I understand the question.

16 Q. All right. Well, I'll try again.

17 Why was the study in Exhibit K performed
18 since Republic Wind had already done the study that
19 is labeled Exhibit N?

20 A. Because they were trying to look for
21 different types of birds and that's why I mentioned
22 the 9 to 4 for raptors, that's when they migrate
23 most, and other diurnal birds will migrate in that
24 same period.

25 But in N, these were passerines. They

1 were looking for passerines engaged in morning flight
2 and making stopovers and that's far better to do
3 early in the morning from dawn until 10.

4 Q. You state, in your testimony, the methods
5 used to conduct the study in Exhibit K followed the
6 Ohio Department of Natural Resources' 2009 guidance
7 document. Is there a protocol in that document that
8 sets a standard or sets a goal with respect to how
9 many point count locations should be used?

10 A. I believe there is.

11 Q. Okay. Do you know what that is?

12 A. I have to look at that but I think it
13 might be -- if I'm not mistaken it's two times the
14 numbers of turbines at a site, but you also have to
15 look at the first page of ODNR's guidance document
16 from 2009 to look to see when they talk about the
17 flexibility and they're allowed to change things and
18 that's how this sample size is different. They're
19 allowed -- they speak with the Applicant and arrive
20 at a study plan that's specific to that site and it's
21 best for that site. That's why there is a slight
22 difference there.

23 Q. So how many points -- point-count sites
24 were conducted in the study that's in Exhibit K?

25 A. Oh, I'm sorry, I got this backwards. It

1 was the passerine migrant one, that I was talking
2 about before, the numbers. This has only three.

3 Q. Okay. Let me make sure the record is
4 clear on what you just said. With respect to the
5 passerine migration survey, the ODNR 2009 guidance
6 states that there should be two monitoring sites
7 for -- for each turbine location, for the number of
8 turbine locations?

9 A. I may have mixed that up. I'd like to go
10 back and look at the original ODNR document because I
11 just don't recall.

12 Q. Okay. With respect to the Diurnal
13 Bird/Raptor Migration Survey, does the ODNR 2009
14 guidance provide for the number of monitoring sites
15 that will be used in such a study?

16 A. I'd have to go back and look at the
17 guidance document.

18 Q. Okay. We're going to get that for you
19 here --

20 A. Thank you.

21 Q. -- through the wonder of the internet
22 shortly. As we're looking that up, I'll continue
23 with my questions.

24 MR. VAN KLEY: May I approach the
25 witness?

1 ALJ SANYAL: Yes, you may, but make sure
2 you show Counsel what you're looking at, and maybe if
3 we can pull it up too.

4 MR. DeVINE: It's my iPad he pulled it up
5 on.

6 ALJ SANYAL: You had it?

7 MR. DeVINE: No, I just looked it up real
8 quick.

9 ALJ SANYAL: Okay. What did you look up?

10 MR. DeVINE: 2009 ODNR bird guidance.

11 MR. VAN KLEY: It's entitled "On-Shore
12 Bird and Bat Pre- and Post-Construction Monitoring
13 Protocol for Commercial Wind Energy Facilities In
14 Ohio."

15 MS. FLINT: May 4, 2009.

16 MR. VAN KLEY: It has a May 4, 2009 date.

17 MR. DeVINE: I'm going to object if he
18 tries to enter my iPad into evidence.

19 ALJ SANYAL: Objection is noted.

20 Has everyone pulled up this document?

21 MR. PARRAM: Can I have one more second,
22 Your Honor?

23 ALJ SANYAL: Sure.

24 MR. PARRAM: We're there. Thank you.

25 ALJ SANYAL: Okay.

1 THE WITNESS: Would you like me to read
2 this?

3 ALJ SANYAL: I'm not sure.

4 MR. VAN KLEY: I'll ask you some
5 questions about it.

6 ALJ SANYAL: Why don't you look at it and
7 make sure you know what the document is.

8 THE WITNESS: Yes.

9 Q. (By Mr. Van Kley) Okay. Do you have in
10 front of you the 2009 ODNR guidance that we've been
11 talking about?

12 A. Yes.

13 Q. Okay. With respect to passerine
14 migration surveys, does this document refresh your
15 memory as to whether the guidance provides for the
16 number of monitoring sites that are recommended?

17 A. The guidance document reads: "The number
18 of sample points will vary with the size and
19 configuration of the proposed facility."

20 Q. Where are you reading from in the
21 guidance document? Can you give us a paragraph?

22 A. I'm reading page 5. 2.2 is the paragraph
23 "Diurnal bird/raptor migration."

24 Q. Okay. So you're reading the provision
25 for the diurnal bird/raptor migration survey, right?

1 A. Yes.

2 Q. Okay. Because I had asked you about
3 passerine migration, so why don't we go there next.
4 Is there a recommendation with respect to the number
5 of monitoring sites for passerine migration surveys?

6 A. One point-count location should be
7 established for every 100 hectares of combined
8 forest, shrub, and wooded wetland; however if the
9 site would require less than 5 survey points, the
10 ODNR will consider eliminating this survey
11 requirement after a field review of habitat quality.

12 ALJ SANYAL: I'm sorry, which page of
13 this document are you reading this from?

14 THE WITNESS: I'm sorry. That's the
15 bottom of page 4 where it says "Passerine migration."

16 ALJ SANYAL: Yeah, I don't think I'm
17 looking at the same document because --

18 THE WITNESS: There is another portion
19 farther down.

20 ALJ SANYAL: Will you come up? Will
21 someone come up here and point me to this document?

22 (Off the record.)

23 ALJ AGRANOFF: Let's get back on the
24 record.

25 ALJ SANYAL: Thank you, Ms. Flint.

1 Q. (By Mr. Van Kley) All right. So with
2 respect to the diurnal bird/raptor migration survey,
3 which you will find in Exhibit K, how many monitoring
4 sites were used in that project?

5 A. I believe it said three.

6 Q. Did ODNR waive the survey requirement for
7 diurnal bird/raptor migration?

8 MS. FLINT: Objection to his,
9 Mr. Van Kley's -- he said did they waive the survey
10 requirement, and Dr. Kerlinger just read what the
11 survey requirement is, and I think we need to
12 establish what the survey requirement is before we
13 see if it was waived.

14 ALJ AGRANOFF: If you could lay a little
15 bit more of a foundation before you ask that
16 particular question.

17 MR. VAN KLEY: Yeah, foundational was
18 about two questions earlier, but I'll refer the
19 witness back to the ODNR 2009 guidance document.

20 Actually, I misphrased my question. I
21 meant to ask about passerine migration, so let me
22 start over.

23 Q. (By Mr. Van Kley) With regard to the
24 recommendation in the ODNR guidance document of 2009
25 for passerine migration, as you've stated there's a

1 recommendation of one point-count location for every
2 100 hectares of combined forest, shrub, and wooded
3 wetland. Did I characterize that accurately?

4 A. Yes.

5 Q. Okay. And then the guidance goes on to
6 say "however if the site would require fewer than 5
7 survey points, the ODNR Division of Wildlife will
8 consider eliminating this survey requirement after a
9 field review of habitat quality." Do you see that in
10 the document?

11 A. Yes.

12 Q. So my question to you is, did the ODNR
13 Division of Wildlife provide Republic Wind with such
14 a waiver?

15 A. The ODNR signed off on the protocol. I
16 don't know if they specifically mentioned that detail
17 during their meetings.

18 Q. Well, the Division of Wildlife didn't
19 tell Republic Wind, to your knowledge, that it did
20 not have to do this survey, did it?

21 A. I -- I'm not sure what you're asking.

22 Q. Are you aware of any statement by ODNR to
23 Republic Wind that it did not have to do this survey?

24 MS. FLINT: Objection. I believe he
25 basically answered that question which was he said

1 that ODNR signed off on the protocol.

2 MR. VAN KLEY: That's not the same thing.
3 I asked if there was a waiver.

4 ALJ AGRANOFF: I'll allow the question.

5 A. It's -- from this report, they didn't
6 waive the survey.

7 Q. Okay.

8 ALJ AGRANOFF: So, from your perspective,
9 the protocol that was used was consistent with ODNR's
10 requirements for these types of surveys?

11 THE WITNESS: Yes.

12 Q. (By Mr. Van Kley) Did you do a
13 calculation to determine whether there were enough
14 monitoring locations to establish a monitoring
15 location for every 100 hectares of combined forest,
16 shrub, and wooded wetland?

17 A. No.

18 Q. Go to Figure 1 of Exhibit K, which you'll
19 find a couple of pages after page 8 of the document,
20 and tell me when you found it.

21 A. Yes.

22 Q. All right. Figure 1 shows the locations
23 for the monitoring sites, correct?

24 A. Yes.

25 Q. And do you see that Figure 1 also shows

1 the footprint of the project area for the Republic
2 Wind project that existed at the time that this study
3 was performed?

4 A. Yes.

5 Q. It's not the same footprint as the
6 project that exists today, correct?

7 A. No, it isn't exactly the same.

8 Q. Do you know whether any of the monitoring
9 sites that were used in this study are located within
10 the present-day footprint of the Republic Wind
11 facility?

12 A. I've not compared the maps.

13 Q. So you don't know?

14 A. No.

15 ALJ AGRANOFF: If I could ask one
16 clarifying question. With respect to Figure 1 that
17 we were just looking at, can you explain to me the
18 difference between Point 2-1 and Point 2-2? Are
19 those two different survey locations?

20 THE WITNESS: I'd have to look at the
21 text.

22 ALJ AGRANOFF: I'm curious as to why they
23 have 2-1 and 2-2 versus having them numbered as 2 and
24 then 3 and then --

25 THE WITNESS: I don't know why they did

1 that. I'm looking in the results now and I can't
2 find an explanation for that.

3 Q. (By Mr. Van Kley) So the results of the
4 survey, included in this report, show results only
5 for three monitoring sites?

6 A. I believe so.

7 Q. Okay.

8 ALJ AGRANOFF: But isn't it four if you
9 count --

10 THE WITNESS: 2-2?

11 ALJ AGRANOFF: -- Point 1, 2-1, 2-2, and
12 2-3?

13 THE WITNESS: It's four if you count 2-2.
14 I don't see a 2-3.

15 ALJ AGRANOFF: I'm sorry, Point 3.

16 THE WITNESS: Oh, yeah, that's four. I
17 don't know if they used data from all of those sites
18 or how they divided it. I'd have to look at this
19 more carefully and I may not know because there might
20 not be an explanation here.

21 MR. VAN KLEY: I'd like to mark the next
22 exhibit. I think we're up to 14?

23 ALJ AGRANOFF: Yes. And what might that
24 exhibit be?

25 MR. VAN KLEY: This is a document

entitled "Passerine Migration Surveys for the Emerson West Wind Project, Seneca County, Ohio," dated August 16, 2016 through May 31, 2017. Actually that's the range of dates on the top of the document, and then the date of the document itself is January 26, 2018.

ALJ AGRANOFF: It shall be so marked.

(EXHIBIT MARKED FOR IDENTIFICATION.)

MR. VAN KLEY: For the record, Your Honor, this is one of the wildlife surveys that was mentioned in the witness's testimony which is not contained in the docket at the present time.

ALJ AGRANOFF: Okay. And just for the purposes of cross-referencing, if you could point me where in his testimony this specific exhibit would be?

MR. VAN KLEY: Uh-huh. Page 7. Towards the middle on the page.

ALJ AGRANOFF: So it's the first full bullet point.

MR. VAN KLEY: Correct.

ALJ AGRANOFF: Okay. Thank you.

Q. (By Mr. Van Kley) Do you recognize the document that has been labeled as LR Exhibit 14?

A. Yes.

1 Q. And that is the document -- that's a
2 document that is listed on page 7 of your testimony?

3 A. They're the same.

4 Q. And this is another migration survey,
5 correct?

6 A. It is.

7 MS. FLINT: Excuse me, I'm sorry to
8 interrupt you, but I have a copy of the same study
9 and it's missing a page, the last page, at least the
10 copy you gave me.

11 MR. DeVINE: I have it electronically.

12 MS. FLINT: I have a copy of what
13 Mr. Van Kley handed out.

14 MR. DeVINE: Oh, okay.

15 MS. FLINT: I'm saying I haven't gone
16 through the entire document but I can tell this copy
17 is missing the last page that I have.

18 MR. VAN KLEY: What about yours?

19 ALJ AGRANOFF: Is the last page supposed
20 to be Appendix A?

21 MR. VAN KLEY: Do you have that?

22 ALJ SANYAL: I don't. This is my last
23 page.

24 MR. VAN KLEY: Yeah, it seems that all of
25 the copies, except for mine, are missing that last

1 page.

2 MS. FLINT: I have copies. They have
3 your Bates stamp on it when they were produced to you
4 so --

5 MR. VAN KLEY: Okay.

6 MS. FLINT: -- you're free to use it.

7 MR. VAN KLEY: Yeah, if you would like to
8 substitute that, that would be great.

9 (Off the record.)

10 ALJ AGRANOFF: Let's go back on the
11 record.

12 Q. (By Mr. Van Kley) Do you recognize
13 Exhibit LR 14?

14 A. Yes.

15 Q. What is it?

16 A. It's the report for the passerine
17 migration survey done in 2016 and '17.

18 Q. And that survey was performed within the
19 footprint for the Emerson West Wind project?

20 A. Yes.

21 Q. Would you go to page 2 of the main text
22 of that document.

23 A. Yes.

24 Q. Is Figure 1, on that page, a map showing
25 the project area?

1 A. It's a map showing the Emerson West
2 project area, yes.

3 Q. And do you know whether any of the land
4 inside of the footprint for the Emerson West Wind
5 project, as it existed at that time, is currently
6 within the footprint of the Republic Wind project?

7 A. I did see a map showing there was an
8 overlap at the north end of this site and the south
9 end of the Republic site. I couldn't tell you the
10 percentage though. I just know there was some
11 overlap unless these maps are different.

12 Q. This map also shows the locations of the
13 monitoring sites?

14 A. Yeah. I can make them out by the
15 lettering, yes, and the dots next to the letters,
16 yes.

17 Q. Do you know how many of these monitoring
18 sites are currently -- let me start over.

19 Do you know how many of the monitoring
20 sites, shown on this figure, are located on land that
21 is currently within the footprint of the Republic
22 Wind project?

23 A. I believe I saw a map that showed, I
24 think, these point-count locations to look at the
25 overlap and I think some of them did overlap but I

1 didn't happen to bring that map with me up here. I
2 think you had received a copy.

3 ALJ AGRANOFF: And your response, with
4 respect to the overlap between the Emerson West
5 project and the Republic Wind project, was comparing
6 the final Emerson West project area to the
7 currently-proposed Republic Wind project area?

8 THE WITNESS: I believe that was the map.
9 There have been many and I've been confused more than
10 once.

11 Q. (By Mr. Van Kley) Go to page 3 of this
12 report. Directing your attention to the first
13 paragraph on page 3. The last sentence states that
14 there were 18 monitoring sites; is that correct?

15 A. Yes, located near forest habitat within
16 the project.

17 Q. That first paragraph on page 3 also
18 mentions the recommendation in the ODNR guidance that
19 there be one point-count location for every
20 100 hectares of combined forest, shrub, and wetland
21 wooded habitats. Do you see that?

22 A. Yes.

23 Q. Can you tell from this report whether
24 that recommendation was followed?

25 A. Well, if you divide 18 into 1,751, I

1 think you get 100 hectares.

2 Q. All right. And according to this page,
3 the surveys were generally completed -- I'm looking
4 at the second paragraph there, first sentence, states
5 the surveys were generally completed weekly from
6 April 1 to May 31 and August 15 to November 15,
7 correct?

8 A. Yes.

9 Q. What year was that?

10 A. 2016 and 2017.

11 ALJ AGRANOFF: So studies were done in
12 between April and May 31 for both 2016 and 2017?

13 THE WITNESS: Those time periods in those
14 two years.

15 Q. Okay. So during 2017 and 2016, the
16 periods of April 1 to May 31 and August 15 to
17 November 15 were the periods of time during both
18 years in which a survey occurred.

19 A. Yes. August 15 to November 15, 2016, and
20 April and May of 2017.

21 Q. Okay. So it's the opposite of what I had
22 assumed.

23 The survey detected the presence of some
24 bald eagles? You can look in the Executive Summary

25 A. Thank you.

1 Q. Last paragraph on page 1.

2 A. Two bald eagles, yes.

3 Q. All right. You can set that document
4 aside.

5 All right. Let's talk about bald eagles
6 for a while. Go to page 4 of your testimony,
7 Answer 7. I'd like to refer you to the last line on
8 that page where you'll see a reference to the U.S.
9 Fish and Wildlife Service 2013 Eagle Conservation
10 Plan Guidance. Do you see that?

11 A. Yes.

12 Q. Are you familiar with that guidance?

13 A. Yes.

14 MR. VAN KLEY: I think I'll mark a copy
15 of that document so you have it in front of you to
16 assist you in answering questions about it.

17 Your Honor, I'd like to mark that as
18 LR Exhibit 15.

19 ALJ SANYAL: Okay. It shall be so
20 marked.

21 (EXHIBIT MARKED FOR IDENTIFICATION.)

22 Q. (By Mr. Van Kley) I've handed you what
23 has been marked as LR Exhibit 15, entitled "Eagle
24 Conservation Plan Guidance, U.S. Fish and Wildlife
25 Service," April 2013. Is this the document to which

1 the last line on page 4 of your testimony refers?

2 A. Yes.

3 Q. What, if anything, did you do to
4 determine that any of the bald eagle surveys, listed
5 in Answer 7 of your testimony, were performed using
6 methods consistent with LR 15?

7 A. I first read the documents, the survey
8 reports, and having done these cooperating in
9 compliance with the Fish and Wildlife Service
10 guidance document, this guidance document for several
11 years, I pretty much knew what the guidance document
12 was asking for and what the U.S. Fish and Wildlife
13 Service, in meetings, has also asked for.

14 Q. Let's look at page 25 of LR Exhibit 15.
15 On the top of that page there is a title that states
16 "4. Site Categorization Based on Mortality Risk to
17 Eagles." Do you see that?

18 A. Yes.

19 Q. And then under that title you'll see a
20 category 1, category 2. On the next page, we have
21 category 3. Do you see that?

22 A. Yes.

23 Q. Can you explain to me what's meant by
24 these categories?

25 A. I think it's pretty explanatory right

1 there on the page. If you look at category 1, it
2 says high risk, potential to avoid or mitigate
3 impacts is low. B, moderate. C, on the next page,
4 minimal risk to eagles. Then it has certain criteria
5 that it uses.

6 Q. For category 1 on page 25 of
7 LR Exhibit 15, it states that a project is in this
8 category if it, No. 1, has an important eagle-use
9 area or migration concentration site within the
10 project footprint, correct?

11 A. That's what it says.

12 Q. Does a nest, within the footprint of a
13 project, constitute an important eagle-use area?

14 A. Not necessarily.

15 Q. What, in your opinion, determines whether
16 it is?

17 A. Whether it is a high-risk site?

18 Q. Whether it is an important eagle-use
19 area.

20 A. Is this for golden eagles or bald eagles
21 because --

22 Q. Bald eagles.

23 A. -- this guidance document is for both.

24 Q. It's for bald eagles.

25 A. You're asking the question for bald

1 eagles?

2 Q. That's correct.

3 A. But this document was written primarily
4 for golden eagles, so there's a major-league
5 difference between what the risk categories really
6 are.

7 Q. Are you saying that the U.S. Fish and
8 Wildlife Service does not use these categories to
9 evaluate risk to bald eagles?

10 A. They somewhat do. You have to realize
11 when you talk to them, they're flexible, because bald
12 eagles are not nearly as susceptible to collisions as
13 golden eagles, especially golden eagles in the
14 western part of this country. That's what this rule
15 was originally written for. That's just as bald
16 eagles started to explode in the eastern United
17 States.

18 They use this document but it's a
19 flexible document. They want to be in on what the
20 site is actually like, if there are golden eagles on
21 the site. That's why you have meetings prior to
22 going into and studying projects, or even prior to
23 trying to develop a project. It's a big difference
24 between golden and bald eagles.

25 Q. If you look at the second paragraph under

1 category 1, you will see it states as follows: "In
2 addition, projects that have eagle nests within 1/2
3 the mean project-area inter-nest distance of the
4 project footprint should be carefully evaluated (see
5 Appendix H). If it is likely eagles occupying these
6 territories use or pass through the project
7 footprint, category 1 designation may be
8 appropriate." Did I read that correctly?

9 A. You did.

10 Q. Does the U.S. Fish and Wildlife Service
11 follow the statement that I just read to you when it
12 evaluates risks to bald eagles?

13 A. In part, they do. Since 2013, they have
14 changed some of what they actually ask developers to
15 do based on empirical information that we've been
16 gathering on actual risk to bald eagles especially
17 here in the eastern part of the country.

18 I've been involved in numerous sites
19 where I've spoken with Fish and Wildlife Service, so
20 personal experience out west where you have golden
21 eagles and in the east and it's a very, very
22 different way of doing things because bald eagles are
23 not high-risk animals. In the west, you have golden
24 eagles which are much higher-risk animals and that's
25 where these original rules came from, this guidance

1 came from.

2 Q. What is the empirical evidence that
3 you've just referred to in your answer?

4 A. 170 studies of post-construction fatality
5 studies done across North America. That's what I
6 base most of what I'm saying right now.

7 I also base it on studies that I've done
8 at sites that would qualify as high-risk sites to
9 eagles, where no eagles, no bald eagles were ever
10 killed. I can give you a list of these sites.

11 You can look along the lakes, the shores
12 of Lake Erie where there are, on the Canadian side,
13 there are 32 projects that have turbines close to the
14 lake; yet, the fatality numbers are very, very small.

15 Despite the small fatality rates, we're
16 seeing eagle populations soaring, so that's one of
17 the reasons that the Fish and Wildlife Service is
18 being more liberal in monitoring -- in following this
19 guidance today.

20 Q. With respect to the bald eagle fatality
21 data that you've just mentioned, is that data that is
22 reported by the wind companies?

23 A. It's actually reported in peer-reviewed
24 journals now. There are about four of these reviews
25 that have passed peer review to look at the total

1 numbers of individuals of all kinds of species killed
2 but you also have a lot of this data available. Some
3 of it is done by the wind companies, most of it is
4 actually, yes, in collaboration or in cooperation
5 with the Fish and Wildlife Service and often the
6 various DNRs in the states in which they're done.

7 Q. So it's the wind company that reports to
8 the government agency how many eagles are killed,
9 correct?

10 A. It's actually the consultants working for
11 the wind company, and we follow federal laws.

12 Q. Okay. Do you know whether the U.S. Fish
13 and Wildlife Service has applied the one-half mean
14 project-area inter-nest distance formula to the
15 Republic Wind project?

16 A. I'm sorry, you mixed something there that
17 I didn't understand.

18 Q. Yeah. I'm just reading, I'm reading from
19 the language on page 25 of LR Exhibit 15 --

20 A. I see it.

21 Q. -- that I read to you about the
22 inter-nest distance.

23 A. Yes.

24 Q. My question is, has the U.S. Fish and
25 Wildlife Service applied this formula to the Republic

1 Wind project?

2 A. I believe they did, yes.

3 Q. And they did that with respect to some
4 bald eagle nests that were located outside the
5 Republic Wind project area, correct?

6 A. Yes.

7 Q. To your knowledge, the U.S. Fish and
8 Wildlife Service has not, at this point in time,
9 determined what the inter-nest distance that will be
10 applied to the nest that has now -- the eagle nest
11 that has now been found inside the footprint of --

12 MS. FLINT: Objection to the foundation
13 for the statement of the eagle nest that was just
14 found.

15 MR. VAN KLEY: That was earlier
16 established in Mr. Kerlinger's testimony.

17 MS. FLINT: Objection. I don't know what
18 was established in his testimony.

19 MR. VAN KLEY: Well, if the Bench wishes,
20 I'll do it again.

21 ALJ SANYAL: Let's do that.

22 Q. (By Mr. Van Kley) Earlier in your
23 testimony you stated that you had received some
24 information, from the testimony of Dawn Hoepf, that
25 an eagle's nest has been located within the footprint

1 of the Republic Wind project. You saw that
2 testimony, right?

3 A. I -- it was allegedly found there. I
4 don't know any of the details.

5 Q. Okay. Assuming that it has been found
6 there, are you aware of any action that U.S. Fish and
7 Wildlife Service has taken with regard to that nest?

8 A. I can't assume that it was there.

9 Q. Well, am I also to assume then that
10 you're not aware of any U.S. Fish and Wildlife
11 Service action with respect to any nest that might be
12 within the footprint of the Republic Wind facility?

13 A. I have no knowledge of that.

14 Q. Okay. Tell me how the U.S. Fish and
15 Wildlife Service calculates the inter-nest distance.

16 A. They look at the distances between the
17 nests and then they do a calculation of what that
18 half inter-nest distance is.

19 Q. And in what area do they use the nest
20 data in to order to come up with that calculation?
21 I'll rephrase the question. It wasn't very well
22 phrased.

23 You said that U.S. Fish and Wildlife
24 Service calculates the distances between eagle nests.
25 My question is, what area does the eagle nest have to

1 be in before it is included in that calculation?

2 A. They look in a larger area surrounding a
3 project site because that helps them determine what
4 the population density may be and the population
5 numbers in that, I think it's a 43-mile-radius area
6 for some of that, and then they come up with that
7 number.

8 Q. Okay. So depending how many nests there
9 are within that area, the inter-nest distance can
10 vary from time to time?

11 A. It's constantly varying because with bald
12 eagle numbers increasing so dramatically there aren't
13 going to be too many sites that have half the
14 internet distance -- inter-nest distance anymore.
15 There's just so many bald eagles out there.

16 Q. Go to page 57 of LR Exhibit 15.

17 A. Yes.

18 Q. I'd like to refer you to the first full
19 paragraph following the bullet points on that page.

20 A. Okay.

21 Q. I'm specifically looking at the sentence
22 that starts on the fourth line of that paragraph,
23 starting with the words "We also reiterate."

24 A. Yes.

25 Q. That sentence says "We also reiterate

1 that these (and most other) surveys should be
2 conducted for at least 2 years before project
3 construction and, in most cases, across all seasons."
4 Did I read that correctly?

5 A. Yes.

6 Q. Okay. Do you know what the sentence
7 refers to when it refers to "most other surveys"?

8 A. No, not exactly.

9 Q. Go to page 58 of LR Exhibit 15. And I'm
10 going to refer you to the first paragraph on that
11 page. And I'll just read at least part of it, the
12 first part of that paragraph which states "The first
13 case (i.e., (1) above) is the use of point count data
14 to validate whether a proposed project meets category
15 3 criteria when Stage 1 information is inadequate.
16 Based on experience with current parameters of the
17 'prior term' in our predictive model (see Appendix
18 D), we calculate an average of 20 hours per turbine
19 as an optimal level of annual sampling via point
20 count survey (for example, equivalent of ten 4-hour
21 point count surveys at each of 20 sample points for a
22 40-turbine project; our 20-hour recommendation
23 considers the hazardous area created by a generic
24 2.5-megawatt turbine with a rotor diameter of about
25 100 meters; sample effort for turbines with smaller

1 rotor diameters would be less)." Do you see that?

2 A. Yes.

3 Q. Can you explain to me what all of that
4 means?

5 A. I can try, but I have to go back and look
6 at what Stage 1 information is involved. I can tell
7 you that their predictive model, they're collecting
8 data.

9 Just to explain to you guys, you go out
10 in the field and you set up a set of points and, at
11 those points, you position somebody, like, twice a
12 month and they will be there for 40 minutes or an
13 hour, whatever your time period is that you're
14 looking for. They will take observations on whether
15 or not bald eagles are seen within an 800-meter
16 radius circle and the height of those. So that
17 circle is a cylinder. It goes up to 800-meters high.

18 So you collect the data there and you
19 give it to them at the end of your year, two-year
20 period, depending upon how risky a potential site is
21 deemed to be. Also that is if they want you to go
22 out and take measurements for a site because they
23 don't always ask for it.

24 In the case of Republic, they did not ask
25 for an Eagle Conservation Plan so they really didn't

1 need to go out and measure the eagle use. However,
2 they did, in two different years, one with 20 points,
3 one with 29 points, so they got a pretty good idea of
4 how many eagles are out there, what they're doing out
5 there, how often they are out there.

6 And they put those types of numbers into
7 a model to see how many number of birds would
8 actually get killed. It's a complex model, it's yet
9 to be truly well-vetted, only a couple sites have
10 done it, and it doesn't always come out with a
11 predictive number of eagles killed on that site, on
12 that particular site.

13 I did one in Michigan, and we spent two
14 years looking for carcasses of bald eagles up there.
15 It was supposed to be a high-risk site and none were
16 killed. None were found dead. And that's what I
17 meant before about bald eagles not being a high-risk
18 species.

19 So you take these numbers, they go
20 through the model for you, you can get the model
21 online in a statistical package if you wish to run
22 these yourself and, from that, you can tell what the
23 absolute risk is likely to be.

24 But, for the Republic site, the risk was
25 thought to be low because of the small numbers of

1 eagles that were seen during the two years of study
2 out there.

3 Sorry if I gave you more than you wanted.

4 Q. Actually, you didn't give me quite as
5 much as I hoped, so let me follow up with another
6 question about this language, and that is with regard
7 to the recommendation to calculate an average of
8 20 hours per turbine as an optimal level of annual
9 sampling.

10 First of all, with regard to the size of
11 the turbine to which this recommendation applies,
12 that size is a 2.5-megawatt turbine as stated there,
13 correct?

14 A. Yes.

15 Q. And that turbine model, as expressed
16 here, has a rotor diameter of about 100 meters,
17 correct?

18 A. Give or take, yes.

19 Q. A larger turbine, that is a turbine that
20 has a larger rotor diameter, would pose more of a
21 risk to bald eagles than a turbine with a rotor
22 diameter of about 100 meters, correct?

23 A. It's never been empirically determined to
24 be correct.

25 Q. Then why does the U.S. Fish and Wildlife

1 Service link its recommendation of 20 sample points
2 to a turbine of that size?

3 A. I won't say it was a swag, but they
4 designed this model and these parameters to be
5 collected -- to be collected for golden eagles in the
6 west, where fatalities were much higher.

7 Once turbines reached the east,
8 everything changed because they just didn't fly into
9 the turbines with the regularity that they did in
10 California which is also designed for different types
11 of turbines. You remember -- I'm sorry, I won't go
12 on.

13 Q. Go to page 64 of LR Exhibit 15, and I'd
14 like to refer you to the first sentence after the
15 heading that reads as follows: "2. Survey of the
16 Project-Area Nesting Population: Number and
17 Locations of Occupied Nests of Eagles." Do you see
18 where I'm at?

19 A. Yes. Thank you.

20 Q. The first sentence states as follows: "To
21 evaluate project siting options and help assess
22 potential effects of wind energy projects on breeding
23 eagles, we recommend determining locations of
24 occupied nests of eagles within the project area for
25 no less than two breeding seasons prior to

1 construction." Do you see that?

2 A. Yes.

3 Q. Then towards the bottom of that page in
4 the last paragraph, I'd like to direct your attention
5 to the second sentence of that paragraph which reads
6 as follows: "At least two checks via aircraft or two
7 ground-based observations are recommended to
8 designate a nest or territory as unoccupied, as long
9 as all potential nest sites and alternate nests are
10 visible and monitored (i.e. alternate nests may be
11 widely separated such that a full-length,
12 ground-based observation should be devoted to each)."
13 Do you see that?

14 A. Yes.

15 Q. All right. Keep this plan in front of
16 you. We will refer back to it as we go through the
17 bald eagle surveys that are mentioned in your
18 testimony but you can set it to one side for the
19 moment.

20 Are there certain times of the year when
21 bald eagles are easier to find than others?

22 A. It depends on where you are, what the
23 habitat is.

24 Q. Okay. With respect to habitat that's in
25 the project area for Republic Wind, are there certain

1 times of the year when eagles are easier to find?

2 A. Yes.

3 Q. And what are those periods of the year?

4 A. Early spring -- for eagles? To find
5 eagles you're just talking about?

6 Q. Bald eagles, yes.

7 A. Pretty much any time during the year you
8 can see bald eagles perched, unless it's in the
9 summer and spring and they're inside of a forest;
10 otherwise, pretty much any time of the year because
11 they're soaring and flying around.

12 Q. Are they harder to find during periods of
13 time when the leaves are on the trees?

14 A. It's very easy to find eagles themselves
15 when the leaves are on trees. If you're talking
16 about nests, it's a very different situation. You
17 want to search when the leaves are off the trees.

18 Q. When do the young eagles leave the nest
19 in Ohio?

20 A. Probably in May. It could be later, it
21 could be earlier depending on the season. If you
22 have an early spring, it might be earlier. Not much.

23 Q. After they leave the nest, is the nest
24 unoccupied for the rest of the year?

25 A. No.

1 Q. Okay. What happens after they first
2 leave the nest?

3 A. They fly a short distance and return to
4 the nest.

5 Q. And how -- how long do they do that?

6 A. As long as they keep getting fed, but
7 generally a month or more.

8 Q. During the time that the adult eagles
9 have young in the nest, what is the travel range for
10 those adult bald eagles when they are foraging for
11 food?

12 A. It varies depending upon how many roads
13 you have in the area because roadkills are a very,
14 very important source of food for eagles. If you
15 have a lot of roads, they don't need to go very far.
16 Without roads, they're going to go farther depending
17 upon what they're used to feeding on. It may be to a
18 certain point where you have lots of ducks.

19 Q. Is it fair to say their travel range
20 depends on the availability of food?

21 A. I think that was the point I was trying
22 to make with roadkills.

23 Q. Yeah. They'll travel as far as necessary
24 to obtain enough food, correct?

25 A. Yes.

1 Q. Generally speaking, do bald eagles, that
2 nest near rivers or lakes, travel as far to satisfy
3 their food needs as eagles that are nesting in areas
4 where rivers or large lakes are not nearby?

5 A. It could be. It also depends on the
6 availability of food and the type of food. Again,
7 roadkills, gut piles from hunters, that season of the
8 year can be very helpful. Well, marginally helpful.

9 Q. You're aware, from reviewing these
10 reports, that there are bald eagle nests in areas
11 surrounding the Republic Wind project area, right?

12 A. They're surrounding it but, you know,
13 they're scattered throughout the landscape, yes.

14 Q. Okay. Have you done any study or looked
15 at any information to determine what the travel range
16 for those bald eagles is?

17 A. No.

18 Q. Would you expect their travel range to be
19 longer than the travel range for bald eagles that are
20 living near Lake Erie?

21 A. I don't know.

22 Q. Do you have an opinion on how long eagle
23 survey data is useful?

24 A. There are what are called "historic
25 nests." Those nests presumably are in good habitat

1 and you can find them year after year after year.

2 But with the changes in eagles these
3 days, we have so many more nests. I live in New
4 Jersey. We're coming up to over 200 nests in the
5 state and that's quadrupled or more than that. New
6 York has quadrupled. So nests are starting to appear
7 in more locations, they're young birds wandering and,
8 as they become sexually mature, they're settling in
9 new habitats that haven't seen bald eagles in a
10 century or more. So, I think that might help answer
11 your question.

12 Q. Yes, it does. Let me follow up on that.
13 With respect to Seneca County, have you determined
14 whether eagle populations in that county are
15 expanding?

16 A. With respect to Seneca, I don't know if
17 it's expanding. In Ohio, it's expanded. It's
18 quadrupled in the last 17, 18 years. There are four
19 times as many bald eagle nests today and it's
20 approaching 300 nests. This is unheard of in modern
21 history because we don't have DET and people aren't
22 shooting them like they used to.

23 Q. So, for Seneca County, are you able to
24 express an opinion as to how recent a bald eagle
25 survey has to be in order to reflect current

1 conditions of the bald eagle populations?

2 A. With the number of nests that are
3 increasing each year, it'd almost have to be annually
4 because they're just off the charts. They're popping
5 up -- they're on Staten Island in New York City now.
6 I mean that's how they nest in new habitats that
7 they're ending up in.

8 Q. Let's look at some of the bald eagle
9 survey reports that you list in your testimony in
10 Answer A-7. I think we'll start with the bald eagle
11 survey that is labeled as Exhibit M, Bald Eagle
12 Survey, to the Amended Application of December 26,
13 2018. If you could get that in front of you.

14 ALJ SANYAL: And what's the
15 exhibit again?

16 MR. VAN KLEY: M.

17 THE WITNESS: November 2012, you said?

18 MR. VAN KLEY: It is November 2012,
19 correct.

20 THE WITNESS: Yes, I have it.

21 MR. VAN KLEY: We'll just pause and let
22 everybody else find it.

23 Ready to go?

24 ALJ SANYAL: Yeah. I'm good. Thank you.
25 My co-ALJ was just telling me he found it quicker

1 than the lady with the computer.

2 (Laughter.)

3 Q. (By Mr. Van Kley) All right. The date of
4 the survey report is November 2012, correct?

5 A. Yes.

6 Q. And it's titled "Final Results for the
7 Bald Eagle Survey Effort, Republic Wind Farm, Seneca
8 and Sandusky Counties, Ohio," correct?

9 A. Correct.

10 Q. And this report was prepared for Republic
11 Wind, LLC, Nordex USA, Inc., according to the title
12 page, correct?

13 A. Yes.

14 Q. Let's go to page No. 1 of that report.

15 A. Okay.

16 Q. This page has the title "Introduction" on
17 the top. According to the first paragraph on page 1
18 of this report, Nordex, at that time, was
19 anticipating 83 turbines to be installed in the
20 project area, correct?

21 A. Of 200 megawatts. Did you say that?

22 Q. No. 83 turbines is what I was reading.

23 A. 83 turbines, okay, yes.

24 Q. And according to the second paragraph on
25 page 1, BHE, the consultant, used the procedures in

1 the U.S. Fish and Wildlife Service Draft Eagle
2 Conservation Plan Guidance, correct?

3 A. Yes.

4 Q. So that was a draft of the final document
5 that is marked as LR Exhibit 15, correct?

6 A. I believe so.

7 Q. Now, if you go to page 2 of the report,
8 you'll see an outline for the project area that was
9 being considered at the time, correct?

10 A. Yes.

11 Q. And the footprint for that project area
12 is different than today's footprint for the Republic
13 Wind project area, correct?

14 A. Yes.

15 Q. Go to page 3 of the report. Under the
16 heading "3.0 Bald Eagle Nest Monitoring and Results,"
17 the first sentence states "During the nest survey,
18 BHE identified three Bald Eagle nests within close
19 proximity (approximately 6 miles) to the Project Area
20 (Figure 1)," correct?

21 A. Yes.

22 Q. Do you know how BHE performed this nest
23 survey?

24 A. I believe they used road counts. In
25 other words, they looked from the roads and, as they

1 drove, they looked for nests. It's a commonly-used
2 method. And where nests in areas could not be
3 accessed easily, they walked into them.

4 I believe that's the methodology, I just
5 want to make sure.

6 Yeah. If access to the nest was not
7 available, BHE used GPS to record the location from
8 the nearest publically accessible area and then
9 estimated the distance.

10 Okay, let me just go back a page.

11 Here they refer to "The Ohio Protocol
12 specifies raptor nest surveys." So if you looked at
13 that in this handy document finder -- I can't open
14 this up again, I'm sorry.

15 ALJ SANYAL: It's your iPad that's been
16 adversely possessed, yes.

17 MR. DeVINE: I'll gladly give you my
18 finger.

19 THE WITNESS: I don't have an iPad. I
20 also didn't want to drop it.

21 Raptor nest searches. ODNR on page 3.
22 Nest searching, 1.2. Conducted on or within 1 mile
23 of the proposed site. A 2-mile buffer should be used
24 if the site is within 1 mile of large bodies of water
25 or wetlands greater than 5 acres -- 5 hectares

1 rather. I don't see where it says how to do these,
2 but I'm pretty sure it was done in the way most of us
3 do them: Driving a car, looking for nests. If you
4 can't see into a wooded area, you walk into it. It's
5 very simple.

6 Q. Does this report indicate that they
7 walked into any wooded areas?

8 A. I can't find anything to that effect.

9 Q. And they did a nest survey in 2011,
10 correct?

11 A. Yes. March 17 through 25, 2011.

12 MR. PARRAM: Your Honor, can I just get
13 an estimate with respect to remaining cross for
14 Mr. Kerlinger? Mr. Marcotte has to get out by
15 5:15 to make his flight, so I just wanted to check.

16 ALJ AGRANOFF: Let's go off the record.

17 (Discussion off the record.)

18 ALJ SANYAL: Let's get back on the
19 record.

20 Q. (By Mr. Van Kley) All right.
21 Mr. Kerlinger, did you have a correction to any of
22 your testimony?

23 A. I prefer to call it an addition.

24 Q. Okay. Go ahead.

25 A. Page 3 of the survey that we were just

1 discussing, you look at the -- there's a table at the
2 top, Table 1.

3 ALJ SANYAL: Sorry, sir, we were looking
4 at several. Is it the Eagle Conservation Plan
5 Guidance or the ODNR --

6 THE WITNESS: I'm sorry. It's the Final
7 Results for the Bald Eagle Survey Effort, Republic
8 Wind Farm --

9 ALJ SANYAL: Thank you.

10 THE WITNESS: -- for 2012. I was asked
11 about what methodology they used and I couldn't find
12 it, but the last sentence in the first paragraph
13 below Table 1, the last two sentences, "At the time
14 of the survey, access had been secured for three
15 woodlots in the southern portion of the Project Area,
16 which were searched on foot. The remainder of the
17 survey was conducted by automobile from public
18 roads."

19 Q. (By Mr. Van Kley) There were three nests
20 found by this survey, correct?

21 A. Yes.

22 Q. Do you know whether those three nests
23 were on a list of nests provided by ODNR to the
24 consultant?

25 A. I don't recall. I believe some of them

1 were but I'd have to look into other documents.

2 Q. And then in 2011, after these three nests
3 were found, then the consultant did some monitoring
4 of the nests, correct?

5 A. I believe so.

6 Q. And then in 2012 was there another nest
7 survey conducted or not?

8 A. No.

9 Q. Okay.

10 A. That's -- yeah.

11 Q. So with respect to page 4, Table 2, in
12 the right-hand column that is labeled "2012 Breeding/
13 Nesting Season Observation Dates," do you see that
14 column?

15 A. Yes.

16 Q. And there's a bunch of dates under that.
17 For those dates in 2018, the consultant was
18 monitoring or was -- yeah, was monitoring the three
19 nests that had been found in the 2011 survey,
20 correct?

21 A. So we're jumping to the 2018 report now?

22 Q. No, no, we're still on Exhibit M.

23 ALJ SANYAL: Mr. Van Kley, you said 2018.

24 MR. VAN KLEY: Oh, I did?

25 ALJ SANYAL: We were referring to the

1 2012 one.

2 MR. VAN KLEY: Okay. Well, you caught me
3 then in error. Let me rephrase the question.

4 Q. (By Mr. Van Kley) On page 4 of Exhibit M,
5 Table 2, you see the right-hand column that is
6 labeled "2012 Breeding/Nesting Season Observation
7 Dates"?

8 A. Yes.

9 Q. Okay. The dates under that title were
10 the dates in which the consultant was monitoring the
11 three nests that had been discovered during the 2011
12 nest survey, correct?

13 A. I believe so, yes.

14 Q. Exhibit M, that we have been discussing,
15 is the only report in your Answer 7 of your testimony
16 for nest surveys in the Republic Wind project
17 area; is that correct?

18 A. Not entirely. If you look at what the
19 WEST Study did in 2016, they actually search in an
20 area well beyond the Emerson West project. I've seen
21 a map, I think that was part of the discovery you
22 received, that showed there was great overlap, almost
23 an entire overlap where they had a buffer area beyond
24 the Emerson West site and they did eagle surveys in
25 there --

1 Q. All right.

2 A. -- within that buffer and within the
3 core.

4 Q. All right. Well, let's take a look at
5 that report. There was more than one Emerson West
6 Wind report that included eagle nest surveys, is that
7 right, or is there only one?

8 A. They monitored nests and they did the
9 point count surveys, but there was one nest and
10 raptor -- I mean raptor nest and bald eagle nest
11 survey.

12 Q. Okay. Yeah, I appreciate that
13 explanation. So we have two reports here for the
14 Emerson West Wind project, one for a nest survey and
15 another for a monitoring survey of existing nests, if
16 I'm understanding what you're saying, right?

17 A. Actually there's a third one, I believe.
18 Use surveys done in 2016 through 2017, where they set
19 up 29 point count sites at Emerson. Some of them
20 actually overlapped into Republic. I think, again,
21 that's one of those maps you received.

22 Q. Okay. Why don't we just look at all
23 three of those reports then. All three of those
24 reports are cited in Answer 7 of your testimony,
25 correct?

1 A. Yes.

2 Q. So why don't we start with a report that
3 is mentioned on page 6 of your testimony, entitled
4 "Eagle Nest Monitoring Surveys for the Emerson West
5 Wind Project in Seneca County, Ohio. Final Report
6 2017." And I believe you can find that in Exhibit J
7 of the Amended Application of December 26, 2018.
8 That would be in part 8 of 33 parts.

9 A. I don't have J here in this folder. I've
10 got K.

11 Q. Perhaps they're on the other bench over
12 here.

13 ALJ AGRANOFF: Why don't we take a
14 5-minute break.

15 (Recess taken.)

16 ALJ SANYAL: Let's get back on the
17 record.

18 Q. (By Mr. Van Kley) Mr. Kerlinger, you have
19 another document in front of you.

20 ALJ SANYAL: Actually, Mr. Kerlinger,
21 could you hand me the laptop that you've been -- no,
22 no, the laptop.

23 MR. PARRAM: The iPad.

24 ALJ SANYAL: The iPad, sorry. I said
25 laptop but I meant iPad. I'm sorry.

1 MR. DeVINE: Thank you.

2 Q. (By Mr. Van Kley) All right.

3 Mr. Kerlinger, do you have in front of you the report
4 that is entitled "Eagle Nest Monitoring Surveys for
5 the Emerson West Wind Project in Seneca County,
6 Ohio," dated January 25, 2017?

7 A. June 30, 2016, Raptor Nest Surveys for
8 the Emerson West, Spring 2016.

9 Q. You're on the wrong document.

10 MS. FLINT: You want the eagle nest
11 monitoring survey?

12 MR. VAN KLEY: Yeah, the document dated
13 January 25, 2017.

14 MS. FLINT: What's the title of the
15 document? What's the report?

16 MR. VAN KLEY: "Eagle Nest Monitoring
17 Surveys for the Emerson West Wind Project."

18 ALJ AGRANOFF: And just so there's
19 cross-reference to the Application itself, it's the
20 Amended Application, Exhibit J.

21 ALJ SANYAL: And if we were looking, I
22 think it's part 8 or 7, I forget.

23 MR. VAN KLEY: It looks like, based on
24 the title, it is the first title on page 6 of the
25 witness's testimony, and it can be found on the

1 docket in Exhibit J, part 8 of 33, and then page 102
2 of that PDF on the website.

3 ALJ AGRANOFF: Thank you.

4 Q. (By Mr. Van Kley) All right. Sir, do you
5 have that document in front of you?

6 A. Yes.

7 Q. Can you identify it?

8 A. Eagle Nest Monitoring Surveys for the
9 Emerson West Wind Project in Seneca County, Ohio;
10 Final Report; January 25, 2017.

11 Q. Does this document describe any eagle
12 nest surveys?

13 A. No.

14 Q. Okay. It only describes eagle nest
15 monitoring surveys of existing known nests?

16 A. Yes, known bald eagle nests.

17 Q. Okay. So the study that is described in
18 this document involved watching nests that were known
19 to exist in the Emerson West project area, correct?

20 A. Yes.

21 Q. And if you look at page 5, Figure 2 of
22 that document, you'll see an outline of that project
23 area?

24 A. Figure 1?

25 Q. 2, page 5.

1 A. Got to keep going.

2 Yes.

3 Q. And on that figure you will see the
4 locations of the monitoring sites.

5 A. Yes.

6 Q. Are any of these monitoring sites located
7 within the present boundary of the project area for
8 the Republic Wind project?

9 A. I don't believe so. It's possible that
10 on the nests in question, on the upper right of the
11 screen, a couple of those observation points fall
12 near the boundary or possibly even within, but this
13 nest site is outside of the Republic project.

14 ALJ AGRANOFF: When you say "nests," is
15 that the same as "points" that we've been discussing?

16 THE WITNESS: No. The nest in this
17 figure, the star, the stars are the three nests;
18 upper right, lower left, and lower right.

19 ALJ SANYAL: So just for clarification,
20 these three nests, the starred ones are the actual
21 known locations of the three nests.

22 THE WITNESS: Yes. And the observation
23 points are surrounding them, those little green
24 circles.

25 ALJ AGRANOFF: Okay. And these were all

1 within Seneca County?

2 THE WITNESS: I believe, yes, they are.
3 The Emerson site that is to the south of Republic.
4 Republic goes up just barely into Sandusky.

5 Q. (By Mr. Van Kley) Given the fact that
6 these eagle nests were located outside of the
7 Republic Wind project area, why did you include them
8 in your testimony? Why did you include this report
9 in your testimony?

10 A. It is certainly relevant to eagle
11 activity at Republic. If you only went inside the
12 project, you wouldn't really get a true picture of
13 the nesting numbers and their distribution in this
14 part of Seneca County.

15 Q. Is that another way of saying that this
16 information is relevant to whether bald eagles from
17 these three nests may travel into the Republic Wind
18 project area?

19 A. Potentially, yes, and that's why this
20 study was done is to look at the direction of flight
21 from these nests.

22 Q. Okay. You can put that one aside. Let's
23 move on to the next one.

24 ALJ AGRANOFF: If I could ask one
25 follow-up question. Do you know whether there were

1 any studies that were done relative to the Sandusky
2 County portion of the Republic project?

3 THE WITNESS: I'd have to look at the
4 maps where the point counts and stuff were. No, they
5 were close to the boundary, the ones that were done
6 by WEST in 2017, I believe. Their point counts went
7 up that high but I'm not sure exactly.

8 ALJ AGRANOFF: Okay.

9 MS. FLINT: I was going to help you find
10 it.

11 THE WITNESS: Will you find this for me?

12 MS. FLINT: Which survey are you going
13 to, Jack, so I can pull it up?

14 MR. VAN KLEY: Yeah, I'll try to make it
15 easier to find.

16 MS. FLINT: What's the name of it?

17 ALJ AGRANOFF: We can go off the record,
18 Carolyn.

19 (Off the record.)

20 ALJ AGRANOFF: Let's go back on the
21 record.

22 Q. (By Mr. Van Kley) All right.
23 Mr. Kerlinger, I've referred you to a report that is
24 entitled "Large Bird and Eagle Use Surveys for the
25 Emerson West Wind Project," Final Report, May 13,

1 2016 through April 20, 2017, and it's dated
2 January 8, 2018. Do you have that report in front of
3 you?

4 A. Yes.

5 ALJ AGRANOFF: And just for the purposes
6 of record clarification, Mr. Van Kley, if you can
7 tell us where that report can be found within the
8 Application --

9 MR. VAN KLEY: Yes.

10 ALJ AGRANOFF: -- or the Amended
11 Application.

12 MR. VAN KLEY: On the online docket you
13 will find that in Exhibit J of the Amended
14 Application of December 26, 2018, part 8 of 33, and
15 page 133 of that PDF.

16 ALJ AGRANOFF: Thank you.

17 Q. (By Mr. Van Kley) Mr. Kerlinger, are you
18 familiar with this document?

19 A. Yes.

20 Q. Okay. Does this document describe any
21 eagle nest surveys?

22 A. Yes, it does.

23 Q. Okay. Would you point us to the part of
24 this document that discusses eagle nest surveys?

25 A. The second paragraph in the Executive

1 Summary. I guess that's page 1 or is it i?

2 ALJ SANYAL: I see it. Either way.

3 THE WITNESS: Okay.

4 A. Do you see the second paragraph?

5 Q. Yes, I do.

6 A. That describes the methodology.

7 Q. Is this a survey or surveys that were
8 looking for nests or were they looking for bald
9 eagles that may be flying or roosting?

10 A. It's called "use" generally for these
11 types of studies. How these birds use a particular
12 area. And if they're nesting there, they would
13 report that as well.

14 Q. Is that a different type of protocol than
15 what was used in the bald eagle survey that was
16 labeled Exhibit M to the Application for the Republic
17 Wind area?

18 A. They're almost identical. It comes right
19 out of the Eagle Conservation Plan Guidance Document
20 for 2013 that we looked at before.

21 Q. Were any of these surveys conducted on
22 land that is within the current footprint of the
23 Republic Wind project?

24 A. I'm pretty sure they did some of them.
25 I'm going to look for the map.

1 Q. Page 4 perhaps?

2 A. You're faster than I am. Yes.

3 Q. And you're looking at Figure 2 on page 4
4 of that document, correct?

5 A. Yes.

6 Q. Can you tell whether any of the survey
7 points are located within the footprint of the
8 current Republic Wind project area?

9 A. I believe some of them at the northern
10 parts of the Emerson site do overlap. I think you
11 have a map from the discovery that shows how they
12 overlap and which ones, how many of them would be.

13 Q. Do you know how many of them are?

14 A. I don't know the exact number. I -- I'm
15 not going to speculate.

16 Q. Were any eagle nests monitored in the
17 activities described in this document?

18 A. I don't think so. I'm just going to look
19 down, scroll down, because I think this was strictly
20 a use study.

21 No.

22 Q. Okay. You can set that document aside.

23 MR. VAN KLEY: The next document we're
24 going to search for is listed on page 6 of the
25 witness's testimony, and it is on the docket in

1 Exhibit J of the Amended Application of Republic
2 Wind, dated December 26, 2018, part 8 of 33, page 91
3 of the PDF document, and it is entitled "Raptor Nest
4 Surveys for the Emerson West Wind Project," Spring
5 2016.

6 MS. FLINT: It's June 30th, 2016?

7 MR. VAN KLEY: Correct. June 30, 2016 is
8 the date of the report.

9 Q. (By Mr. Van Kley) Do you have it?

10 A. Yes.

11 Q. Okay. And this is another one of the
12 reports that you reviewed to prepare your testimony
13 in this case, correct?

14 A. Yes.

15 Q. And this report does describe eagle nest
16 surveys, correct?

17 A. Yes, it does.

18 Q. Going to page 3 of this document, do you
19 see a Figure 2?

20 A. Yes.

21 Q. And that shows the Emerson Wind --
22 Emerson West Wind project to which this report
23 pertained, correct?

24 A. Yes.

25 Q. And on Figure 2 on page 3, you can see

1 the outline of the Emerson West Wind project,
2 correct?

3 A. Yes.

4 Q. Okay. Does this figure provide you with
5 the locations at which the nest, the eagle nest
6 survey was performed?

7 A. Yes, it does.

8 Q. And can you tell from that figure whether
9 any of that area included land that is within the
10 footprint of the current configuration for the
11 Republic Wind project?

12 A. Yes, the black line shows an outline of
13 the 4-mile buffer area beyond the Emerson project.
14 Quite a bit of that is within the Republic footprint.

15 Q. How many acres within this eagle nest
16 survey was -- was conducted on land within the
17 Republic Wind project area?

18 A. I don't know the exact number.

19 Q. Can you provide me with any estimate as
20 to the distance between -- let me ask you this: Does
21 the Emerson West Wind project area, as depicted on
22 Figure 2, abut up against the current project
23 boundary for Republic Wind?

24 A. The red line, I believe, overlaps in
25 places with the Republic boundary.

1 Q. Which is the red line? Is that the
2 circular line or is that --

3 A. Oh, I'm sorry. You have it in black and
4 white.

5 Q. I have a black-and-white copy in front of
6 me.

7 A. The red line is with the straight lines,
8 the rectangular, rectilinear I guess you'd call it.
9 The other one, the curved lines, are the 4-mile
10 buffer outside of the Emerson project.

11 There is a map showing the overlap
12 between the two sites that could be used in one of
13 the -- the last one of the reports that I site that
14 would be on page 8. You'll see where the boundaries
15 of the two sites are and then you can go from there
16 with these 4 miles to see how much overlap there
17 actually is.

18 ALJ AGRANOFF: When you say "page 8,"
19 page 8 of your testimony?

20 THE WITNESS: I'm sorry, my testimony,
21 correct. Top of the page. The memorandum, Technical
22 Memorandum from WEST to Apex.

23 ALJ AGRANOFF: Is that memorandum
24 included as part of the application exhibits?

25 THE WITNESS: I believe it is, yes.

1 MR. VAN KLEY: Your Honor, it's not.
2 That's one of the documents that was not included in
3 the Application on the docket.

4 MS. FLINT: Are we going to reference it?
5 Because we can introduce it.

6 MR. VAN KLEY: I'm not going to use it.
7 I didn't have any questions about it, but if you want
8 to -- if you want to mark it, that would be okay. I
9 don't have any preference in that regard.

10 ALJ AGRANOFF: If I understand the
11 witness's testimony, there is, within that document,
12 a clear comparison of the Emerson West project area
13 to the currently-proposed Republic project area in
14 this case?

15 THE WITNESS: Yes.

16 ALJ AGRANOFF: I think that would be a
17 valuable piece of information.

18 MS. FLINT: I agree.

19 ALJ AGRANOFF: Do you want to have that
20 marked as?

21 MS. FLINT: 22.

22 ALJ SANYAL: It should be 23, actually, I
23 think.

24 MR. PARRAM: I apologize, 23.

25 ALJ SANYAL: I'm sorry.

1 MR. PARRAM: You're correct.

2 ALJ AGRANOFF: 23.

3 MR. PARRAM: 23.

4 ALJ AGRANOFF: It shall be so marked.

5 (EXHIBIT MARKED FOR IDENTIFICATION.)

6 ALJ AGRANOFF: And just for the purposes
7 of record clarification, either Ms. Flint or
8 Mr. Parram if you want to describe what that document
9 is.

10 MS. FLINT: Exhibit 23 is -- the first
11 page is an e-mail from an Erin Hazelton to Jennie
12 Geiger and -- or a series of e-mails and then
13 attached to that e-mail is the January 10, 2018
14 Technical Memorandum that Dr. Kerlinger is
15 referencing.

16 MR. VAN KLEY: That document is mentioned
17 in the witness's testimony on the top of page 8.

18 ALJ AGRANOFF: Just for the purposes of
19 clarification, Dr. Kerlinger, if you could explain to
20 us where specifically within Applicant Exhibit 23
21 that comparison can be found?

22 THE WITNESS: There's a memorandum after
23 the introduction sheet, a Technical Memorandum from
24 Jennie Geiger, and if you go to page 4 of that
25 document there's a map showing the boundaries of both

1 entities.

2 ALJ AGRANOFF: So the boundary that is
3 shown in the darker black line is for which -- which
4 project area?

5 THE WITNESS: Republic.

6 ALJ SANYAL: And then the Emerson West is
7 shown in the remaining?

8 THE WITNESS: Yeah. They kind of overlap
9 a little bit in the area in the lavender color, I
10 don't know how to describe that, that is the Repub --
11 Emerson.

12 ALJ AGRANOFF: So if you were speculating
13 as to what percentage of overlap there is, would you
14 be able to make that kind of estimation?

15 THE WITNESS: Very rough. If you look at
16 Figure 2 that we were looking at in the 2016 raptor
17 nest report, and you look at the 4-mile, that curved
18 line represents the 4-mile buffer that study used and
19 you can see that study overlapped greatly with -- you
20 see where it says "Adams Township" in the middle of
21 the memorandum, Technical Memorandum?

22 ALJ AGRANOFF: Yes.

23 THE WITNESS: Much of that is covered by
24 this 4-mile buffer for this eagle use survey, but the
25 actual overlap of the sites is probably 10 to

1 20 percent. That sounds reasonable. And the
2 boundary is shared for a greater area. I'd say 20,
3 25 percent overlap.

4 ALJ AGRANOFF: Thank you.

5 Q. (By Mr. Van Kley) Are you saying that
6 25 percent of the Republic Wind project area has been
7 the subject of eagle nest surveys conducted for the
8 Emerson West Wind project?

9 A. No, I'm saying more than that is. If you
10 note this is -- in the Emerson West Project 2016
11 Raptor Nest Report they show a 4-mile buffer. If you
12 put 4 miles on top of the -- the southernmost
13 boundary of -- I should say the northernmost boundary
14 of the Emerson project, that 4 miles covers a large
15 portion of the Republic site. There's a mileage
16 gauge at the bottom on the left of the Technical
17 Memorandum from WEST.

18 Q. Were there monitoring sites set up in
19 that 4-mile buffer?

20 A. I believe there were. That's generally
21 what you do with a buffer is you look to see if there
22 are any nests in it.

23 Q. Is there a map, in the Emerson West
24 report that we're currently discussing, that shows
25 the location of those monitoring stations?

1 A. No. But in the original document you
2 asked me to go to, this 2016 raptor nest report, you
3 can see how they surveyed out to the edge of the
4 Emerson boundary and they did find eagle nests in
5 green, active nests. So if they were searching in
6 the buffer beyond that, it makes perfect sense that
7 they were 4 miles into the Republic site.

8 Q. Just to be clear then, what percentage
9 approximately of the Republic Wind project area has
10 been surveyed for eagle nests that were conducted for
11 Emerson West?

12 A. I don't know exactly.

13 Q. And what are the dates on which this
14 survey for Emerson West was performed? You can look
15 on page 1 if it helps.

16 A. March 25 through April 13, 2016.

17 Actually, if you look in the first
18 paragraph on the Methods on page 2, it says No. 2 in
19 the first one -- actually Nos. 1 and 2. "A survey
20 for raptor and eagle nests within one mile...of the
21 proposed Project, and 2) assessment of four known
22 eagle nests within the 4 miles of the Project."

23 So they didn't actually survey all of
24 that 4-mile buffer, I stand corrected, but they did
25 survey out to a mile which would still bring you well

1 into the Republic project if you go back to the
2 original maps in the WEST technical report.

3 Q. Where did you just read from, which
4 document?

5 A. Which -- which --

6 Q. The document from which you obtained the
7 information that the survey was 1 mile into the
8 Republic Wind project area?

9 A. The 2016 raptor nest report by WEST,
10 page 2.

11 Q. Under the title "Other Raptors"?

12 A. I'm sorry, what was that?

13 Q. Did you find that information in a
14 paragraph that is labeled "Other Raptors"?

15 A. I don't think so. It was page 3, top of
16 the page, it says "Methods."

17 Q. Just to make sure we're clear here,
18 what's the title of the document you're looking at?

19 A. "Emerson West Wind Project 2016 Raptor
20 Nest Report."

21 ALJ SANYAL: So I think the issue,
22 Mr. Van Kley, is on the document the first few --
23 many of the first few pages are numbered as 1, but
24 there is a paragraph on one of the pages numbered 1,
25 there is a section that says "Methods," from where I

1 think Mr. Kerlinger gave you that 1-mile information.

2 THE WITNESS: Thank you for explaining.

3 ALJ SANYAL: Yes.

4 Q. (By Mr. Van Kley) So it's under "Methods"
5 in that document?

6 A. Yes.

7 Q. In which paragraph?

8 A. First.

9 ALJ AGRANOFF: If we can go off the
10 record for just one minute.

11 (Discussion off the record.)

12 ALJ SANYAL: Let's get back on the
13 record.

14 Q. (By Mr. Van Kley) Was the survey for
15 eagle nests, in the raptor nest survey report of
16 June 30, 2016, conducted as point surveys?

17 A. No.

18 Q. What kind of surveys were conducted?

19 A. Driving along public roads. If you look
20 at the next paragraph in the Methods section, you'll
21 see "driving along public roads while looking for
22 raptor nest structures within areas of suitable
23 habitat, such as riparian forested areas," and then
24 it goes on to describe those, and "searched from the
25 ground after obtaining landowner permission." That's

1 if they couldn't see it, see into a forested area.

2 Q. Did the acreage, included in the eagle
3 nest surveys of this report, overlap any other eagle
4 nest surveys?

5 A. Yes, it overlapped on the earlier 2011
6 eagle nest surveys that were done within the Republic
7 project site.

8 Q. But it did not overlap any eagle nest
9 surveys conducted for Emerson West.

10 A. Are you talking about -- I don't
11 understand the question.

12 Q. Yeah, let me rephrase it then.

13 Did the eagle nest surveys, described in
14 this report, overlap the acreage that was surveyed
15 for eagle nests in any other study done for Emerson
16 West?

17 A. I think your question is contradictory to
18 what you said. Either that or I just don't
19 understand it. You talked about the Emerson West,
20 this report, the 2016 report, did it overlap on other
21 eagle nesting reports?

22 Q. In other words, were the eagle nests
23 surveyed for, on the land covered by this report, on
24 any other occasion besides the occasion reported
25 here?

1 A. I understand now. I don't believe so.
2 It was -- for use surveys there was big overlap and
3 for some of the nest monitoring there was overlap.

4 MR. VAN KLEY: Okay. I think we're at a
5 breaking point.

6 ALJ AGRANOFF: Thank you. For the
7 interim then, Mr. Kerlinger, you'll be excused and
8 then we'll have you come back.

9 ALJ SANYAL: Should we take a quick
10 5-minute break?

11 MR. VAN KLEY: If you want to.

12 MR. PARRAM: I'm fine. Unless others
13 would like to.

14 ALJ SANYAL: I'd like to.

15 MR. PARRAM: Okay.

16 ALJ AGRANOFF: We'll come back at ten
17 till.

18 (Recess taken.)

19 ALJ SANYAL: Okay. Let's get back on the
20 record. And then, Mr. Marcotte, I'm going to swear
21 you in.

22 THE WITNESS: Do I stand?

23 ALJ SANYAL: Whatever you prefer.

24 (Witness sworn.)

25 ALJ SANYAL: You may be seated.

1 (EXHIBIT MARKED FOR IDENTIFICATION.)

2 - - -

3 FRANCIS T. MARCOTTE

4 being first duly sworn, as prescribed by law, was
5 examined and testified as follows:

6 DIRECT EXAMINATION

7 By Mr. Parram:

8 Q. Mr. Marcotte, can you please state and
9 spell your name for the record.

10 A. Francis Marcotte. F-r-a-n-c-i-s
11 M-a-r-c-o-t-t-e.

12 Q. And what is your address?

13 A. 1033 Tallokas Road, Crestview, Florida.

14 Q. Do you have a document in front of you,
15 marked Applicant Exhibit 24?

16 A. I do.

17 Q. And what is this document?

18 A. It's my Direct Testimony.

19 Q. And was this prepared by you or under
20 your direction?

21 A. Yes.

22 Q. If I were to ask you the same questions
23 in Applicant Exhibit 24, today, would your answers be
24 the same?

25 A. That's correct.

1 MR. PARRAM: Your Honor, I move for
2 admission of Applicant Exhibit 24, and tender
3 Mr. Marcotte for cross-examination.

4 ALJ SANYAL: Thank you.

5 Go ahead, Mr. DeVine.

6 - - -

7 CROSS-EXAMINATION

8 By Mr. DeVine:

9 Q. Good afternoon, Mr. Marcotte. Can you
10 hear me okay?

11 A. Yes, sir.

12 Q. Good. I have a few questions for you.

13 In reviewing your testimony, would it be
14 fair to summarize your testimony that, with
15 additional training, Life Flight pilots and personnel
16 will be able to overcome the minimal additional risk,
17 time, and stress involved in landings near wind
18 turbines?

19 A. I'm not sure I understand the question
20 because I'm not sure that there's additional risk
21 involved.

22 Q. From your perspective there's no
23 additional risk in landing near wind turbines during
24 normal operations?

25 MR. PARRAM: Objection. The definition

1 of "near," Your Honor?

2 THE WITNESS: And "normal."

3 ALJ SANYAL: Okay. So if you could
4 rephrase or break those questions up somehow.

5 Q. (By Mr. DeVine) Is there any additional
6 risk presented by operating a helicopter in an area
7 where wind turbines are present?

8 A. Compared to what, sir, additional?

9 Q. Are you familiar with the area involved
10 in the Application for the wind turbine project in
11 this case?

12 A. I'm sorry, say it again.

13 Q. Are you familiar with the area where the
14 wind turbine project in this case is being applied
15 for?

16 A. I've never been there.

17 Q. Have you reviewed a map of it?

18 A. Yes.

19 Q. Okay. Would the addition of wind
20 turbines make operating a Life Flight helicopter more
21 risky than they are prior to the construction?

22 A. I don't believe so.

23 Q. In your testimony you reference there
24 needs to be proper training and testing for operating
25 a helicopter near a wind farm, correct?

1 A. Where is that?

2 Q. Page 4, Answer 12.

3 A. And the question again?

4 Q. Is it correct to say that your testimony
5 says that after proper training and testing, the
6 rescue missions around wind farms should become
7 routine?

8 A. Yes.

9 Q. What additional -- why is additional
10 training and testing needed if the presence of wind
11 turbines does not create any additional risk?

12 A. As -- as new -- as the wind turbines go
13 up, the pilots -- during the construction phase the
14 pilots will observe their locations, their heights
15 and their relations to the flight paths they're
16 flying. As new pilots are brought in, they will have
17 to be trained as to where they are during the initial
18 familiarization period.

19 Q. On that same page, in Question 13, the
20 question is "Does the presence of a nearby wind farm
21 delay the time it takes for an EMS flight helicopter
22 to arrive on the scene," and your answer is "Not
23 necessarily," correct?

24 A. Right.

25 Q. Would you agree, in the event of a low

1 ceiling, that the presence of a wind farm could cause
2 a delay in the operation of a helicopter?

3 A. Yes.

4 Q. Do you also agree, in the absence of good
5 visibility, that the presence of wind turbines could
6 impact the arrival of a helicopter?

7 A. Again, it could be, yes, but the question
8 becomes whether that's a significant delay in the
9 interest of safety.

10 Q. Does the presence of the wind turbine
11 farm make the lack of good visibility a more
12 dangerous situation than if the wind turbine farm is
13 not there?

14 MR. PARRAM: Objection. Again, what's
15 the definition of "dangerous"?

16 MR. DeVINE: I think the witness knows
17 the Webster's definition of "dangerous."

18 ALJ SANYAL: Overruled. You can answer.

19 THE WITNESS: Can you repeat it, please?

20 ALJ AGRANOFF: Would you like it read
21 back?

22 MR. DeVINE: Please.

23 (Record read.)

24 A. Not necessarily.

25 Q. Mr. Marcotte, have you ever served as an

1 expert witness before in any type of case?

2 A. Yes.

3 Q. In what type of cases have you been an
4 expert witness in?

5 A. It's in the vitae, the documents I
6 already gave you, but I'm a helicopter accident
7 investigator, I'm a safety specialist, and I have
8 provided testimony at a prior wind, Ohio wind
9 project.

10 Q. Which project was that?

11 A. I believe it was 2012 and I think it was
12 called Champaign.

13 Q. You said you have looked at a -- at some
14 documents regarding the Republic application about
15 the area that the project applied to be installed in?

16 A. Yes.

17 Q. Have you looked -- have you been able,
18 from what you looked at, to determine what the
19 tallest structures are presently in that environment?

20 A. I haven't looked at each one, but there
21 seems to be some towers that are in the area that are
22 in the mid-300 ranges.

23 Q. Okay. And you would agree that if towers
24 are constructed that are over 600 feet, they would
25 become the tallest objects in the area?

1 A. I'm not certain of that, but that's quite
2 possible.

3 Q. You're not aware of any other objects
4 taller than the 300-foot towers that you've
5 referenced?

6 A. I have checked some aeronautical charts.
7 I have not seen the area, so I'm not certain.

8 MR. DeVINE: I have no further questions.
9 Thank you.

10 ALJ SANYAL: Mr. Van Kley.

11 - - -

12 CROSS-EXAMINATION

13 By Mr. Van Kley:

14 Q. Do you know what model helicopter is used
15 by Life Flight in Seneca County?

16 A. No, sir.

17 Q. I note that in Answer 5, on page 2 of
18 your testimony, that it states that you flew an
19 Augusta 109 single pilot instrument flight rules
20 helicopter in the California coastal mountains. Do
21 you see that?

22 A. Yes, sir.

23 Q. To your knowledge is that a helicopter
24 that is similar to the types of helicopters that are
25 used as air ambulances in Ohio?

1 A. Again, I don't know what they're using.
2 I believe the ones I've seen locally are
3 Aerospatiales but I'm not certain of the model.

4 Q. You also flew a helicopter for the Coast
5 Guard?

6 A. Yes, sir.

7 Q. Was the helicopter you flew for EMS
8 purposes a lighter model, a lighter helicopter model
9 than the one you flew for the Coast Guard?

10 A. Yes, sir, it was.

11 Q. So the Coast Guard helicopter is more
12 durable in emergency situations, such as wind and
13 storms, than the EMS helicopter you flew?

14 A. "Durable" is a term I've never considered
15 about helicopters. The Sikorskys that I flew were
16 old, low-powered, heavy, amphibious devices. The
17 Augusta 109 is a twin-engine, high-speed, wheeled,
18 but they were both wheeled helicopters.

19 Q. To your knowledge does an operating wind
20 turbine produce a wake in the wind or a wake in the
21 atmosphere?

22 A. I wouldn't describe it as a wake. The
23 wind that is -- the discharge, in my mind, from the
24 wind turbines is dissimilar from prop wash. Even
25 though they both look like propellers, if you walk

1 behind a small aircraft or even a C-130 or something
2 with a propeller on it, the engine is adding energy
3 to the air it's moving, thousands of horsepower
4 sometimes so that when you walk behind them you are
5 blown, you can feel it, or it will move small
6 objects.

7 In a wind turbine it is subtracting
8 energy from that laminar flow of air through it so
9 that the air behind it is -- has probably -- most
10 likely has less velocity but it will be coming at a
11 different direction.

12 The way I would describe it would be if I
13 was on the freeway and you change lanes and get
14 behind a semi, you'll feel some disruption but,
15 behind the turbines, it's going to be not 70 miles an
16 hour but it's going to be 20 miles an hour, whatever
17 the ambient air flow is, so it's not going to be
18 downwash and it's not going to be extremely
19 turbulent, it's just going to be disrupted air.

20 And if a helicopter was flying through it
21 at speed for some reason, it might get a bump. But
22 if you're taxiing, air taxiing, you can come up to an
23 area like that and sense it and simply stop if you
24 don't like it. Helicopters can move at 3 knots if
25 they have to.

1 Does that help answer your question, sir?

2 Q. Do you know how fast the wind turbine's
3 blades travel through the air?

4 A. No, sir.

5 Q. So then how do you know whether the
6 turbulence created by a wind turbine would be
7 equivalent to a 20-mile-per-hour vehicle?

8 A. I have a degree in engineering for one
9 thing, and it was an example, an estimate.

10 Q. Okay. So it's just for the sake of
11 illustration.

12 A. Yes, sir.

13 Q. Okay. How far away does an air ambulance
14 helicopter have to stay away from a turbine for
15 safety purposes?

16 A. The pilot is responsible for the safe
17 distances and the proximity that he comes to fixed
18 and moving objects. "Safe" is relative and the only
19 one that counts is the pilot's objective view of it.
20 I could provide you with examples of some of the
21 things they do, but if you've seen pictures of
22 helicopters operating either around trees, power
23 lines or bridges, you can get a sense of what they're
24 comfortable with.

25 Q. Well, you were, at one time, a pilot in

1 an air ambulance helicopter, right?

2 A. Yes.

3 Q. Based on your standard for yourself, how
4 far away would you stay from the wind turbines?

5 A. I'd be comfortable quite close to them.
6 You can -- most -- by way of example, most operators
7 land their helicopters next to the hangar at night.
8 When we land in front of a hangar so they can tow
9 them in for maintenance, you're only 40 feet from a
10 building. The turbine, in my mind, is a fixed
11 object. It's no different than that.

12 When I've searched as a Coastie, as a
13 Coast Guard rescue pilot when I've searched power
14 line bases or bridge supports over the different
15 rivers and bays, you can get very close to the bridge
16 pylons comfortably.

17 Q. But the airport hangar has no rotating
18 turbine blades, right?

19 A. In the interest of safety, I don't
20 believe it matters. You can't touch anything with
21 the rotor blades on the helicopter. So any fixed
22 object in the path plane of that rotating disc
23 presents the same hazard to me.

24 MR. VAN KLEY: I have no further
25 questions.

1 ALJ SANYAL: Okay. Redirect?

2 MS. BAIR: I have no questions. Thank
3 you.

4 ALJ SANYAL: I'm sorry.

5 MR. PARRAM: Your Honor, I do have a
6 housekeeping matter that, I apologize, I failed to do
7 earlier. As of yesterday, Mr. Marcotte did review
8 some documentation when he came into town, and I
9 wanted to be able to provide the documents to
10 counsel. I provided some earlier and then some was
11 just dropped off recently. There's two deposition --
12 two additional deposition transcripts and some
13 testimony from prior Board cases.

14 I want to be able to hand that out to
15 counsel to be responsive to a discovery request about
16 documents he reviewed in preparation for testimony.
17 He didn't review it before his Direct Testimony was
18 drafted and filed, but I do want to provide it to
19 counsel now. And if there's any additional questions
20 based on those documents, I want to give the parties
21 an opportunity.

22 ALJ SANYAL: Sure. Why don't we go off
23 the record for about five minutes, you can hand out
24 the documents and see if there are any additional
25 questions based on that.

1 (Off the record.)

2 ALJ SANYAL: Let's get back on the
3 record.

4 - - -

5 REDIRECT EXAMINATION

6 By Mr. Parram:

7 Q. So, Mr. Marcotte, Prosecutor DeVine asked
8 you some questions about whether or not flying
9 helicopters in the project area would be more
10 dangerous or having wind farms, whether or not flying
11 within the project area, whether wind turbines would
12 result in it being more dangerous for helicopter
13 pilots. You indicated you didn't believe so. Could
14 you explain why?

15 A. I'm not sure just how much helicopter
16 traffic there is through this area. It looks very --
17 not residential even. It looks very agricultural to
18 me. I don't see an awful lot of intersections.
19 There's not a lot of high-density population where I
20 would expect the Saturday-night traffic accidents so
21 that, in general, I would think this is a
22 lesser-traveled area than other portions of the
23 country that I've flown in like downtown Oakland, San
24 Francisco, and the rest.

25 It doesn't have the distraction of hills

1 and mountains and terrain like that, so this is a
2 very comfortable area to operate helicopters in.
3 It's relatively flat land.

4 The -- I don't think it would increase
5 danger, was the question I believe, or risk in that
6 manner because these things aren't going to grow up
7 like mushrooms in the dark. They're going to take
8 years to develop.

9 Over those years, on clear days like
10 this, the existing pilots are going to be able to fly
11 the area, see what exists, where they're digging,
12 where it's going to be, how high it is, they're going
13 to get ranges, bearings, routes of traffic on their
14 normal areas of progress.

15 The ops bosses, the people that control
16 flights for the operators, will be including what
17 they want in the training for the new pilots.
18 They'll -- in general they will have the -- they will
19 get to know the bearings of these obstacles that are
20 going to be along the way now. They will know that
21 if they're just a few degrees off this heading or
22 that heading, they will be clear of them when they
23 head out.

24 So it's not like you're going to come up
25 to an obstacle and climb vertically over it, or come

1 up to it and deviate 5 miles to one side. They're
2 just going to take a heading that's 4 or 5 degrees
3 off to one side and start out.

4 There will be very few -- as time goes on
5 there won't be delays involved. They will just --
6 and if it comes to the point where they have to do
7 something in the vicinity of one of these areas,
8 these turbines are far enough apart that they can be
9 comfortably circumnavigated by experienced pilots
10 and, in general, the EMS pilots are not novices.
11 They start off with higher-time pilots and just train
12 them for the local areas.

13 So I don't -- as -- as the development of
14 the project goes on, it will be a known quantity and
15 even in the periods of low visibility at nighttime it
16 won't be an overwhelming problem because, in today's
17 aviation, these fellas are going to have the
18 county -- as I understand it, your county EMS people,
19 that get the 911 calls, already have a GPS location
20 of where that is with a visual display, so they will
21 be able to call out you've got one at this point and
22 that should include -- and then that's passed to the
23 operator who dispatches it. These operators have
24 flight following groups who are going to be
25 monitoring their progress and the known areas that

1 these are going to be built in.

2 And, in the cockpit, they're going to
3 have GPS displays that show them that they've got
4 something that sticks up into their airspace and warn
5 them about. So it's not going to be a surprise
6 that -- that is -- that increases their danger level.
7 They're just going to see and observe, the way they
8 are now, a different situation and then react to it.

9 And even if they have to operate in the
10 proximity of them, helicopters, unlike fixed-wing,
11 have the ability to slow down. They can just slow up
12 and observe it, evaluate it, make sure they can see
13 it properly. It's not a situation where you have to
14 fly into something like a fixed-wing.

15 So I don't see it as something that's
16 going to be an increase in risk after the operational
17 awareness of where they are is displayed, and that's
18 going to -- that will be from the minute they start
19 breaking ground until the paint dries on the new
20 installation.

21 Is that clear enough?

22 Q. Thank you.

23 There was also a question about whether
24 or not bad visibility or low ceilings can cause a
25 delay because of alternate flight paths a pilot might

1 have to take. Even if there isn't a wind farm
2 project in an area, is it true that low visibility or
3 low ceilings can have a delay on helicopter pilots?

4 A. And if there was a trauma center located
5 in the center of it, that may be so, but if the
6 trauma center is located, what is it, 40 miles away
7 or 40 minutes of flight time away, the delays will
8 not be significant.

9 These helicopters travel between 2 and
10 3 miles each minute. To deviate half a mile out of
11 the way to avoid having to fly directly over a wind
12 turbine is not significant. It's not going to -- as
13 time goes on and they -- everybody gets used to what
14 exists. It's not going to be noticeable in my mind.

15 MR. PARRAM: Thank you.

16 I have no further questions, Your Honor.

17 ALJ SANYAL: Any recross based on the
18 responses?

19 MR. DeVINE: I have no recross. Thank
20 you.

21 MR. VAN KLEY: I do.

22 - - -

23 RECROSS-EXAMINATION

24 By Mr. Van Kley:

25 Q. Have you ever driven State Route 19

1 through the project area?

2 A. No, sir.

3 Q. Are you familiar with that route?

4 A. No, sir.

5 Q. So you have no basis then to say that you
6 would not expect many accidents on that road.

7 A. I never said that.

8 Q. Okay. Do you know that the size of the
9 project area is 24,000 acres?

10 A. That would not surprise me, but I don't
11 know it.

12 Q. How long does it take an air ambulance to
13 fly halfway around 24,000 acres?

14 A. The project -- I don't deal with
15 distance. An acre is not a distance to size. The
16 project is about 10 miles across at its widest
17 breadth. If you flew up to that in -- if you flew up
18 to one edge of it, you wouldn't have to go around.
19 If you flew up to the middle of that, you would have
20 5 miles to go out of the way. If you flew right up
21 to it and then stopped, you would have to deviate
22 5 miles at the most.

23 You know, in an Augusta 109, you can
24 travel 3 miles in 1 minute; so it would be a minute
25 and a half if you fly right up to it.

1 If, at your departure point, you deviate
2 5, 10 degrees, you don't have to deviate at all, you
3 just go to the edge of it and make another 4-,
4 10-degree heading change and you go around it. It
5 depends on how far back you are at the starting point
6 of your deviation.

7 Does that -- does that make any sense to
8 you? It's hard to do without a chart.

9 Q. Have you ever had any conversations with
10 medical doctors, for example, to determine
11 how-many-minute delay will increase the risk for
12 patients being delivered to the hospital?

13 MR. PARRAM: Can I have the question
14 reread?

15 MR. VAN KLEY: I can rephrase it.

16 Q. Are you aware of any medical information
17 for which you have the expertise to opine that would
18 tell you whether a delay in delivering a patient to a
19 hospital, in any number of minutes, would increase
20 the risk for that patient?

21 MR. PARRAM: Your Honor, I'm going to
22 object because we haven't tendered this witness to
23 provide any medical opinion or, as far as I'm aware,
24 any medical expertise where he could provide a
25 medical opinion, so.

1 ALJ SANYAL: But he has EMS flying
2 experience so I'm going to let him respond to the
3 extent he knows.

4 A. Time is critical in many transports. The
5 question to you would be whether it's significant or
6 not, the delays would be significant. I'm sure, in
7 some instances, delays would be unacceptable, any
8 delays would be unacceptable.

9 I'm not certain that the number of
10 flights that are going to pass through that area
11 would reach the level of significance that also
12 involve delays of any kind because, on days like
13 this, you'll be able to see those turbines from miles
14 away and that's either during the break-in period
15 when the pilots are getting used to them, and at
16 night you'll know where they are from miles away, so
17 I don't -- I don't anticipate significant delays.

18 MR. VAN KLEY: I have nothing further.

19 ALJ SANYAL: Okay. I have one question.

20 So, Mr. Marcotte, if you'll turn to
21 page 3 of your testimony and then on line 62 and 64
22 you say "Just as instruction on flying near power
23 lines is an essential part of the safety training for
24 pilots, flying near wind turbines should already be a
25 part of all flight training programs, particularly

1 for EMS crews." So are you suggesting that you know
2 that this training is already part of training
3 programs or this is just a suggestion on your part?

4 THE WITNESS: It would be an awareness on
5 my part. The -- and it would be more of a suggestion
6 to answer your question.

7 By way of example, when you're dealing
8 with pilots in a mountainous area, you have to tell
9 them how to operate around power lines. We have
10 power line strikes occasionally. The old thought is
11 if you fly over the tops of the towers, you won't hit
12 the wires. That's not necessarily true because the
13 engineers put tension wires across the tops of them.

14 So the pilots that are being trained in
15 areas of operation where power lines are a
16 significant hazard or a significant presence, I would
17 say presence, then they get more sophisticated
18 training in terms of area familiarization or chart
19 training so they know where they are.

20 And the same -- I would expect the same
21 thing with an EMS operator that, when you come in,
22 it's going to be on the wall of the operating office.
23 Before you get in your helicopter to go anywhere for
24 the day, there's going to be a chart of the local
25 operating area, and I would expect this area will be

1 highlighted on those charts so it will become part of
2 their training exposure.

3 ALJ SANYAL: Just to clarify, if there
4 are wind turbines built in this area, you will expect
5 that it will become common knowledge and part of the
6 specialized training that EMS crews receive?

7 THE WITNESS: Yes, ma'am.

8 ALJ AGRANOFF: Mr. Marcotte, just so I
9 understand the context for your testimony. Are your
10 responses premised off of a knowledge of the location
11 of the Life Flight helicopter as to where that would
12 be and how much time it would take to get there?

13 THE WITNESS: I'm not sure I'm following
14 the question. You mean the Life Flight base of
15 operations?

16 ALJ AGRANOFF: Yes.

17 THE WITNESS: All I know is it's near
18 Tiffin.

19 ALJ AGRANOFF: You wouldn't know where
20 they were going to.

21 THE WITNESS: I would imagine they fly
22 everywhere they're needed.

23 ALJ AGRANOFF: Right. But in terms of
24 which medical facility they would potentially be
25 taken to.

1 THE WITNESS: I think they go up into the
2 northwest, most of the time, to the trauma facility.

3 ALJ AGRANOFF: Which would be located
4 where?

5 THE WITNESS: As far as I -- is it
6 Toledo?

7 ALJ AGRANOFF: I'm asking you.

8 THE WITNESS: I don't -- I'm not certain.

9 ALJ AGRANOFF: Okay.

10 THE WITNESS: But I don't believe it's in
11 this area of the wind farm.

12 ALJ AGRANOFF: And you don't know what
13 the estimated --

14 THE WITNESS: I know the second one was
15 in Columbus that they would go to. I'm sorry.

16 ALJ AGRANOFF: Okay. Thank you.

17 MR. PARRAM: Your Honor, there is one
18 more item I wanted to clarify. There is something
19 that needs to be modified in Mr. Marcotte's
20 testimony. There is a sentence, at the bottom of
21 Question -- Answer 5, about a copy of his curriculum
22 vitae attached to his testimony. There's no
23 attachment there to his testimony, there wasn't
24 supposed to be, so I wanted to indicate to the
25 witness or have that modified.

1 Mr. Marcotte, is that your understanding
2 of the last sentence that it should be stricken?

3 THE WITNESS: If it's not attached, yes,
4 that's my understanding.

5 ALJ SANYAL: What page are you on? I'm
6 sorry.

7 MR. PARRAM: I'm on page 2 and it's the
8 last sentence of Answer 5.

9 ALJ SANYAL: Is there a page 2?

10 ALJ AGRANOFF: Page 2 of his testimony.
11 So the sentence would end at the word "industry" with
12 respect to the answer of Question 5?

13 MR. PARRAM: Question 5, "Please
14 summarize your educational background and experience
15 flying helicopters."

16 ALJ AGRANOFF: Right, and then the answer
17 would end at --

18 MR. PARRAM: "Oil industry."

19 ALJ AGRANOFF: -- "oil industry."

20 MR. PARRAM: Yes, Your Honor.

21 ALJ SANYAL: Thank you.

22 ALJ AGRANOFF: Based on my limited
23 question or Ms. Sanyal's question, was there any
24 follow-up from any of the parties?

25 Okay.

1 ALJ SANYAL: Thank you.

2 MR. PARRAM: Your Honor, I move for the
3 admission of Applicant Exhibit 24.

4 ALJ SANYAL: Any objections?

5 Hearing none, it is admitted.

6 (EXHIBIT ADMITTED INTO EVIDENCE.)

7 ALJ SANYAL: Let's go off the record.

8 (Recess taken.)

9 ALJ SANYAL: Let's get back on the
10 record.

11 Mr. Van Kley, the floor is yours.

12 MR. VAN KLEY: Okay. Let's find the next
13 report and that one would be listed on page 4 of the
14 witness's testimony. It's entitled "Raptor Nest
15 Survey, Republic Wind Farm," prepared by BHE.

16 ALJ SANYAL: Is that Exhibit M to the
17 December --

18 MR. VAN KLEY: It should be Exhibit L, I
19 believe. Let me just doublecheck. I think it's
20 Exhibit L.

21 MS. FLINT: What's the name of it again?

22 MR. VAN KLEY: "Raptor Nest Survey,
23 Republic Wind Farm."

24 ALJ AGRANOFF: 2011?

25 ALJ SANYAL: It is Exhibit L.

1 THE WITNESS: Okay.

2 - - -

3 PAUL KERLINGER, Ph.D.

4 being previously duly sworn, as prescribed by law,
5 was examined and further testified as follows:

6 CROSS-EXAMINATION (Continued)

7 By Mr. Van Kley:

8 Q. All right. This is one of the reports
9 that you cite in your testimony, correct?

10 A. Yes.

11 Q. And it's entitled "Raptor Nest Survey,
12 Republic Wind Farm"?

13 A. Correct.

14 Q. It has a date of May 2011 on it?

15 A. Yes.

16 Q. Did the survey described in this report
17 include any surveys to locate eagle nests?

18 A. I believe -- eagles are raptors and
19 generally when you do a raptor survey, looking for
20 nests, you would find eagle nests as one of those
21 types of nests. In other words, yes.

22 Q. Were any eagle nests detected by the
23 survey that is described in this document?

24 A. I don't believe so. I'm still looking
25 though.

1 Actually, there were bald eagle nests
2 found outside of the project boundary and, if you
3 look at Figure 1, there's one in the northwest
4 outside of the 2-mile boundary, and one -- that's the
5 only one I can find.

6 Oh, another one due west. I believe it's
7 on the other side of the Sandusky River. It's out
8 that way. South of the transmission line corridor.

9 Q. What were the dates of the survey that is
10 described in this report?

11 A. 17 through 25, March, 2011.

12 Q. Turning your attention to the Executive
13 Summary. If you could find that, it would be --

14 A. Yes.

15 Q. Okay. You found it, page 1 of the
16 document. It has the page number 1 at the bottom of
17 the page. It's not the first PDF page of the
18 document.

19 A. Yes.

20 Q. Directing your attention to the first
21 paragraph of that Executive Summary, do you see where
22 it says that the survey was done in the Republic Wind
23 project area and the 2-mile surrounding area?

24 A. Yes.

25 Q. Okay. And if you keep your finger there

1 and go back to Figure 1.

2 A. Yes.

3 Q. You will see that that 2-mile surrounding
4 area is described as the 2-mile buffer?

5 A. The yellow dashed line?

6 Q. Yeah. In the legend. The legend of
7 Figure 1.

8 A. Yes.

9 Q. You'll see that the 2 -- the 2 miles
10 around the project area are referred to there as the
11 2-mile buffer?

12 A. Yes.

13 Q. What was the purpose for doing the survey
14 within the 2-mile buffer?

15 A. To locate raptor and eagle nests.

16 Q. And why was that important?

17 A. Buffer areas can sometimes reveal things
18 that the actual project area doesn't reveal and it's
19 always good to have a buffer or at least kind of a
20 pad so you're sure of what's in or near the project
21 site.

22 Q. Is that area also surveyed because the
23 raptors, including the eagles, in that 2-mile buffer
24 zone could fly into the project area?

25 A. I imagine that they could fly into the

1 project area whether they were in the 2-mile or in
2 the project itself.

3 Q. Looking at Figure 1, do you see the
4 footprint of the Republic Wind project outlined on
5 that figure?

6 A. I do.

7 Q. And that's a different configuration for
8 the project area than the configuration we have today
9 for Republic Wind, correct?

10 A. Yes.

11 Q. Do you know how much of the area, that
12 was surveyed as part of this study, is located
13 outside the present-day footprint of the Republic
14 Wind project area?

15 A. I know in some parts of it it is outside
16 the boundary, at least the 2-mile buffer is.

17 Q. And how about the actual footprint of the
18 project as shown by Figure 1, is part of it outside
19 the current day boundaries of the project area?

20 A. I have to take a look at another part of
21 the map for reference. I think some of it may be and
22 some of it isn't. Is it okay if I look at this other
23 map?

24 Q. Sure.

25 A. I'm looking at the map that shows the

1 Republic and Emerson, and when you include the 2-mile
2 buffer, most of the Republic site is covered. Some
3 parts of Sandusky County are outside of the boundary
4 of the project, the more updated project, the project
5 in question now, but most of it would be covered by
6 the 2-mile buffer at least.

7 ALJ AGRANOFF: So you're saying the
8 2-mile buffer in Figure 1, relative to Sandusky
9 County, is wider than the current project?

10 THE WITNESS: That's correct. It extends
11 east to west more than the current project which --
12 and I don't think -- I think it goes up just as far
13 at the northernmost into Sandusky.

14 ALJ AGRANOFF: Is there a reason why
15 another study was not performed to reflect the
16 more-current situation?

17 THE WITNESS: I can't answer that
18 question. I don't know.

19 ALJ SANYAL: I think he's --

20 MR. VAN KLEY: Should I continue?

21 ALJ SANYAL: Yes, yes.

22 MR. VAN KLEY: May I approach the witness
23 with another exhibit?

24 ALJ SANYAL: Yes, you may.

25 MR. VAN KLEY: And I believe we are at --

1 ALJ SANYAL: I believe 16.

2 MR. VAN KLEY: Okay.

3 (EXHIBIT MARKED FOR IDENTIFICATION.)

4 Q. (By Mr. Van Kley) I've handed you what
5 has been marked as LR Exhibit 16. Do you recognize
6 this as a copy of the Technical Memorandum listed at
7 the bottom of page 7 of your testimony?

8 A. Yes.

9 Q. Now, the fieldwork, that is described in
10 LR Exhibit 16, did not include a nest survey, right?

11 A. No.

12 Q. What was included in this fieldwork, as
13 described in Exhibit 16, was the monitoring of one
14 eagle nest?

15 A. Yes.

16 Q. And where was the location of this eagle
17 nest relative to the Republic Wind project?

18 A. It was east of the project as it says in
19 the first paragraph. Outside the boundary but nearby
20 a half a mile as it says.

21 Q. And what were the dates this fieldwork
22 was conducted?

23 A. The dates were June 21 through July 27.

24 ALJ AGRANOFF: Of what year?

25 THE WITNESS: 2017. Sorry.

1 Q. And during -- how many days during that
2 period was the monitoring conducted? I don't
3 actually mean the number of days but how frequently
4 was it conducted. If you look at the bottom of
5 page 1.

6 A. It says six weeks, and I'm looking for
7 the --

8 Q. If you look at the bottom of page 1, you
9 see the sentence that says "Each survey was conducted
10 for 60 minutes twice per week."

11 A. Yes. Thank you.

12 Q. And how many surveys were conducted?

13 A. I believe 12. 48 hours of observations
14 at those four points.

15 Q. So what was the total number of hours of
16 observation of this eagle nest?

17 A. I believe it was 48 hours.

18 Q. That's the total of all of the
19 observations?

20 A. It says in the Results section, first
21 sentence, "Four adult bald eagle observations were
22 recorded during 48 hours of the fixed-point eagle
23 nest monitoring."

24 Q. Okay. How close must a bald eagle nest
25 be to a turbine site in order for that presence to be

1 considered relevant to the safety of the eagles?

2 MS. FLINT: Objection. It assumes a
3 fact. I think we need some more information.

4 MR. VAN KLEY: I'll reword it.

5 ALJ SANYAL: Thank you, Mr. Van Kley.

6 Q. (By Mr. Van Kley) Earlier we had a
7 conversation about the 2-mile buffer zone that was
8 surveyed around the project area in one of the
9 reports. So, building on that conversation, I was
10 wondering whether eagle nest data, beyond the 2-mile
11 buffer zone, might also be useful information to have
12 in determining whether a turbine project would harm
13 the eagles.

14 A. I don't really know. The empirical work
15 on this is minimal because bald eagle fatalities have
16 been minimal. If you know of studies where this
17 information is, I would love to see it.

18 Q. Let's put the question in a different way
19 then. How far out, beyond a project area for a wind
20 turbine project, would a nest, an eagle nest have to
21 be for you to conclude that the eagles from that nest
22 are not likely to travel into the project area?

23 A. I'm going to give you the same answer I
24 gave before because I'm an empiricist, I rely on
25 science, and I like to see some of that information

1 and, again, the sample size of eagles that have been
2 killed by wind turbines is so small that there
3 doesn't seem to be a correlation between distance of
4 a nest, if it was a nest, if it were a nesting bird,
5 and fatalities of eagles.

6 Q. Okay. So what's the answer to my
7 question then?

8 A. I believe I gave the answer. It's not
9 possible to answer that because of the small sample
10 size.

11 Q. Well, the question was whether you know
12 how far beyond a wind project boundary an eagle is
13 likely to traverse in order to enter the project
14 area.

15 A. That's a different question, I believe,
16 and I'm not sure I understand what you're getting at
17 or the question you're asking.

18 Q. Well, what is the travel range for a bald
19 eagle?

20 MS. FLINT: Objection. That's already
21 been asked and answered a couple hours ago.

22 ALJ SANYAL: You know, I actually don't
23 remember that particular question, so I'm going to
24 let you answer that.

25 A. I remember the question and I remember

1 the answer. The answer, I believe, was it varies
2 depending upon where the eagle nests are. If an
3 eagle lives next to a salmon stream, it doesn't have
4 to travel far; if it doesn't, it may have to travel
5 far. So it varies dramatically.

6 Also you have to realize these eagle
7 can't simply travel where they want to travel because
8 there are other territories between them. Eagles
9 kill each other on occasion. That's about the
10 sixth-highest cause of eagle mortality in this
11 country is other eagles killing eagles because they
12 enter their territory. They're not nice neighbors.

13 Q. Would you go to page 6 of your testimony.
14 I'd like to refer you to the last sentence in the
15 second paragraph on that page.

16 A. Yes.

17 Q. Where you stated "Eagles did make flights
18 across the project area." In that sentence are you
19 referring to the Republic Wind project area or the
20 Emerson West project area?

21 A. Both.

22 Q. Let's go to page 11 of your testimony.

23 ALJ SANYAL: Was it page 9?

24 ALJ AGRANOFF: 11.

25 ALJ SANYAL: 11. Thank you.

1 A. Yes.

2 Q. Go to the third paragraph, line 17, where
3 you state "The recommended condition as written
4 conflicts with the TAL."

5 A. Yes.

6 Q. I'm not sure that I understand what you
7 believe the conflict is, so could you explain that?

8 A. Yes. We have to go to the TAL to do
9 that, if I might?

10 Q. Do you have it in front of you?

11 A. I do not.

12 Q. Okay. That would be attached to
13 Mr. Carr's testimony, I believe. If we have that
14 available?

15 MR. PARRAM: One second, Your Honor -- or
16 Mr. Van Kley.

17 MR. VAN KLEY: Mr. Carr's testimony, his
18 written testimony. I believe the TAL was attached to
19 his testimony.

20 MS. FLINT: What are you referring to
21 again, Mr. Van Kley?

22 MR. VAN KLEY: The TAL.

23 ALJ AGRANOFF: Just so the record is
24 clear, the "TAL" stands for the Technical Assistance
25 Letter?

1 MR. VAN KLEY: Yes.

2 A. If you look at the condition, the
3 condition actually asks for the Applicant -- requires
4 the Applicant to comply with the TAL until an
5 incidental take permit has been obtained.

6 In fact, the TAL and the terms have been
7 agreed upon, thereby reducing potential impacts to
8 both northern long-eared and Indiana bats to
9 virtually zero if not zero.

10 The Applicant has complied with all of
11 the terms, has agreed to all of the terms in the term
12 sheet at the back of the TAL, so an incidental take
13 permit is not necessary. And that's the conflict.
14 Maybe I didn't use the correct word but I think
15 that's the point.

16 Q. Okay. I understand it now.

17 Do you know whether birds collide with
18 guide wires that have been erected to steady towers?

19 A. I've actually published on that topic
20 and, yes, in fact probably 85 to 90 percent of
21 collisions at communication towers are with the guide
22 wires.

23 Q. With regard to a weather tower, that is a
24 meteorological tower, is there another way, besides
25 using guide wires, to provide the necessary support

1 to your knowledge?

2 A. Absolutely.

3 Q. What would that be?

4 A. You have a free-standing tower and this
5 is -- this has been the practice for close to a
6 decade in the wind industry back when we started
7 recommending it. I did my work on towers and guide
8 wires back in 2005, I finished that study which the
9 Fish and Wildlife Service, in communication with the
10 FCC and the FAA, have changed a lot of their guidance
11 for towers because they wanted to protect more birds.

12 Q. Did you know that Republic Wind uses
13 guide wires on the meteorological towers that have
14 been erected in the tower area?

15 A. I have been told the permanent
16 meteorological towers will be freestanding, the three
17 towers.

18 Q. And what about the towers that are out
19 there now?

20 A. They will be taken down, I assume.

21 Q. In how many cases, whether they're
22 administrative cases or lawsuits, have you testified
23 in matters that involve wind turbines?

24 A. I have participated, where I have been
25 sworn in as a witness, roughly 40 times. Those

1 include depositions.

2 Q. And in every one of those cases did you
3 provide testimony on behalf of the wind developer?

4 A. Yes.

5 Q. At approximately what time period did you
6 start testifying for wind companies?

7 A. I believe 1994 and then 1995 -- '94 I
8 didn't, I wasn't called, I was in the hearing but I
9 was never called, but '95 I was.

10 MR. VAN KLEY: I have no further
11 questions.

12 ALJ SANYAL: Staff?

13 MR. EUBANKS: Just a few clarifying
14 questions.

15 - - -

16 CROSS-EXAMINATION

17 By Mr. Eubanks:

18 Q. I wanted to refer to your testimony,
19 Question 15 and Answer 15. I guess they also include
20 Question and Answer 16 as well. Looking at Question
21 and Answer 16, you request that the definition for
22 "preferred nesting habitat type" to be the
23 definition -- ODNR's definition; is that correct?

24 A. Yes.

25 Q. Is that a statutory definition you're

1 referring to?

2 A. I'm not a lawyer. I don't understand
3 what a statutory definition is.

4 Q. Well, where did you see the definition,
5 ODNR's definition?

6 A. They have descriptions of these different
7 species, these three species I was talking about, on
8 their website.

9 Q. So you're talking about the definition
10 they would have on their website --

11 A. Yes.

12 Q. -- for "preferred nesting habitat type."

13 A. Yes.

14 Q. Okay. And when did you view the website?

15 A. A month, two months ago --

16 Q. Okay.

17 A. -- when I was prepping testimony.

18 Q. And if, indeed, that was the definition
19 that Staff was referring to when it wrote its
20 condition, you would have no other problem with the
21 condition?

22 A. No. My -- can I tell you what my problem
23 with the definition was? Would you like that? It's
24 in the --

25 Q. It's in your testimony, yes.

1 A. Okay.

2 Q. But I'm saying if, indeed, the definition
3 that Staff was referring to was in agreement with the
4 definition on ODNR's website, you would have no other
5 problem with the condition?

6 A. I don't think so. I'd have to look at
7 that.

8 Q. Then I wanted to go into your testimony
9 where you talk about Condition 40. I believe that is
10 Question and Answer 18.

11 A. Yes.

12 Q. The second sentence in your answer reads:
13 "These agencies have acknowledged that no other eagle
14 use surveys are necessary." Do you see that in your
15 testimony?

16 A. That's on page 13?

17 Q. Page 12.

18 A. 12. Oh, I'm sorry.

19 Q. Answer 18, second sentence.

20 A. Yes.

21 Q. Are you referring to any particular
22 documents there?

23 A. In the technical document that was -- I
24 used for one of my -- a few pages back is an e-mail
25 from ODNR saying that all, basically all requirements

1 were fulfilled. And if it weren't 5:20, I would have
2 found it by now.

3 Q. Would that be the same e-mail that you
4 refer to later on in the paragraph, the final
5 sentence, the January 25th, 2018 e-mail?

6 A. Yes. Yes, it would be.

7 Q. Okay. And you said -- first, is that
8 e-mail part of the Application?

9 A. I don't know. I think earlier it was
10 said that it wasn't part of the Application.

11 Q. Has it been made an exhibit?

12 A. I believe so because these were copied
13 and handed out. Oh, it's Exhibit 23. I'm sorry.

14 Q. So it's Exhibit 23 you're referring to?

15 A. Yes.

16 Q. Okay. Where exactly in the e-mail are
17 you referring to?

18 A. In the top e-mail on the front page, it
19 says Jennie Geiger and it says from Erin Hazelton,
20 and the text of the very short -- "Hi Jennie, These
21 surveys meet ODNR's pre-construction monitoring
22 protocols for the new project boundary."

23 Q. And you interpreted that to mean that
24 ODNR is acknowledging that no further eagle use
25 surveys are necessary?

1 A. I'm just going from what it says, no
2 other pre-construction monitoring protocols.
3 That's -- it says it straight out and that's -- if
4 it's coming from ODNR, I guess I just believed it.

5 Q. I was just -- I was looking for the exact
6 words that are in your testimony. You're saying
7 there's no document that uses the exact words that
8 you state in sentence 2, correct?

9 A. No, not that I know of. Not the exact
10 words. That was for 40? I mean 18. Yeah, "These
11 agencies have acknowledged...." Okay.

12 Q. Similarly, you say "these agencies." So
13 is there a document where U.S. Fish and Wildlife is
14 telling you that no further eagle use surveys are
15 necessary?

16 A. I don't recall seeing that exact
17 sentence. No, I just don't know. I went by the ODNR
18 e-mail.

19 Q. So it's fair to say, instead of saying
20 "these agencies," we could just say "ODNR"?

21 A. Yes. May I check one thing?

22 Q. Sure.

23 A. There was a meeting between U.S. Fish and
24 Wildlife Service on August 27, 2016, and I just have
25 the details of this -- oh, I'm sorry, it's the same

1 technical memo with Erin Hazelton, Exhibit 23.

2 Q. Still Exhibit 23?

3 A. Yeah. August 27, 2016, U.S. Fish and
4 Wildlife Service and Apex meet to discuss surveys
5 conducted to date and confirm survey completion for
6 OPSB/WEG, Wind Energy Generation, compliance.

7 Q. I'm sorry, what page are you on?

8 A. Sorry. Page 2 of the attached document
9 to Erin Hazelton. It's the technical memo.

10 Q. Is it under what is labeled "Table 1"?

11 A. Table 1, yes.

12 Q. Okay. And you're referring to the second
13 paragraph?

14 A. I'm referring to, on page 2, there's a
15 Table 1, it's the third from the bottom row,
16 August 27.

17 Q. Okay.

18 A. "Confirm survey completion for OPSB."

19 Q. Who wrote that description?

20 A. That was written by two people -- one
21 person from WEST named Goniela Iskali. Western
22 EcoSystems Technology, that was one of the
23 consultants for the Republic project.

24 Q. Okay. And -- okay. And that was in
25 2016.

1 A. Yes.

2 Q. Okay. So it's fair to state that -- and
3 the correspondence with ODNR you're relying on,
4 that's 2018?

5 A. Correct.

6 Q. So even if I interpret those statements
7 the same as you interpret those statements, just for
8 sake of argument, neither ODNR or U.S. Fish and
9 Wildlife would have any -- would be basing those
10 statements on information that would have been
11 gathered during this hearing.

12 A. I'm sorry, I didn't -- the information
13 gathered during this hearing?

14 MS. FLINT: Objection. It sounds to me
15 like maybe Counsel is asking a legal or procedural
16 question.

17 MR. EUBANKS: I'm not.

18 MS. FLINT: I'm not sure the witness
19 would know.

20 MR. EUBANKS: There's no legal or
21 procedural --

22 ALJ SANYAL: Okay. I actually need the
23 question read back because I don't -- so may I have
24 the question read back?

25 (Record read.)

1 ALJ SANYAL: Overruled. You may answer
2 to the extent you know.

3 A. I don't know.

4 Q. Did the Applicant ever voluntarily
5 request assistance in the development of an Eagle
6 Conservation Plan from U.S. Fish and Wildlife?

7 A. No. The meetings, the original meetings,
8 the early-on meetings were not specifically a focus
9 on going after one. A lot of it was to determine
10 whether one was needed or not. But the Fish and
11 Wildlife Service does offer help if one is needed.
12 They do the calculations after you do the fieldwork
13 which is the fieldwork that was done. They also tell
14 you whether or not, once the fieldwork is done,
15 whether or not it's likely that you're going to need
16 such a permit.

17 I've actually done a couple of these,
18 done the fieldwork, and sometimes the fieldwork shows
19 that you don't need a permit and they'll tell you
20 that. In some parts of the country in some locations
21 like in Maryland or along the ridges, the Appalachian
22 ridges where you have a lot of eagle migration,
23 they're not even requiring or asking for permits
24 anymore because migrating eagles don't collide with
25 turbines. There's a thousand turbines there and they

1 don't have fatalities.

2 But in other cases they'll definitely say
3 you have a lot of eagle use or more eagle use than
4 we'd like, so you should go after an ECP, I mean an
5 Eagle Conservation Plan.

6 Q. I believe your answer initially was no,
7 they didn't request --

8 A. No.

9 Q. -- voluntary assistance.

10 A. No. I shouldn't say no because I don't
11 know. I wasn't in those meetings.

12 Q. Okay. Fair enough. And so that leads to
13 my next question. The Applicant did have some
14 face-to-face meetings with U.S. Fish and Wildlife,
15 correct?

16 A. Yes.

17 Q. And they would have also had telephone
18 conversations with U.S. Fish and Wildlife, correct?

19 A. Yes.

20 Q. When you state in your testimony that you
21 reviewed correspondence, you're talking about written
22 correspondence, correct?

23 A. Yes.

24 Q. You would not have reviewed any telephone
25 calls. They wouldn't have been recorded so you could

1 review them, right?

2 A. No.

3 Q. And, further, you wouldn't have reviewed
4 any meetings, they weren't recorded so that you could
5 review the conversations that took place during the
6 meetings, correct?

7 A. No. There's a list of the meetings in
8 that Table 2 that I was showing you before, if want
9 to get an idea of how many and when.

10 Q. You're right. In the meetings that you
11 showed, they had summaries of the discussions, right?

12 A. Yes.

13 Q. But beyond those summaries, you don't
14 know the conversations that took place during the
15 meetings, right?

16 A. Right.

17 Q. So, sitting here today, you don't know
18 if, during those meetings or on the telephone,
19 whether or not U.S. Fish and Wildlife suggested that
20 an Eagle Conservation Plan was necessary for this
21 project?

22 A. I probably would have heard about that,
23 but I can't say I know for sure.

24 Q. Okay. At the end of your -- the last
25 paragraph, you say "In summary, proposed Condition

1 No. 40 is not supported by the facts...." I believe
2 when you say "facts" you're speaking about the
3 general statement that you now made several times
4 that, you know, when it comes to bald eagles, they
5 just don't run into turbines.

6 A. I never said they don't.

7 Q. Okay.

8 A. Because there are small numbers that have
9 over the years so, I'm sorry to correct you, but --

10 Q. Okay. So could you state in your own
11 words, in a qualified way, your summary of when it
12 comes to bald eagle?

13 A. The empirical information that we have,
14 over the last 20-plus years, as more and more
15 turbines have been put on the landscape, is that
16 eagles, bald eagles, are not terribly susceptible to
17 colliding with those turbines. So there are
18 fatalities but the number is very small, and the
19 population has grown continuously even though you
20 have more and more turbines on the landscape.

21 In a state like New York, I just happened
22 to be looking at this recently, has a thousand
23 turbines now on the landscape and only one bald eagle
24 fatality in that whole -- since 2000, the year 2000,
25 it's gone up steadily, the numbers of eagles

1 approaching 500 pairs, the number of turbines keep
2 going up, and one bald eagle fatality.

3 Q. So is this a fair summary: You believe
4 that the fatalities associated with bald eagles and
5 wind turbines are so low that an Eagle Conservation
6 Plan would never be needed.

7 A. I believe in something a little bit
8 different than that.

9 I think if and when a bald eagle -- if or
10 when a bald eagle is killed, then something needs to
11 be done almost like a compensatory-type mitigation,
12 but going out ahead of time and doing all these
13 studies, I don't think it tells us all that much.
14 And it could lead to prevention in some ways but,
15 better yet, you could do something after the fact and
16 I think there are lots of things that can be done.

17 If you look at the Eagle Conservation
18 Plan, they recommend various types of mitigation
19 processes. In other words, if one eagle is killed,
20 you could put up some kind of a tower for example
21 like they're doing in Florida now, where bald eagles
22 are on cell towers. You can go online and look at
23 the photographs. They're nesting on these cell
24 towers very successfully because they don't have
25 enough big trees, the population has increased. So

1 by putting something up like a tower or a couple
2 towers, you could easily compensate for that.

3 Q. Okay.

4 A. So, in other words, after the fact,
5 rather than before the fact, because the numbers are
6 small and so difficult to predict the numbers of
7 fatalities.

8 Q. Does U.S. Fish and Wildlife agree with
9 your assessment?

10 A. Partially. I've worked in some states
11 where they agree with me, and I've worked in states
12 where they say I'm wrong.

13 Q. Do they believe you're correct in Ohio?

14 A. I don't know.

15 Q. Well, if we look at Condition 40, it says
16 the Applicant shall coordinate with U.S. Fish and
17 Wildlife to determine the adequacy of
18 pre-construction eagle use surveys and assure that
19 impacts to bald eagles are minimized. I'm sorry, do
20 you have the Staff Report in front of you?

21 A. No. That was the Staff investigation
22 or --

23 Q. Yes.

24 MR. EUBANKS: May I approach the witness?

25 ALJ SANYAL: Yes, you may. Does everyone

1 else have a copy of the Staff Report, dated July 25,
2 2019?

3 MS. FLINT: Yes.

4 MR. EUBANKS: Has it been marked yet?

5 MR. PARRAM: It has not.

6 MR. EUBANKS: If we can mark it as Staff
7 Exhibit 1, we'll move later to have it admitted.

8 ALJ SANYAL: Sure.

9 (EXHIBIT MARKED FOR IDENTIFICATION.)

10 Q. (By Mr. Eubanks) If you could go to
11 Condition 40. Find Condition 40.

12 A. Can you tell me what page -- oh, I found
13 find it.

14 Q. I believe it's on 66. You found it?

15 A. Yes.

16 Q. Okay. So starting from the beginning of
17 that condition, it says the Applicant shall
18 coordinate with U.S. Fish and Wildlife to determine
19 the adequacy of pre-construction eagle use surveys
20 and assure that the impacts to bald eagles are
21 minimized. Do you see that?

22 A. Yes.

23 Q. And then at the very beginning of the
24 next sentence it says, if recommended by U.S. Fish
25 and Wildlife, the Applicant shall develop and

1 implement an Eagle Conservation Plan. Do you see
2 that?

3 A. Yes.

4 Q. So based off of that condition, if U.S.
5 Fish and Wildlife agreed with your assessment, the
6 Applicant wouldn't have to do anything; isn't that
7 correct?

8 A. The Fish and Wildlife Service would want
9 to check it out prior to -- like, they know where the
10 nests are. Generally they have the database where
11 the nests are and they can look at their own maps to
12 see if there are many nests.

13 And if there are many nests or a lot of
14 eagle use that they know of, for example if it's a
15 site right up on Lake Erie at the mouth of the
16 Sandusky River, something like that, and there are a
17 lot of eagles that they know about, they would
18 recommend doing the studies to look at to see what
19 the actual eagle use was.

20 And the client, the Applicant in this
21 case, did the eagle use studies and spoke with the
22 Fish and Wildlife Service, and an Eagle Conservation
23 Plan was not recommended.

24 Q. Let me restate the question and let me
25 first preface it with my understanding of your

1 testimony. It is your testimony, two things, No. 1,
2 you believe that U.S. Fish and Wildlife has already
3 said there was no need for any additional eagle use
4 surveys; is that correct?

5 A. I believe that's the case, yes.

6 Q. And you also have a general opinion that
7 there's no reason to have an Eagle Conservation Plan
8 before there is a fatality involving a bald eagle at
9 a wind site; is that correct?

10 A. That is my personal belief. Personal
11 belief.

12 Q. Okay. So I'm saying if, indeed, U.S.
13 Fish and Wildlife agreed with you on both of those
14 premises, isn't it true that the Applicant wouldn't
15 have to do anything based off of Condition 40?

16 A. I think you're right.

17 Q. So actually if U.S. Fish and Wildlife
18 agrees with you, there's nothing that is, I believe
19 the word you used was "onerous" --

20 A. Yes.

21 Q. -- about Condition 40. The only way that
22 there's anything that they would have to do is if
23 they just disagreed with you.

24 A. (Witness nods.)

25 MS. FLINT: Objection.

1 MR. EUBANKS: Well, he's already answered
2 the question. He shook his head yes.

3 MS. FLINT: Well, but you had a follow-up
4 question. My objection, because you're trying to say
5 it's onerous but you're not reading -- considering
6 all of Dr. Kerlinger's testimony on this part on why
7 it might be onerous. If we look at his testimony on
8 page 13 at line 9 --

9 MR. EUBANKS: I object. She's now
10 testifying.

11 MS. FLINT: It's happened all day.

12 MR. EUBANKS: He's answered the question.

13 ALJ SANYAL: Overruled. Go on.

14 THE WITNESS: May I add one thing?

15 MR. EUBANKS: Sure.

16 THE WITNESS: The ECP is voluntary.

17 ALJ AGRANOFF: Just so the record is
18 clear, "ECP" stands for?

19 THE WITNESS: Eagle Conservation Plan --

20 ALJ AGRANOFF: Thank you.

21 THE WITNESS: -- is voluntary. The
22 guidance document it just -- an Applicant does not
23 have to do one unless other agencies in that
24 state, you know, recommend one. So that's another
25 factor that they possibly didn't have to do anything.

1 However, they did two years of the studies that are
2 recommended by the Fish and Wildlife Service in the
3 Eagle Conservation Plan.

4 Q. (By Mr. Eubanks) I'm not sure how that's
5 related to the last question that I asked, but since
6 you offered that, I just want to be clear. If,
7 indeed, the Commission did recommend Condition 40 or
8 if, indeed, they did place that as a condition for
9 the Application, you're not suggesting that the
10 Applicant wouldn't follow the condition, are you?

11 A. It's up to the Applicant. I think
12 that --

13 MS. FLINT: Objection. I'm sorry to
14 interrupt you but he is not the Applicant, so how can
15 he be a fact witness to respond to your question?
16 That would have to go to the Applicant.

17 MR. EUBANKS: He's just now -- he's
18 saying they wouldn't have to follow it. I'm just
19 being clear that --

20 MS. FLINT: No, he said that they
21 wouldn't have -- his testimony --

22 ALJ SANYAL: Hang on. I get you.
23 Objection sustained.

24 MR. EUBANKS: Okay.

25 ALJ SANYAL: I think he was -- you're

1 mischaracterizing his previous response.

2 MR. EUBANKS: Okay. Well, that's why I
3 said you're not saying that. He could have said
4 "You're right, I'm not saying that," but okay.

5 ALJ SANYAL: Let's move on.

6 Q. (By Mr. Eubanks) I believe you had one
7 other condition that you disagreed with. I believe
8 it's Condition 26; is that correct?

9 A. Yes, that's correct.

10 ALJ SANYAL: What page of his testimony
11 are we -- oh, never mind, I found it. Page 10,
12 correct?

13 MR. EUBANKS: Sorry, give me one second.
14 Okay, yes, page 10, Question and Answer 14.

15 Q. (By Mr. Eubanks) Did you have any
16 communications with U.S. Fish and Wildlife concerning
17 the interpretation of the Technical Assistance Letter
18 as it relates to the document's statements addressing
19 the northern long-eared bat?

20 A. No.

21 Q. Do you have the Technical Assistance
22 Letter in front of you?

23 A. I was just looking for it.

24 THE WITNESS: Thank you.

25 Q. I'm glad you have it in front of you.

1 You may not need it. I'm going to move to the next
2 one.

3 Did you review any correspondence,
4 between the Applicant and the United States Fish and
5 Wildlife, concerning the interpretation of the
6 Technical Assistance Letter as it relates to the
7 document's statements addressing the northern
8 long-eared bat?

9 A. No.

10 Q. On page 11, you say that the recommended
11 condition, as written, conflicts with the TAL. Do
12 you see that?

13 A. Page 11?

14 Q. Yes.

15 A. Yes.

16 Q. Page 11, line 17.

17 A. 17, thank you. Yes.

18 Q. And I believe you were asked a question
19 on that, and I believe, and you can tell me if my
20 answer is wrong, you said the way it conflicts is
21 that the condition says "The Applicant shall comply
22 with the operational measures detailed within the
23 technical assistance letter until an incidental take
24 permit has been obtained for the project." And you
25 believe that because there's no need for an

1 incidental take permit that there's a confliction
2 there.

3 A. The conflict was that the Applicant has
4 already agreed to the terms in the term sheet and,
5 therefore, because they've agreed and they're going
6 to be taking the mitigation prior to even -- they
7 accept it prior to putting the turbines up. Once
8 those turbines are up, their operations will
9 correspond to what's in the term letter. Therefore,
10 there won't be any bat fatalities and you don't need
11 an incidental take permit.

12 Q. If we turn to page 2 of the Technical
13 Assistance Letter.

14 A. Yes.

15 Q. The sentence that begins with "The
16 USFWS." Do you see that?

17 A. Yes.

18 Q. I'm going to read it. "The USFWS
19 reached this conclusion through coordination and
20 ongoing discussions with Apex including Apex's
21 commitment in writing to the USFWS, that these
22 measures will be implemented throughout the life of
23 the project or until incidental take coverage is
24 obtained." Do you see that?

25 A. I lost you some place. I'm sorry about

1 that. You said second paragraph?

2 Q. The first paragraph.

3 A. First.

4 Q. The sentence that begins with "The
5 USFWS."

6 A. "As reviewed"?

7 Q. I'm sorry, I didn't understand what you
8 just said.

9 A. Is that on the bottom of the first page
10 where the paragraph begins "The U.S. Fish and
11 Wildlife Service has reviewed"?

12 ALJ SANYAL: I believe he's looking --

13 MR. EUBANKS: It's at the top of the
14 page.

15 ALJ SANYAL: He's looking at the partial
16 paragraph --

17 THE WITNESS: Okay.

18 ALJ SANYAL: -- and at the middle there's
19 a sentence that says "The USFWS" --

20 THE WITNESS: I got it. Thank you.

21 ALJ SANYAL: Uh-huh.

22 Q. (By Mr. Eubanks) So again, reading that,
23 "The USFWS reached this conclusion through
24 coordination and ongoing discussions with Apex
25 including Apex's commitment in writing to the USFWS,

1 that these measures will be implemented throughout
2 the life of the project or until incidental take
3 coverage is obtained." Do you see that?

4 A. Yes.

5 Q. Isn't that exactly what recommendation 26
6 says?

7 MS. FLINT: Objection. I think Condition
8 26 speaks for itself and the language that was just
9 quoted from the letter speaks for itself.

10 ALJ SANYAL: Overruled.

11 A. I'd have to read Condition 26.

12 Q. And to help you out, I'm referring
13 specifically to the last sentence of Condition 26.

14 A. I don't have that in front of me, but I
15 have the excerpt for Question 14 in my testimony.

16 Q. I just handed you the Application.

17 A. Oh.

18 Q. Once again it's on page -- well --

19 ALJ SANYAL: The "Staff Report."

20 Q. The Staff Report, I'm sorry.

21 A. Got it. It's getting late. Sorry.

22 ALJ SANYAL: It's okay.

23 A. This actually is different from -- this
24 says "operational measures detailed within the
25 technical assistance letter until an incidental take

1 permit...." The other one said for the life of
2 project, I think.

3 Q. Doesn't it go on to say "until"?

4 A. I'm not sure I understand.

5 Q. The Technical Assistance Letter reads
6 "these measures will be implemented throughout the
7 life of the project or until incidental take coverage
8 is obtained." Do you see that?

9 A. Yes.

10 Q. Aren't they consistent?

11 MS. FLINT: Objection. I'm back to, I'm
12 sorry, that the language speaks for itself.

13 ALJ SANYAL: I'm overruling that
14 objection because the witness has expressed an
15 opinion about what that condition means, and I think
16 Counsel is just trying to understand why the witness
17 has that opinion, so overruled.

18 MS. FLINT: I understand too, but Counsel
19 is also suggesting that the sentence in the TAL --

20 ALJ SANYAL: Sure.

21 MS. FLINT: -- is the same --

22 ALJ SANYAL: Absolutely, and I think the
23 witness can respond to that himself.

24 A. The sentence isn't the same because it
25 seems that from this letter they can choose to just

1 adhere to the form -- the term sheet conditions for
2 the rest of the project without getting a permit. It
3 says "or until," doesn't it?

4 Q. It does say that.

5 A. Or am I missing something?

6 Q. It does say that.

7 A. So I think --

8 Q. So it's the "or"?

9 A. Yes.

10 Q. Okay. So if Condition 26 said "The
11 applicant shall comply with the operational measures
12 detailed within the technical assistance letter or
13 until," then you would have no problem, it would not
14 conflict?

15 MS. FLINT: Objection. Dalton Carr is
16 the Project Manager who is the witness who will state
17 why and on what terms they agree with or disagree
18 with or are asking for a change in the condition;
19 it's not Dr. Kerlinger.

20 ALJ SANYAL: But --

21 MR. EUBANKS: It is Dr. Kerlinger who has
22 said it conflicts.

23 MS. FLINT: And Dr. Kerlinger's testimony
24 gives other reasons for why it conflicts, why the
25 condition conflicts.

1 MR. EUBANKS: This question has already
2 been asked and answered.

3 ALJ SANYAL: Overruled. Let's finish
4 here.

5 MR. EUBANKS: Okay.

6 ALJ SANYAL: I think you can get what you
7 need --

8 MR. EUBANKS: I just need a direct answer
9 and I'm good.

10 ALJ SANYAL: All right. Mr. Eubanks, you
11 may --

12 MS. FLINT: My objection is Dr. Kerlinger
13 cannot testify as to what the Applicant is willing to
14 accept or not accept or agree with with a condition.
15 It's as simple as that.

16 MR. EUBANKS: Well, this question has
17 already been asked.

18 ALJ SANYAL: I've overruled the
19 objection. Mr. Eubanks, go ahead with your one
20 remaining question.

21 Q. (By Mr. Eubanks) The question has been
22 asked. Can you answer it?

23 A. I believe I answered.

24 Q. You didn't answer it.

25 MS. FLINT: If we can repeat the

1 question?

2 ALJ AGRANOFF: Let's do it this way: In
3 your capacity that you're here today, are you able to
4 say as to whether or not the Applicant would be
5 willing to accept the interpretation that Mr. Eubanks
6 expressed to you?

7 THE WITNESS: I cannot speak for the
8 Applicant.

9 MR. EUBANKS: That wasn't my question.
10 Let me ask the question a different way.

11 Q. (By Mr. Eubanks) If the last sentence of
12 Condition 26 -- yeah. If what Staff meant by the
13 last sentence of Condition 26 was what is written on
14 page 2 of the TAL, the language that we went through
15 now at least three times, if that's what Staff meant,
16 then you would agree that Condition 26 does not
17 conflict with the TAL.

18 A. I'm getting more confused as we go along.
19 I simply said because of the "or" statement, and I
20 can't answer for the Applicant on that.

21 Q. Okay. Are you aware that the TAL
22 recommends that the Applicant coordinate the project
23 with ODNR Department of Wildlife?

24 A. Am I aware of that?

25 Q. That the TAL --

1 A. The TAL, yeah.

2 Q. -- after it got done listing all of the
3 different requirements for the northern bat and for
4 the Indiana bat, at the very end of that it says you
5 should coordinate with ODNR Wildlife because these
6 species are also state-endangered and threatened
7 species. Are you aware of that?

8 A. I wasn't aware that it said that over
9 there.

10 Q. Well, could you refer to the TAL again.
11 Page 2, last paragraph. Could you read that out
12 loud?

13 A. Okay. It says we recommend you
14 coordinate this project with the ODNR Wildlife,
15 Department of Wildlife, for these species. Please
16 contact Erin Hazelton.

17 Q. Okay. So in your testimony where you say
18 it's customary to just follow the TAL, this
19 particular TAL also requests for the Applicant to
20 work with ODNR Wildlife as well, correct?

21 A. It reads that, yes.

22 MR. EUBANKS: I have no further
23 questions.

24 ALJ SANYAL: Redirect?

25 MS. FLINT: Yes.

1 ALJ SANYAL: Do you need some time?

2 MS. FLINT: Yes. Not very long at all.

3 ALJ SANYAL: Let's go off the record for
4 5 minutes, but a true 5 minutes. Not 8; 5.

5 (Recess taken.)

6 ALJ SANYAL: Okay. Let's get back on the
7 record. And you may proceed.

8 MS. FLINT: I'm going to try to work
9 backwards from most recent to many hours ago.

10 ALJ SANYAL: Okay.

11 - - -

12 REDIRECT EXAMINATION

13 By Ms. Flint:

14 Q. Dr. Kerlinger, if we could turn to your
15 testimony which is Exhibit 22, in relation to
16 Question 14 about Condition 26 which relates to the
17 TAL.

18 A. Yes.

19 Q. And your response goes on to page 11. In
20 response to, I believe, questions from the Local
21 Residents' counsel, you indicated that a conflict
22 between Condition No. 26 and the TAL is that it's
23 your understanding that TALs are voluntary. Does
24 that sound correct?

25 A. I said that, yes.

1 Q. Okay. Is there any other reason why you
2 believe Condition No. 26 conflicts with the TAL?

3 A. Yes. I neglected to include lines 13
4 through 16 and the last sentence of that. According
5 to the Indiana Bat Section 7 and Section 10 Guidance
6 for Wind Energy Projects, then the last sentence says
7 "It is inappropriate to apply the home range
8 characteristics from one species to another."

9 Indiana bat and northern long-eared bat
10 are different species, they have different habitat
11 requirements, home-range characteristics, and the
12 term sheet took those into consideration. And if
13 they were treated as the same for those different
14 species, that was another area of conflict in that.

15 Q. Is --

16 A. So --

17 Q. I'm sorry.

18 A. If you take a look at that portion of the
19 term sheet, you'll see that there are different range
20 requirements. Different species have different
21 habits, in other words.

22 Q. So if could you turn to, and this is in
23 the Staff Report, it's page 64 where Condition 26 is.

24 A. Yes.

25 Q. It's in the middle of Condition No. 26,

1 it starts with the word "Summertime." Do you see
2 that?

3 A. Yes.

4 Q. Could you read that sentence?

5 A. "Summertime feathering measures
6 identified in the technical assistance letter for the
7 Indiana bat, including feathering within specified
8 distances of documented roost trees, shall also be
9 applied to the northern long-eared bat."

10 Q. And does the Technical Assistance Letter
11 contain the same feathering measures between the
12 Indiana bat and the northern long-eared bat?

13 A. No. The term sheet has different ranges
14 for those feathering operations.

15 Q. Can you read the last sentence of 26?

16 A. "The Applicant shall comply with the
17 operational measures detailed within the technical
18 assistance letter until an incidental take permit has
19 been obtained for the project."

20 Q. So would it be fair to say that this
21 condition requires the Applicant to comply with the
22 operational measures detailed in the Technical
23 Assistance Letter?

24 A. Yes.

25 Q. And that those, the operational measures,

1 are detailed in the Technical Assistance Letter?

2 A. Very detailed.

3 Q. And they, again, have different measures
4 between the Indiana bat and the northern long-eared
5 bat.

6 MR. VAN KLEY: Objection. That's been
7 three leading questions in a row.

8 ALJ SANYAL: Rephrase.

9 Q. The Technical Assistance Letter sets
10 forth what the measures are between -- for the
11 Indiana bat versus the northern long-eared bat.

12 A. They set forth different measurements for
13 the two different species.

14 Q. There was a discussion about summaries of
15 meetings between the project and U.S. Fish and
16 Wildlife Service and/or ODNR. Do you recall that
17 testimony?

18 A. Yes.

19 Q. And one of the references was, and I'm
20 talking about Exhibit 23 right now, which starts off
21 with an e-mail of Thursday, January 25, 2018, and
22 attached is a January 10, 2018, Technical Memorandum.

23 A. Yes.

24 Q. Do you have Exhibit 23 in front of you?
25 And you were directed to Table 1 which is on page 2

1 of Exhibit 23, specifically August 27, 2016, and then
2 a description of the meeting. Do you see that?

3 A. Yes.

4 Q. In your experience, would a summary of a
5 meeting with United States Fish and Wildlife Service
6 include, if U.S. Fish and Wildlife had recommended an
7 HCP, would a summary of that meeting include that
8 fact --

9 MR. EUBANKS: Objection.

10 Q. -- in your experience --

11 MR. EUBANKS: Objection. Calls for
12 speculation.

13 ALJ SANYAL: You're going to have to wait
14 to make the objection until she finishes the
15 question.

16 So I need you to ask the question again
17 because I couldn't hear it. I'm sorry.

18 Q. (By Ms. Flint) In your experience, would
19 a summary of a meeting between a project and U.S.
20 Fish and Wildlife Service include, if a
21 recommendation was made from U.S. Fish and Wildlife
22 Service to obtain an HCP or an ECP, an Eagle
23 Conservation Plan?

24 MR. EUBANKS: Objection. Calls for
25 speculation.

1 ALJ SANYAL: Overruled.

2 A. I'm pretty sure it would include that.
3 That's the kind of thing that once it's said and
4 agreed upon, people write it down. I've been at
5 meetings where, you know, we've been told no Eagle
6 Conservation Plan is needed and that's very easily
7 remembered.

8 Q. And if an Eagle Conservation Plan was
9 recommended, is that very easily remembered?

10 A. Yes.

11 Q. It's a pretty significant recommendation,
12 is it not?

13 MR. VAN KLEY: Objection.

14 A. Majorly.

15 ALJ SANYAL: I think you're going to get
16 a leading --

17 MR. VAN KLEY: Leading.

18 ALJ SANYAL: -- objection again, so maybe
19 rephrase that question.

20 MS. FLINT: No need. I withdraw the
21 question.

22 This is a procedural question. Can we
23 make some copies of an exhibit?

24 ALJ SANYAL: Are you -- yeah, I can go
25 make some copies for you, sure.

1 (Off the record.)

2 ALJ SANYAL: Okay. Let's get back on the
3 record.

4 MS. FLINT: I'm waiting to get the
5 guidelines up on our computer.

6 ALJ SANYAL: Okay.

7 Q. (By Ms. Flint) I want to make sure
8 because I was confused about some of the testimony
9 earlier about what was recommended with hectares. Do
10 you remember that discussion?

11 A. Yes, somewhat.

12 Q. And I don't have the guidelines up in
13 front of me yet but, when I do, is the -- if you can
14 recall, do the guidelines call for this survey point
15 per hectares for diurnal bird/raptor -- diurnal bird
16 migration surveys?

17 A. I don't recall.

18 Q. So we'll have to look.

19 MS. FLINT: I realize now we're missing
20 the iPad that we had earlier --

21 ALJ SANYAL: Yes.

22 MS. FLINT: -- for the witness.

23 Okay. And I will bring this to the
24 witness. I'm referring back to earlier testimony.

25 Q. (By Ms. Flint) The diurnal bird/raptor

1 migration survey from 2011, do you recall that three
2 survey points --

3 A. I believe that's correct, yes.

4 Q. -- sampling point locations were used?
5 Do you have any reason to believe that that was
6 outside of what was recommended by ODNR, the
7 guidelines?

8 A. I'm not sure.

9 Q. Would ODNR's guidelines for passerine
10 migration apply to a diurnal raptor survey?

11 A. No.

12 Q. Does the distance or range a bald eagle
13 travels have any correlation to risk of fatality by a
14 wind turbine?

15 A. There is no data that says that that is
16 the case.

17 Q. Is there any data that suggests an
18 increase in the number of eagle nests, within a
19 particular area, correlates to risk of fatality by
20 wind turbines?

21 A. That's never been demonstrated either.

22 Q. I believe there was testimony earlier
23 about, and I'm referring now to I believe it's
24 Exhibit M to the Application, it's the Final Results
25 for the Bald Eagle Survey Effort, Republic Wind

1 Seneca and Sandusky Counties, November 2012, prepared
2 by BHE Environmental.

3 A. The question is do I recall that?

4 Q. Is that one of the surveys for which you
5 mention in your testimony?

6 A. Yes.

7 Q. That was not the only eagle survey done
8 in relation to the Republic project, was it?

9 A. No.

10 Q. Were there any other raptor/eagle nest
11 surveys or studies, performed after the 2011 raptor
12 nest survey, that relate to the Republic project?

13 A. Yes.

14 Q. And are those studies contained in your
15 testimony in answer to Question 7?

16 A. Yes.

17 Q. Do you recall, off the top of your head,
18 how many others were done in relation -- that relate
19 to the Republic project?

20 A. You're talking about eagle studies in
21 general or eagle point use studies?

22 Q. Either. Any survey relating to eagles.

23 A. There were a couple different surveys
24 relating to eagles. There was a nest monitoring,
25 there was a use study and a nest study, nest search

1 survey.

2 Q. And is it accurate to say that some of
3 the studies were done for the Emerson West project
4 but they were utilized or considered by you because
5 they overlapped with Republic boundaries?

6 A. Yes, they were either nearby or
7 overlapped.

8 Q. And so the results of those studies would
9 be relevant to impacts, use information, that U.S.
10 Fish or ODNR would want in relation to the Republic
11 project?

12 A. They would very much want that.

13 Q. If you could turn to Local Residents
14 Exhibit 16. Do you have it in front of you?

15 A. I do not. This is Local Residents?

16 Q. It's the November 15, 2017 Technical
17 Memorandum.

18 A. I don't have it in front of me. Oh, yes,
19 sorry, November 15, 2017, yes.

20 Q. If you could turn to the last page of
21 that document. It's Figure 2, page 5.

22 A. Yes.

23 Q. What does that figure show?

24 A. It shows the outline of the Republic
25 site, the boundaries, and it shows the location of

1 the bald eagle nest and fixed point count locations
2 close to the nest so the nest can be surveyed.

3 Q. In Figure 2 -- it's hard for me to
4 read -- there is a marking of, I think it says FP1
5 and there's a star?

6 A. Yes.

7 Q. What is that line, that squiggly line as
8 I'll call it, below the star, if you know?

9 A. That is the flight path of an eagle.

10 Q. Does that reflect that that eagle did
11 not -- was not flying into the Republic boundary?

12 MR. VAN KLEY: Objection. Leading.

13 ALJ SANYAL: What does that represent,
14 Mr. Kerlinger, that squiggly line?

15 THE WITNESS: I'd have to look at the
16 text to see what that line -- but it does represent
17 the bald eagle flight path and, from this, I cannot
18 tell if it's coming or going.

19 "One of the eagles recorded on June 21
20 was observed flying in a southerly direction away
21 from the general nest location," so this is the
22 flight path for that and it refers to Figure 2 down
23 farther in that same paragraph; so I'm assuming it's
24 the only eagle they mention flight direction for and
25 it's roughly south at first.

1 Q. Does Figure 2 also contain the project
2 boundary for Republic?

3 A. Yes.

4 Q. Is the flight pattern, as shown in
5 Figure 2, is that inside or outside the Republic
6 boundary?

7 A. The nest and the flight path are outside
8 the boundary.

9 ALJ AGRANOFF: And that was as of what
10 date?

11 THE WITNESS: The date was June 21, 2017.

12 ALJ AGRANOFF: To your knowledge does
13 that reflect the current project boundary?

14 THE WITNESS: It appears to be the same
15 to me. Let me just check.

16 Actually, there's a slight discrepancy in
17 the top middle where it says the Seneca-Sandusky
18 line. The project site doesn't go up that high
19 anymore. On the northeast corner it does still go
20 above the Sandusky boundary. It's very close to the
21 current, including where the nest is.

22 Q. Is Magee Marsh in the project area?

23 A. No.

24 Q. Would the discovery of a new eagle nest,
25 near or within the project boundary, change your

1 opinion on risk to bald eagles from the project?

2 A. No.

3 Q. Is there any reason to question the
4 validity of the avian studies performed for the
5 project?

6 A. No.

7 Q. Any reason to question the validity --
8 I'm sorry -- the credentials of the consultants who
9 performed these studies?

10 A. No.

11 Q. Were they performed in consult with U.S.
12 Fish and Wildlife Service and ODNR?

13 A. They were.

14 Q. Were they performed in accordance with
15 U.S. Fish and Wildlife Service and ODNR guidelines
16 and protocols specifically for wind facilities?

17 A. They were.

18 Q. How -- there was some discussion, a lot
19 of discussion earlier about nocturnal migrants. Do
20 you recall that?

21 A. Yes.

22 Q. How high are nocturnal migrants generally
23 flying at night when they migrate?

24 A. They fly several hundred meters above the
25 ground to up to 6-, 800 meters above the ground. In

1 other words, 7-, 800 feet to 2,500 feet above the
2 ground. That's what they mostly cruise at, those
3 altitudes.

4 Q. There were no radar studies performed,
5 radar avian studies performed; is that correct?

6 A. No.

7 Q. Should radar studies have been performed
8 for this project?

9 A. No.

10 Q. If ODNR and U.S. Fish and Wildlife
11 Service believe radar should have been used for this
12 project, would they have recommended that?

13 MR. VAN KLEY: Objection. Speculation.

14 MS. FLINT: We went through --

15 ALJ SANYAL: Overruled.

16 THE WITNESS: Would you repeat the
17 question, please?

18 Q. (By Ms. Flint) If ODNR and U.S. Fish and
19 Wildlife Service believed radar should have been used
20 for this project, would they have recommended that?

21 A. I believe they would have definitely.

22 Q. But they didn't here.

23 A. No.

24 Q. If we could turn to the 2011 Passerine
25 Migration Study.

1 ALJ AGRANOFF: If you could give us an
2 exhibit number or a reference or an application
3 exhibit number?

4 THE WITNESS: What was the -- sorry.

5 ALJ SANYAL: We had a question for
6 Counsel.

7 MS. FLINT: Let's get in front of
8 everybody the 2011 Passerine Migration Study. Let me
9 find it here. This is noted on page 5 of your
10 testimony, "Results of the passerine migration
11 survey, Republic Wind Farm, Seneca and Sandusky
12 Counties. December 2011."

13 A. Yes.

14 Q. Do you have the study in front of you?

15 A. I do.

16 MS. FLINT: Does everybody else?

17 ALJ SANYAL: No. I don't know what
18 exhibit you're referring to.

19 ALJ AGRANOFF: Has it been marked as an
20 exhibit?

21 THE WITNESS: N.

22 MS. FLINT: It's in the Application.

23 ALJ AGRANOFF: N.

24 THE WITNESS: N?

25 MS. FLINT: N as in Nancy?

1 THE WITNESS: Yes.

2 ALJ SANYAL: We're ready if you are.

3 MS. FLINT: Now we're trying to find it.

4 I'm sorry, I'm trying to find my
5 reference. Feel free to take a nap.

6 Q. (By Ms. Flint) Okay. If you could turn
7 to page 2 of that study.

8 A. Yes.

9 Q. You were asked to read, earlier, the
10 first sentence of the third paragraph under
11 "Introduction."

12 A. Yes.

13 Q. Can you read that again?

14 A. "Passerines appear to be especially
15 vulnerable to collision with wind turbines, and in
16 one synthesis, were found to represent 74 percent of
17 all fatalities recorded in existing data sets
18 (Strickland 2008)."

19 Q. And if you could read, it's in the middle
20 of that same paragraph, the sentence that starts with
21 the word "While."

22 A. "While passerines are the most
23 susceptible group of bird species, the numbers of
24 bird casualties are low." NWCC, it's the National
25 Wind Coordinating Committee, 2010.

1 Q. Okay. Thank you.

2 MS. FLINT: What number or letter?

3 MR. PARRAM: 25.

4 MS. FLINT: I'm going to be marking
5 Applicant Exhibit 25. It's a set of two maps.

6 ALJ AGRANOFF: They shall be so marked.

7 (EXHIBIT MARKED FOR IDENTIFICATION.)

8 MS. FLINT: I have to so mark them,
9 literally with my pen, before I pass them out.

10 Q. (By Ms. Flint) Dr. Kerlinger, if you
11 could take your time and look at the two maps that
12 you were just handed that have been marked as
13 Exhibit 25.

14 A. Okay.

15 Q. Are you ready?

16 A. Yes.

17 Q. One of the maps has the heading "Project:
18 Republic Wind Eagle Use Surveys." Do you see that?

19 A. Yes.

20 Q. And if you could tell us what the blue
21 circles on this map represent?

22 MR. VAN KLEY: Which document are you
23 looking at?

24 MS. FLINT: This is the Exhibit 25, the
25 map that says "Project: Republic Wind Eagle Use

1 Surveys."

2 MR. VAN KLEY: Okay. The document you
3 gave me does not have that heading on it.

4 ALJ SANYAL: There's two maps,
5 Mr. Van Kley.

6 MR. VAN KLEY: I was only given one.

7 MR. PARRAM: Can we make one more copy?

8 ALJ SANYAL: Let's go off the record real
9 quick.

10 (Off the record.)

11 Q. (By Ms. Flint) So the map marked with the
12 title "Project: Republic Wind Eagle Use Surveys."

13 A. Yes.

14 Q. Okay. Can you tell us what the blue
15 circles represent?

16 A. They are -- the lighter of the blue
17 circles, mostly from the bottom of the project
18 upward, are from the 2011-2012 eagle use study and
19 they show the distribution of the circles.

20 The other circles that are different
21 colors, the red and the darker blue, are from the
22 Emerson study, eagle use point count circles. You
23 can see that they overlap onto the Republic site very
24 nicely.

25 The second point about this -- actually

1 the third point, the circles that go across the top,
 2 the four circles across the top, one of the Hearing
 3 Examiners asked the question earlier about Sandusky
 4 County, if any of these went -- those four circles
 5 overlap with the Sandusky County border; so
 6 approximately half of them. You can see on the map
 7 where the Republic site juts up to the farthest
 8 north, that's in Sandusky County. So those four
 9 circles are partly in Sandusky County. So the
 10 observers were probably standing right on the border.

11 ALJ AGRANOFF: Which four circles were
 12 you referencing?

13 THE WITNESS: The very top.

14 ALJ AGRANOFF: Okay.

15 A. And the third point is if you recall from
 16 the Emerson eagle use survey and actually the nest
 17 survey from Emerson, they use the 1-plus-mile
 18 boundary, a buffer area at the top of their site and
 19 it went all the way around their site, but the
 20 Emerson site is just to the south of the southernmost
 21 area where the Republic site extends southward, and
 22 the Emerson site actually wraps around that but the
 23 1-mile buffer goes up 1 mile from the inside of the
 24 southern extension around the -- it extends 1 mile
 25 into the Republic site.

1 In other words, there's a much greater
2 overlap than we anticipated, and this bears that out
3 in some ways, but the eagle nest surveys went up into
4 that portion a mile from the border at least.

5 Q. Really quickly, if you could keep the
6 maps in front of you and turn to the second map, I
7 guess I would call that an orange-colored map, and
8 also take out Exhibit 23 which is -- it contains the
9 January 10, 2018 Technical Memorandum, marked
10 Exhibit 23. The first pages are the e-mails between
11 Erin Hazelton and Jennie Geiger. Do you have that in
12 front of you?

13 A. Yes.

14 Q. If you could turn and we're on Exhibit 23
15 now, if you could turn to page 4, Figure 1. Are you
16 there?

17 A. Yes. I'm sorry.

18 Q. That's okay.

19 Generally describe what Figure 1 is
20 showing. We've gone through this in the earlier
21 testimony but to refresh.

22 A. Briefly, it shows the Emerson on the
23 bottom with a light, like, lavender color and you can
24 see its boundary extends across and there's overlap
25 into the Republic which is the northernmost

1 black-lined area, so those are the two projects in
2 relation to each other. You can see there's overlap.

3 Q. Okay. And then turning back to the
4 Exhibit 25 maps, the orange map.

5 A. Yes.

6 Q. You were just referencing a 1-mile
7 buffer.

8 A. Yes.

9 Q. In relation to the second map in
10 Exhibit 25, the orange map, can you generally
11 describe for us --

12 A. If you -- I'm sorry.

13 Q. -- for us what that 1-mile buffer, how
14 that relates with what would be depicted on this map,
15 the project, the Republic Wind map?

16 A. Yeah. First, you can see that there are
17 -- if you look at the overlap between the two sites
18 from the WEST technical report, you can see there's
19 an overlap. At the bottom there's several of those
20 turbines that are actually in that overlap area. So
21 anything -- any of the studies done for Emerson were
22 actually covering lands within Republic.

23 If you then take this boundary for the
24 Emerson project and add a mile north to that and look
25 into the Republic site where you see the blue turbine

1 locations, you see there's a very large overlap
2 between the two.

3 Many of the turbines are on both the
4 Emerson study, nesting study, eagle nesting study,
5 and within the Republic area. So there's a large
6 overlap there, many of the turbines. You can see on
7 the southeastern corner how there's a wraparound that
8 covers a lot of the turbines that are on the
9 eastern-southeastern boundary of the Republic
10 project.

11 Q. And the Republic boundary map between
12 Figure 1 in the WEST memo and the map in front of
13 you, they're not exactly the same, are they?

14 A. No, I don't believe so.

15 Q. Are they -- do they generally depict the
16 current Republic boundary?

17 A. I believe so, yes. The turbine
18 locations, it's a tip off.

19 MS. FLINT: Nothing further.

20 ALJ SANYAL: Just to follow up, which one
21 of these maps most accurately describes the Republic
22 Wind project as it stands today?

23 THE WITNESS: The orange map.

24 ALJ SANYAL: Okay. Thank you.

25 Mr. Van Kley.

1 MR. VAN KLEY: Yes, Your Honor.

2 - - -

3 RECROSS-EXAMINATION

4 By Mr. Van Kley:

5 Q. Since you're on Exhibit 25, I have a
6 question or two about that exhibit.

7 A. Sorry, what was that again?

8 Q. Exhibit 25.

9 ALJ SANYAL: The orange map and the
10 companion.

11 Q. And I'm going to refer you to the other
12 map that is marked as Exhibit 25.

13 MR. VAN KLEY: And I assume Exhibit 25 is
14 a two-page exhibit?

15 ALJ AGRANOFF: Why don't we just, for
16 clarity sake, call the orange one, page 1 of 2, and
17 the white one is 2 of 2.

18 MR. VAN KLEY: Okay.

19 Q. (By Mr. Van Kley) So on my copy of the
20 map that is not the orange one, I'm having a hard
21 time distinguishing between the blue circles for the
22 Emerson project and the blue circles for the Republic
23 Wind project. I was wondering if you could tell me
24 which circles in blue are related to surveys done for
25 the Emerson West project.

1 MR. PARRAM: Your Honor, I think the
2 Emerson West is green and then the Republic eagle use
3 surveys are blue. The color is close but --

4 ALJ SANYAL: They're close. I can tell a
5 difference. I agree.

6 MR. VAN KLEY: Oh, wow, okay.

7 MR. PARRAM: Let me show you a copy of
8 ours. The copy is not great.

9 MR. VAN KLEY: Oh, yeah, it's clearer on
10 yours.

11 MR. PARRAM: You want to switch?

12 MR. VAN KLEY: Sure, just a second.
13 Yeah, that helps.

14 Q. (By Mr. Van Kley) All right. So there
15 are how many circles in green related to Emerson
16 Creek?

17 A. I believe it's --

18 MR. PARRAM: Your Honor, I believe
19 there's four.

20 A. Four, yeah. Sorry.

21 ALJ SANYAL: I have five.

22 ALJ AGRANOFF: It would be very helpful
23 if somehow you guys can take the document and
24 actually mark it with the appropriate Emerson West
25 versus Republic so that we don't have to guess as to

1 what circle is what, and then share that with counsel
2 and with us so that we all can be clear as to which
3 circle is intended to serve what purpose.

4 ALJ SANYAL: Because, by my color count,
5 I have five for Emerson West.

6 MR. PARRAM: Three, four, five. I have
7 five too.

8 ALJ SANYAL: Okay. But the one over
9 here, the furthest to the right, appears to be both
10 Emerson West and a Republic.

11 MR. PARRAM: Where they're overlapping.

12 ALJ SANYAL: There's two circles.

13 MS. BAIR: The green is the five, yeah.

14 THE WITNESS: You guys have better vision
15 than me.

16 ALJ SANYAL: And I'll give you my copy.

17 MR. PARRAM: Jack, you can go ahead --
18 or, Mr. Van Kley.

19 Q. (By Mr. Van Kley) All right. So with
20 respect to the green circles that represent the
21 Emerson West surveys, all of those circles are on the
22 boundary between the Emerson West project and the
23 Republic Wind project, correct?

24 A. Yes.

25 Q. I believe that you stated that there's no

1 correlation between eagle flight distances and
2 collisions with turbines? Am I expressing that
3 accurately?

4 A. I believe that's the case, yes.

5 Q. Okay. If that's the case, why do eagle
6 nest surveys and eagle surveys, at all, to prepare
7 for the construction of a project of this nature?

8 A. That's a question I can't answer. I'm
9 just going by my statement that it was one of
10 empiricism. In other words, no studies have shown
11 that relationship to be correct.

12 Q. With respect to your statement that there
13 were a number of eagle nests surveyed in the Republic
14 Wind project area, have you and I, during your
15 testimony previously, discussed all of those studies?

16 A. Could you repeat that question, please?

17 Q. Yeah.

18 When I was asking you questions, I asked
19 you a number of questions about the reports on bird
20 studies that are listed in your testimony. Other
21 than those reports, are there any other eagle nest
22 surveys that were conducted in the Republic Wind
23 project area?

24 A. I don't know of any.

25 Q. Okay. Are there any additional eagle

1 nest or eagle studies in the Emerson West Wind
2 project area that you're aware of, other than those
3 in the studies listed in your testimony?

4 A. I'm not aware of any.

5 Q. Now, pull out Exhibit 13, please. That
6 is the excerpt or excerpts from your book, "How Birds
7 Migrate," and go to page 166, the figure on that
8 page.

9 A. 166, yes.

10 Q. All right. And for purposes of record
11 clarity, this is the page that you and I discussed
12 that shows a figure of altitudes at which various
13 types of birds fly, correct?

14 A. Yes. This is a --

15 Q. And the altitudes at which the birds fly,
16 in that table, are expressed in feet above the
17 ground, correct?

18 A. Yes. Or water.

19 Q. Okay. Now, I thought you said, in
20 redirect, that birds primarily fly at a level of
21 700 meters above the ground? Is that what you said?

22 A. For which one of these? I didn't say
23 700 meters, I don't believe, on average. That would
24 be in the higher range for some species. I'm sorry.

25 Q. Okay. I guess it was unclear to me what

1 you said. I thought I heard you say that birds, in
2 migration, fly at or above the level of 700 meters,
3 but maybe I misunderstood your testimony. Do you
4 recall what you said?

5 A. I do to some degree. I mean, do I need
6 to repeat it?

7 Q. Well, I would like to understand what it
8 was you said.

9 A. All right. Let's start with this being a
10 kind of rudimentary diagram to educate people who
11 know very little about bird migration or maybe
12 intermediate birders or even higher-level birders who
13 don't know that much. This is supposed to represent
14 the approximate altitudes and numbers of birds flying
15 above the ground over water versus over land, day
16 versus night. There's nothing exact about this. Do
17 you want me to go over all of these?

18 Q. No, not necessary. So I take it then
19 that you are not backtracking on your testimony
20 earlier today in which you discussed the information
21 in this figure, correct?

22 A. I did discuss some of the information in
23 this figure.

24 Q. Yeah. And you're not backtracking on
25 that testimony, are you?

1 MS. FLINT: Objection.

2 A. No.

3 MS. FLINT: Objection. He earlier gave
4 basically the same testimony that he just gave on
5 what this figure represents and we're just repeating
6 it all.

7 ALJ SANYAL: I mean, I think I feel like
8 your witness answered the question, so I feel like
9 your objection is moot.

10 ALJ AGRANOFF: Please move on.

11 ALJ SANYAL: Yeah.

12 Q. (By Mr. Van Kley) Go to Exhibit N of the
13 Amended Application, dated December 26, 2018, which
14 is entitled "Passerine Migration Survey."

15 A. What is the exhibit? I don't know if I
16 have that here.

17 Q. It's the one that you discussed with
18 Republic's counsel. Exhibit N, "Passerine Migration
19 Survey."

20 A. Who did this study?

21 MR. PARRAM: "N."

22 THE WITNESS: "N." I'm sorry. Thank
23 you.

24 A. Yes.

25 Q. Okay. You were asked about a sentence in

1 the third paragraph on that page.

2 ALJ SANYAL: On which page?

3 MR. VAN KLEY: Page 2.

4 Q. In the heading under "Introduction."

5 A. Yes.

6 Q. The sentence you were asked about states
7 "While passerines are the most susceptible group of
8 bird species, the numbers of bird casualties are
9 low." Do you recall that testimony that you just
10 gave?

11 A. Yes.

12 Q. Keep your finger there and go back to
13 Exhibit LR 13 which has the excerpts from your book
14 on migration, and I would like to refer you to
15 page 96 of those excerpts.

16 A. Okay.

17 Q. Starting on the fourth line down on that
18 page, it's stated as follows: "A single Chicago
19 skyscraper was once responsible for the death of
20 fifteen hundred migrants each year, birds on their
21 way north up into the vast bird-breeding northern
22 forests; now a city program is succeeding with a
23 lights-out policy. In Toronto, Ring-billed Gulls
24 would even come in to eat fallen birds off the
25 sidewalks near the skyscrapers as the dazed birds

1 tried to become airborne again. Add to this the
2 growing number of wind turbines in rural areas, and
3 you do indeed have a problem."

4 Now, you wrote that in your book,
5 correct?

6 A. In 1995, I wrote that in my book, yes.

7 MR. VAN KLEY: Okay. I have no further
8 questions.

9 ALJ AGRANOFF: I have one.

10 MR. EUBANKS: I've got a quick --

11 ALJ AGRANOFF: I'm sorry.

12 ALJ SANYAL: I'm sorry, go ahead.

13 MR. EUBANKS: I'll try to be as quick as
14 possible.

15 - - -

16 RE CROSS-EXAMINATION

17 By Mr. Eubanks:

18 Q. I believe in your redirect you stated
19 that the Indiana bat and the northern long-eared bat
20 have different habitats?

21 A. To some degree, yes. In -- I'm sorry,
22 yes.

23 Q. But you would agree that they have
24 similar habitats?

25 A. They are similar in some ways.

1 Q. You would agree that they have similar --
2 I'm sorry, I'm looking at the wrong document. It's
3 getting late for me as well. Similar active periods?

4 A. Yes.

5 Q. And similar morphological features?

6 A. A bat expert would disagree, but I would
7 kind of agree with you, looking at them.

8 Q. And that they're the same genus?

9 A. Yes.

10 Q. Okay. And you would agree that was
11 pointed out in the Technical Assistance Letter by
12 U.S. Fish and Wildlife?

13 A. Yes.

14 Q. And I believe also in your redirect you
15 stated or you agreed with your counsel's
16 characterization that the TAL outlines separate
17 requirements for the Indiana bat and for the northern
18 long-eared bat; is that correct?

19 A. They do.

20 Q. Isn't it true that the TAL outlines
21 guidelines for the Indiana bat and it states that the
22 northern long-eared bat is exempted from incidental
23 takes? So it doesn't really outline any requirements
24 for the Indiana bat -- I mean for the northern
25 long-eared bat.

1 A. But the term sheet -- may I look at that
2 term sheet? If I can find it.

3 MR. PARRAM: I'll point you to the right
4 place.

5 THE WITNESS: Thank you.

6 A. If you look at the term sheet, the two
7 dots under "Design and Construction." It says unless
8 otherwise approved by U.S. Fish and Wildlife Service,
9 avoid tree clearing as follows: Within 2.5 miles of
10 the Indiana bat average roost, from April 1 through
11 October 31; and within 150 feet of identified
12 northern long-eared bat roosts, from June 1 to
13 July 31. The dates are different for those and for
14 the tree clearing. So you have different dates for
15 different species in different areas.

16 Q. Just for clarity, you said "term sheet."
17 Is that the same as the Technical Assistance Letter?

18 A. The last --

19 ALJ SANYAL: It's the last page of that
20 sheet.

21 A. The last page of the Technical Assistance
22 Letter is the term sheet.

23 ALJ SANYAL: I had the same question
24 earlier and I flipped it over.

25 THE WITNESS: I'm sorry.

1 ALJ SANYAL: No, no, you're correct.

2 Q. (By Mr. Eubanks) Okay. Could you refer
3 me to -- I'm now at the document. Could you refer me
4 to what you're speaking of?

5 A. A third of the way down the page where it
6 says "Design and Construction."

7 Q. Yes.

8 A. Then in No. 2 it differentiates between
9 Indiana bat, the two dots, and the northern
10 long-eared bat with respect to avoiding tree
11 clearing. They're different requirements. Within
12 2.5 miles of Indiana bat roost, between April 1 and
13 October 31; and within 150 feet of identified
14 northern long-eared bat roost trees, from June 1 to
15 July 31. So it's a different distance and a
16 different date because they're slightly different in
17 activity patterns during the year.

18 MR. EUBANKS: Okay. I have no further
19 questions.

20 ALJ AGRANOFF: If I could just get an
21 understanding of why the Company was relying on
22 Emerson East maps and trying to then make an analogy
23 with respect to Republic's service territory and then
24 the various monitoring and assorted activities.

25 Why wouldn't -- why didn't the Applicant

1 simply just provide us with maps that were
2 Republic-specific, rather than trying to do this
3 analogy?

4 MS. FLINT: Could I have a point of
5 clarification, Your Honor? I believe you said
6 "Emerson East."

7 ALJ SANYAL: It's Emerson West.

8 ALJ AGRANOFF: I'm sorry, I'm sorry.
9 Emerson West.

10 MS. FLINT: Okay.

11 THE WITNESS: For some reason I heard you
12 say "West." You're going to have to ask the
13 Applicant on that --

14 ALJ AGRANOFF: Okay.

15 THE WITNESS: -- because I have nothing
16 to do with making maps.

17 ALJ AGRANOFF: So you were not involved
18 in any development of the testimony or exhibits that
19 were presented today relative to making analogies
20 between Emerson West?

21 THE WITNESS: None of the graphics, I
22 wasn't involved in any of those. I was given the
23 material and developed the text based on what I had.

24 ALJ AGRANOFF: Do you think it would have
25 been possible to simply provide us with maps that

1 were specific to the Application in this case?

2 THE WITNESS: I believe so.

3 ALJ AGRANOFF: And then with respect to
4 questions that you were asked relative to conditions
5 that may have come about with U.S. Fish and Wildlife
6 pursuant to conversations versus written directive,
7 is it your understanding that U.S. Fish and Wildlife
8 would establish conditions through conversation which
9 would not be reflected in written directive?

10 THE WITNESS: They don't like to say
11 things unless they're going to be in print
12 eventually. You don't say those types of things
13 because it's tough to -- I'm sorry -- it's tough to
14 take back things once you've gotten into a meeting
15 and you've said certain things. So, generally, is
16 that -- that's --

17 ALJ AGRANOFF: I'm asking whether or not
18 it's your understanding that U.S. Fish and Wildlife's
19 directives would take place through written
20 documentation versus through any type of oral
21 communication.

22 THE WITNESS: Most take, you know, a
23 written approach but, in meetings prior to that, you
24 know, you exchange ideas and thoughts and you
25 generally know, before you get the letter, if you've

1 been going to meetings and discussing this stuff with
2 them.

3 ALJ AGRANOFF: And then once you receive
4 the letter, anything that would be specific would
5 have been delineated within that letter?

6 THE WITNESS: Usually it's more specific,
7 yeah, conditions and sample sizes that they might ask
8 for, things like that.

9 ALJ AGRANOFF: Okay. Based on my limited
10 questions, any follow-up from counsel?

11 MR. VAN KLEY: No, Your Honor.

12 MS. FLINT: No, Your Honor.

13 MR. EUBANKS: No, Your Honor.

14 ALJ AGRANOFF: Thank you.

15 ALJ SANYAL: Thank you, Mr. Kerlinger.

16 THE WITNESS: Thank you.

17 ALJ SANYAL: We apologize for keeping you
18 so late.

19 ALJ AGRANOFF: Okay. Now, we have a
20 number of exhibits and a short period of time to do
21 this, so let me ask just generically: Are there
22 going to be objections to the admission of some of
23 these exhibits that have been marked throughout
24 today?

25 MR. VAN KLEY: I don't -- I don't think I

1 would object to any of the Applicant's exhibits that
2 were marked today.

3 ALJ AGRANOFF: And with -- Staff, do you
4 have any?

5 MR. EUBANKS: We have no objections.

6 ALJ AGRANOFF: Okay. And with respect to
7 any of the exhibits that the Local Residents have
8 marked today, any objections to those?

9 MS. FLINT: Could you repeat the
10 question, Your Honor?

11 ALJ AGRANOFF: Yes.

12 MS. FLINT: Do we have --

13 ALJ AGRANOFF: Are you objecting to any
14 of Mr. Van Kley's exhibits?

15 MS. FLINT: We would object to
16 Exhibit LR 13, the excerpts from Mr. Kerlinger's
17 book.

18 ALJ SANYAL: Explain further.

19 MS. FLINT: The basis would be that,
20 first of all, they're excerpts from a book which
21 Mr. Kerlinger -- Dr. Kerlinger described that this
22 isn't an empirical study as opposed to the studies
23 that were at issue in this case. I just don't
24 think -- it has no relevancy and could be potentially
25 used -- could be prejudicial and it's not a complete

1 copy.

2 ALJ AGRANOFF: Mr. Van Kley.

3 MR. VAN KLEY: Yeah.

4 With regard to Exhibit 13, as a
 5 compromise, I would offer to ask for the admission of
 6 only the first two pages to identify the book and
 7 identify Mr. Kerlinger as the author of that book;
 8 and then page 166, which contains the figure that
 9 Mr. Kerlinger described in detail during his
 10 testimony, so that people, including the parties, can
 11 refer to it and so that the record clearly reflects
 12 what he was discussing in this figure, in particular
 13 the distribution of flight altitudes for the various
 14 categories of birds which are perhaps a more clear
 15 portrayal of the information that he compiled during
 16 his studies than just relying on his verbal
 17 testimony.

18 MS. FLINT: I don't really understand
 19 what Mr. Van Kley -- most of what Mr. Van Kley just
 20 said how -- if he's relating what is in 166 to be
 21 what his testimony is, and I think maybe that's my
 22 point.

23 I think he was very clear when he
 24 explained what the figures are in 166 and he was
 25 describing them as they're meant for. I mean, I wish

1 I could go back on his testimony but he clearly was
2 not describing these figures to be meant to be used
3 as some kind of scientific study or analysis that he,
4 himself, performed to come up with those figures.

5 And to put them in record would be to
6 suggest that this is what Dr. Kerlinger believes
7 today to be the height of nocturnal migrants, which I
8 believe it's clear from Mr. Van Kley's insistence
9 that it be in, he wants to challenge that or he wants
10 to suggest this is Dr. Kerlinger's opinion, and it is
11 not.

12 MR. VAN KLEY: I think --

13 MS. FLINT: This book is not what
14 Dr. Kerlinger's position is on the general height of
15 nocturnal migrants, he said that and that this book
16 is not an empirical-study-type of book.

17 MR. VAN KLEY: Well, he didn't get the
18 figures out of thin air. He testified on the stand
19 that this is a valid general portrayal as to the
20 flight altitudes of migrating birds --

21 MS. FLINT: I do not recall --

22 MR. VAN KLEY: Would you stop
23 interrupting, please.

24 MS. FLINT: I thought you were finished,
25 sir.

1 MR. VAN KLEY: I was not.

2 How he characterized the information in
3 this figure can be derived from his testimony on it.
4 So, you know, to the extent that he either did or did
5 not say that this information reflects his current
6 opinion, and I think he did say that but the record
7 will reflect what he indeed did say. But at least by
8 placing this page in the record, everybody involved
9 in the case will be able to refer to it, and it will
10 make his testimony clearer.

11 MS. FLINT: Your Honors, I disagree that
12 it will make his testimony clearer. He did not
13 equate his opinion on the general height of nocturnal
14 migrants to what he said in page 166. In fact, I
15 think he said what he refers to on page 166 is not a
16 scientific explanation or study. I think he very
17 clearly said that which is the basis for my
18 objection.

19 It's being put in the record for --
20 attempting to be put in the record for a purpose that
21 is not helpful to the Hearing Officers on what is at
22 issue in the case, per the author of the document
23 himself.

24 ALJ AGRANOFF: Okay. We're going to
25 refrain from issuing a ruling on this at this point

1 in time until I have an opportunity to go back and
2 look at the context under which this conversation
3 took place; so once I have an opportunity to have
4 that review, then we will make a ruling relative to
5 this particular exhibit.

6 MS. FLINT: I understand. Thank you.

7 ALJ AGRANOFF: Other than that, if I
8 understood correctly, there were no other objections
9 to any of the other exhibits that have been
10 identified?

11 MR. VAN KLEY: Correct.

12 ALJ AGRANOFF: Okay. So why don't we
13 just, if Anna can do a quick --

14 ALJ SANYAL: Sure.

15 ALJ AGRANOFF: -- delineation of
16 everything.

17 ALJ SANYAL: Sure. So I have LR 12, 13,
18 14, and 15 that are being admitted, and there's no
19 objections to those.

20 And then I have Republic 22, 23, 24, and
21 25. I believe actually 24 was admitted earlier.

22 And then we've marked Staff Exhibit 1,
23 which is the Staff Report, but we're going to admit
24 it later, correct, or do you want to do it now?

25 MR. EUBANKS: I always believe that it's

1 admitted as part of the rules but --

2 ALJ SANYAL: Right, so.

3 MR. EUBANKS: -- unless anybody objects,
4 I would move for its admission.

5 ALJ SANYAL: I'm going to admit it then
6 if there's --

7 ALJ AGRANOFF: I'd like each of the
8 parties to make a motion to move their respective
9 exhibits into evidence, so who wants to go first?

10 MR. VAN KLEY: We so move.

11 MR. PARRAM: We move for all of our
12 exhibits to be admitted into the record.

13 ALJ AGRANOFF: That were identified in
14 today's proceeding?

15 MR. PARRAM: Yes, Your Honor.

16 MR. EUBANKS: Staff moves to have Staff's
17 Exhibit 1 moved into evidence.

18 ALJ SANYAL: Okay. And those motions are
19 granted.

20 (EXHIBITS ADMITTED INTO EVIDENCE.)

21 ALJ AGRANOFF: Except for --

22 ALJ SANYAL: Except for LR Exhibit 16
23 which we will make a ruling on after we review --

24 ALJ AGRANOFF: 13, LR Exhibit 13.

25 ALJ SANYAL: Just kidding. Exhibit LR 13

1 which we will review the transcript for.

2 ALJ AGRANOFF: Okay. Thank you,
3 everybody. Have a good evening.

4 (Thereupon, the proceedings concluded at
5 7:33 p.m.)

6 - - -

7 CERTIFICATE

8 I do hereby certify that the foregoing is a
9 true and correct transcript of the proceedings taken
10 by me in this matter on Wednesday, November 6, 2019,
11 and carefully compared with my original stenographic
12 notes.

13
14 Carolyn M. Burke
15 Carolyn M. Burke, Registered
16 Professional Reporter, and
Notary Public in and for the
State of Ohio.

17
18 My commission expires July 17, 2023.

19 - - -



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Summary: Transcript Volume III - In the Matter of the Application of Republic Wind, LLC, for a Certificate of Environmental Compatibility and Public Need for a Wind-Powered Electric Generating Facility in Seneca and Sandusky Counties, Ohio, hearing held on November 6th, 2019. electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Burke, Carolyn