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P R O C E E D I N G S**(Hearing resumed at 1:06 p.m.)**

PRESIDING OFFICER HONIGBERG: I think we're ready to resume. We have a witness in place. Would you please swear her in?

(Whereupon, **Mary Lee** was duly sworn by the court reporter)

MARY LEE, DULY SWORN

PRESIDING OFFICER HONIGBERG: Ms. Lee, Mr. Iacopino is going to help you get your Prefiled Testimony into the record here, okay?

MS. LEE: Thank you.

DIRECT EXAMINATION**BY MR. IACOPINO:**

Q Would you please identify yourself?

A Mary Lee.

Q Could you tell us your address, please?

A 93 Fiddlers Choice Road, Northfield.

Q Ms. Lee, I understand that you are a member of the Ashland to Concord Abutters Group; is that correct?

A Yes.

Q An I understand that on November 15, 2016, you filed Prefiled Direct Testimony in this docket;

1 is that correct?

2 A Yes.

3 Q Do you have that testimony before you?

4 A Yes, I do.

5 Q And it appears that that testimony has been
6 marked as Exhibit Ashland to Concord Abutter
7 number 1; is that correct?

8 A Correct.

9 Q Do you have any changes to that testimony?

10 A No.

11 Q Any additions to that testimony?

12 A Other than what I'm going to say today?

13 Q Correct.

14 A There might be.

15 Q Okay. Let me ask you this question though. If
16 you were asked all of the questions today that
17 are asked in that Prefiled Testimony, would you
18 give the same answers today?

19 A Yes.

20 Q And do you adopt that testimony as your Prefiled
21 Direct Testimony under oath here today?

22 A Yes.

23 Q Okay. The witness is available.

24 PRESIDING OFFICER HONIGBERG: Mr. Aslin?

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CROSS-EXAMINATION

BY MR. ASLIN:

Q Good afternoon, Ms. Lee. How are you?

A I'm good. Thank you.

Q Thank you. I just have a few questions. I want to orient us by pulling up the Project map for your property location. So this is part of Applicant's Exhibit 201 which is the August 2017 Revised Project Maps. And this is APP 68055.

Ms. Lee, is this the location of your property? Or can you see it up there yet?

A I just touched something and it disappeared.

Q Okay. Maybe Dawn can help you. Or Pam.

A I was trying to move it closer, Dawn. It's back on. I won't touch anything more.

Q Okay. So now you have a Project map in front of you?

A Yes.

Q Is this the location of your property in Northfield?

A Yes.

Q Could you help me identify which parcel is your property? If you're able to read it?

A Right about the center of the photo. You'll see

1 lot number 7405. The trapezoid shape.

2 Q Okay. Thank you. That's your property where
3 your home is located?

4 A Yes.

5 Q Okay. I believe in your testimony you indicate
6 that your driveway crosses underneath the
7 right-of-way; is that correct?

8 A Yes, it does.

9 Q Is that the sort of white-ish line you can see
10 coming up from your property through the
11 right-of-way and over to Fiddlers Choice Road?

12 A Yes.

13 Q In this location, the white checked box markers
14 indicate the existing structures in the
15 right-of-way; is that your understanding?

16 A Could you repeat that, please?

17 Q Sure. Do you see the little white boxes with
18 the cross through them?

19 A Yes.

20 Q Is it your understanding that that indicates the
21 position of the existing line?

22 A Those are the ones that are according to the key
23 going to be removed.

24 Q Correct.

1 A Yes.

2 Q And those are going to be moved to what's shown
3 as the green boxes; is that correct?

4 A Right. The green would be the relocated new 115
5 kV line.

6 Q And so as proposed, the Project will move the
7 existing 115 kilovolt line a little bit closer
8 to your property; is that correct?

9 A Yes.

10 Q And then the new line that will be the yellow
11 boxes, the 345 kV line, and those will be just a
12 little further away from your property than the
13 current 115 kV line?

14 A Right. The one that's between the purple square
15 and the green squares on the bottom, that whole
16 yellow line is the 345 line coming in.

17 Q I understand from your testimony that one of
18 your primary concerns is the preclearing that's
19 going to take place within the right-of-way in
20 the vicinity of your property; is that correct?

21 A Yes.

22 Q And have you had discussions with the Applicant
23 about your concerns?

24 A I did speak to counsel Marvin Bellis about the

1 tree clearing, and I spoke to engineers from
2 Normandeau about the vegetation and the tree
3 clearing.

4 Q Do you feel like you've had an opportunity to
5 discuss with the Applicant your concerns and
6 potential mitigation?

7 A Would you rephrase that?

8 Q I'll try. Sure. Do you feel that you've had an
9 appropriate opportunity to discuss with the
10 Applicant your areas of concern?

11 A I had an opportunity, but I'm not done.

12 Q Okay.

13 A Because I'm here at the hearings all the time,
14 but I did have an opportunity to have an
15 engineer visit the property and put in stakes.

16 Q Okay. Are you aware of anything that's changed
17 with regard to the Project in the vicinity of
18 your property that you're concerned about
19 subsequent to when your testimony was filed?

20 A Subsequent to having the engineer visit on May
21 25th, 2017, I was working with a very old map
22 and I looked at that file. It was dated 2013
23 Preliminary. And I know that I was assured by
24 the engineer Ovid Rochon that everything would

1 remain the same, and I noticed in August 2017
2 there are some maps. I think the engineering
3 maps have since June 1st been updated, but I
4 can't really be certain of that. I know even
5 the August 2017 maps of this property still have
6 the word "preliminary" on it. And since I've
7 been sitting through these hearings, there's
8 been a lot of discussion about where exactly is
9 the right-of-way, edge of the right-of-way. And
10 there have been discussions over how wide
11 people's individual right-of-ways are. And I've
12 been told mine is 225 feet wide.

13 So I am concerned about where exactly is
14 the definite map of the edge of the
15 right-of-way, and especially as is going to be
16 clearing of vegetation on my property near my
17 well, I'm very concerned about where exactly is
18 the definite map, not a preliminary map.

19 Q Okay. You mentioned you have a well. Is that
20 something you can locate for us on this map?

21 A Yes. You see the little green house, the
22 rooftop under the yellow dot within the
23 trapezoid?

24 Q Yes. Just below the label F139-275?

1 A Exactly. You can't see it because of all the
2 trees in this aerial view, but if you will note
3 to the left of that little green metal roof,
4 there's kind of a clearing, it's all sandy soil.
5 If you were to walk toward that direction under
6 those trees, 30 feet from the, actually, to the
7 left of the corner of my house there is a well
8 there, and it's about 92 plus or minus feet from
9 the corner of my house. And as you look at this
10 trapezoid, if you look on the far left corner
11 where it says F139-276, you're looking
12 northeast. And I was very concerned about the
13 fact that in the corner it was a well, not a,
14 excuse me, a boundary marker that was knocked
15 down by the tree clearing crew a while back.

16 Q Okay.

17 A So I'm concerned about vegetation and clearing.

18 Q I understand. Just one more question on your
19 well. Do you have an understanding of whether
20 your well is within the right-of-way area or
21 outside of the right-of-way?

22 A It's on my property, and the red line where it
23 crosses my trapezoid on, toward the middle of
24 that widest line of the lot could be exactly

1 where my well would be, but once you start
2 clearing that 20 to 30 feet of proposed
3 vegetation clearing, and given the engineering
4 preliminary maps that I have looked at, you
5 could be on top of my well or you could be
6 approaching my well.

7 Q Okay. So in the vicinity of the potential
8 clearing area?

9 A Exactly.

10 Q Have you had discussions with the Applicant or
11 have you pointed out to the Applicant the
12 location of your well with relation to the
13 right-of-way?

14 A On May 25th, '17, I met with Ovid Rochon and the
15 liaison for Northern Pass, and we staked out,
16 Ovid staked out 30 feet where the edge of the
17 new cleared right-of-way would be, and that
18 would be 30 feet from my well.

19 Q Okay. So your well is 30 feet away from the
20 cleared area that's been marked. Not in the
21 cleared area.

22 A It's not in the cleared area. I was very
23 concerned that you were going to be clearing my
24 well.

{WITNESS: LEE}

1 Q Certainly. And if I understand your testimony
2 so far, you're still in discussions with the
3 Applicant about addressing some of your
4 concerns?

5 A Yes.

6 Q Okay. I have no further questions. Thank you.

7 PRESIDING OFFICER HONIGBERG: Ms. Pacik?
8 Any questions for your group?

9 MS. PACIK: I believe Jeanne Menard was
10 going to go before me, and then I may have
11 followup questions but unlikely.

12 PRESIDING OFFICER HONIGBERG: Okay. Ms.
13 Menard. Off the record.

14 (Discussion off the record)

15 **CROSS-EXAMINATION**

16 **BY MS. MENARD:**

17 Q Good morning, Ms. Lee.

18 A Hello, Ms. Menard.

19 Q I, too, would like to ask you a few questions on
20 a few topics. One is about your well and one is
21 about your property values, given the visibility
22 of the Northern Pass Transmission Project and
23 how it relates to your property value.

24 So to set up both of these topics, I just

1 need to run through a couple background
2 questions, and I apologize there will be a
3 little bit of overlap given what has just
4 happened, but I think it would be more efficient
5 to just keep with the questions in this order.

6 So Bob, if you could put up the same sheet
7 that we were just looking at, there's no need, I
8 think people have oriented themselves to your
9 property correctly, and the current right-of-way
10 as you have described has two existing 115 kV
11 lines, and one of those lines is going to be
12 moved 50 feet closer to your house. And the
13 Northern Pass Transmission line will go in
14 between those two lines. Is that correct?

15 A You mean the 345 kilovolt line will be in
16 between the --

17 Q Correct.

18 A -- two 115?

19 Q Yes.

20 A Yes.

21 Q And structure F139-276 is located on your
22 property, but structure F139-275 appears to be
23 the closest structure to your house. Do you
24 agree with that?

1 A Yes.

2 Q So that structure is not on your property, but
3 it's the one closest to your property.

4 A Yes.

5 Q So if we look at the segment sheet, it shows
6 that the relocated structure on your land will
7 be 79 feet tall and that the nearest relocated
8 pole is 100 feet tall. Do you agree with that?

9 A Yes.

10 Q So while we're on this page, does it appear that
11 the relocated pole will be much taller than the
12 existing pole?

13 A Oh, yes.

14 Q So let's talk about the distance of your well in
15 relation to your house, the edge of the
16 right-of-way, and the relocated 115 kV line.
17 And you have drawn a picture to help us, to
18 illustrate how things were set up which you did
19 a nice job describing earlier, and we're going
20 to label this exhibit Deerfield Abutter 155 A.

21 And you've also had actual photos taken
22 that were placed by a representative from Burns
23 & McDonnell, correct?

24 A Photos taken of the stakes?

1 Q Yes.

2 A Near the well, yes.

3 Q Okay. So from your house to your well, you've
4 described that it's plus or minus 92 feet and
5 you did that measurement; is that correct?

6 A Yes.

7 Q Okay. But the measurement from the right-of-way
8 clearing to your well is 30 feet, and that was
9 done by Burns & McDonnell; is that correct?

10 A Yes. We were all talking about plus or minus.

11 Q Yes. Understood. So basically, if we throw
12 three feet in for the diameter of your well,
13 your house is approximately 125 feet from the
14 right-of-way edge; does that sound about right?

15 A Yes.

16 Q Okay. So back to your well. Let's look at the
17 pictures that just depict what we've just talked
18 about. This actually, can we look at the other
19 picture, first? Thank you. So here's your
20 well. And then if Bob can just point out the
21 stakes that are in the tree line closer to the
22 right-of-way. (Mr. Cote indicating.)

23 Thank you. And then we have a picture that
24 you took that shows the evidence of the fact

1 that this well is 30 feet from the edge of the
2 right-of-way. Is that correct?

3 A Yes.

4 Q Okay. So the schematic, again, if we go back to
5 the construction page, the schematic shows the
6 relocated pole 30 feet from the edge of the
7 right-of-way. If you add up there's a five-foot
8 buffer and then 25 feet to the relocated pole?

9 A Yes.

10 Q So did Northern Pass Transmission measure the
11 distance from the pole to your well?

12 A No.

13 Q How long have you used this well?

14 A 1987 and maybe prior to that. But at least from
15 1987 when we built the house.

16 Q Okay, and this is your primary source of
17 drinking water?

18 A Yes.

19 Q Have you ever had any problems with your well?

20 A No. I replaced a pump a few years ago.

21 Q Okay. Can we take a look at the construction
22 map? Yes. From this picture, you can see that
23 the construction pad is going to be located
24 right on the edge of the right-of-way. Does

1 that look like it's close to the edge of your
2 property?

3 Let me rephrase that question for you,
4 Mary. Is it possible that construction will
5 occur within 30 feet of your well?

6 A Yes. It appears so.

7 Q Okay. Are you aware of the Northern Pass
8 Transmission, the claims process should there be
9 any damage to your well?

10 A No.

11 Q Even though that Northern Pass Transmission came
12 to do a site visit regarding your concerns about
13 your well, they did not discuss this claims
14 process with you?

15 A No.

16 Q Do you know what records or documentation you
17 might need in order to prepare a file just in
18 case there is a problem with your well due to
19 the construction activities?

20 A I would think that you'd have to have evidence;
21 say a water test of prior to construction water
22 quality and then perhaps postconstruction.

23 Q Have you thought about yield? How much water
24 your well might produce compared to what it's

1 doing now?

2 A I have not thought about it.

3 Q Okay. So thank you. I have a few questions
4 regarding the effects of this Project on your
5 property value. Mr. Cote and Mr. Cunningham
6 raised questions with Mr. Chalmers about the
7 owner's perspective of property value as opposed
8 to his market value perspective, and before
9 going into the transcript, I would like to look
10 at page 4 of Mr. Chalmers' report where he gives
11 an example of owner's perspective, and it says
12 that as a scenario, where a portion of an HVTL
13 structure becomes visible, causes tremendous
14 harm in the subjective opinion of an individual
15 property owner. Do you agree that this scenario
16 is similar to what you have been expressing as a
17 concern?

18 MR. NEEDLEMAN: Objection, Mr. Chair.
19 Property values are an issue that is in Ms.
20 Lee's testimony, and material like this could
21 have and should have been discussed in there.

22 PRESIDING OFFICER HONIGBERG: Ms. Menard?

23 MS. MENARD: I didn't hear the last part of
24 what you said, Mr. Needleman. The property

1 value is -- do you mind repeating that?

2 MR. NEEDLEMAN: Sure. This is all material
3 that could have and should have been discussed
4 in her testimony.

5 MS. MENARD: The testimony originally in
6 Mr. Chalmers' work, Mr. Chalmers' testimony was
7 a bit dismissive of a property owner's
8 perspective, and he has stated that it should be
9 respected, but it leaves one to question whether
10 it needs to be considered with the same degree
11 of importance that a market value perspective
12 is.

13 PRESIDING OFFICER HONIGBERG: I understand
14 that part.

15 MS. MENARD: And in the course of the
16 cross-examination, there was an attempt of
17 Intervenors, and, in fact, I'm going to be
18 pulling from the transcript a conversation that
19 Mary Lee had with Mr. Chalmers with regards to
20 her concerns about her property value. None of
21 us were in a position to truly understand his
22 visibility conclusions because of --

23 PRESIDING OFFICER HONIGBERG: Don't go too
24 far here. What you want to know from Ms. Lee is

1 what exactly on this point?

2 MS. MENARD: I want to know if she, given
3 the impact of the Project on her property
4 visibility-wise, whether or not her, what is her
5 perspective on property value impact, and this
6 is a concern --

7 PRESIDING OFFICER HONIGBERG: We'll let her
8 answer. Go ahead.

9 MS. MENARD: Thank you.

10 BY MS. MENARD:

11 Q So can we take a look at the transcript, please?

12 PRESIDING OFFICER HONIGBERG: Wait.
13 There's a pending question, I think.

14 Q I'm sorry. I'm distracted. So the pending
15 question is --

16 PRESIDING OFFICER HONIGBERG: It's
17 something like what do you think the impact on
18 your property value will be. It's along those
19 lines. I don't remember the specific wording.

20 Q Well, I think we talked about the perspective,
21 and I wanted to ready a section from the
22 transcript.

23 PRESIDING OFFICER HONIGBERG: Hang on.
24 Cindy, can you go back and look at what the

1 pending question is, please?

2 COURT REPORTER: I have a few questions
3 regarding the effects of this Project on your
4 property value. Mr. Cote and Mr. Cunningham
5 raised questions with Mr. Chalmers about the
6 owner's perspective of property value as opposed
7 to his market value perspective, and before
8 going into the transcript, I would like to look
9 at page 4 of Mr. Chalmers' report where he gives
10 an example of owner's perspective, and it says
11 that as a scenario, where a portion of an HVTL
12 structure becomes visible, causes tremendous
13 harm in the subjective opinion of an individual
14 property owner. Do you agree that this scenario
15 is similar to what you have been expressing as a
16 concern?

17 PRESIDING OFFICER HONIGBERG: Do you
18 understand the question, Ms. Lee?

19 A I really don't because I'm looking at my
20 Prefiled Testimony, and number 2 says I have
21 enjoyed the quiet remote nature of my home, its
22 natural beauty, its wildlife, my health, my
23 property value. So am I talking about property
24 value or not?

1 MR. IACOPINO: Look at Section 6 of your
2 testimony. You do talk about property value.
3 Number 6.

4 A That's right. There's a whole paragraph.

5 Q Can I clarify the question?

6 PRESIDING OFFICER HONIGBERG: Why don't you
7 clarify the question.

8 BY MS. MENARD:

9 Q So the question, Ms. Lee, is does this scenario
10 that Mr. Chalmers has in his report regarding
11 the HVTL structure becoming visible cause
12 tremendous harm in the subjective opinion of an
13 individual property owner, does this example
14 sound like the concern that you have raised,
15 that you raised with Mr. Chalmers?

16 A Yes.

17 Q And in the transcript from that conversation, he
18 says, and if you want to drop down if people
19 want to scan a little bit from the top down to
20 get a little bigger perspective of the whole
21 question, we just focus on the visibility of the
22 structures, and in particular, the visibility
23 from the house because we think that's what
24 really drives market value. So you have stated

1 your concerns regarding property value and the
2 relocated 100-foot structure, correct?

3 A Yes.

4 Q And you agree that the Northern Pass
5 Transmission Project will be visible from your
6 property.

7 A Yes.

8 Q So when you're standing at your kitchen sink
9 looking out the window towards the right-of-way,
10 how much of the existing poles can you see?

11 A In the fall which is right now and in the
12 winter, I can see the tops, the cross bar of the
13 H-Frame.

14 Q From your yard area, is that the same situation?

15 A Exactly.

16 Q Okay. So are you aware that Mr. Chalmers' New
17 Hampshire research concluded that market value
18 affects only if the house is within 100 feet of
19 the right-of-way?

20 A Yes.

21 Q And we've established earlier that your house is
22 approximately 125 feet so your house doesn't
23 meet his criteria?

24 A No.

1 Q Do you agree with Mr. Chalmers' conclusion that
2 the Project will not affect your property value
3 if the Project is built as designed?

4 MR. NEEDLEMAN: Same objection.

5 PRESIDING OFFICER HONIGBERG: Overruled.
6 She can answer.

7 A Absolutely not.

8 Q Thank you. No further questions.

9 PRESIDING OFFICER HONIGBERG: Ms. Pacik?

10 MS. PACIK: No questions. Thank you.

11 PRESIDING OFFICER HONIGBERG: I don't see
12 Mr. Cunningham or Ms. Percy here. Ms. Draper?

13 MS. DRAPER: Can I stay right here?

14 **CROSS-EXAMINATION**

15 **BY MS. DRAPER:**

16 Q Hello, Mary.

17 A Hello, Ms. Draper.

18 Q I have just a few questions. And mainly, would
19 you tell us more about the conservation zone
20 where your property is located?

21 A I had previously shown a map, I think it was in
22 the Northfield property tax maps, and I believe
23 it was before the Construction Panel a while
24 ago, and it shows the limits of the, the

1 boundary lines rather of the groundwater
2 protection area, or I think they refer to it as
3 a groundwater protection district, and then it's
4 also part of a zone in Northfield called
5 conservation zone.

6 Q Is that a town -- I know the groundwater
7 protection would come from Northfield. What
8 about the conservation zone? Is that private
9 conservation land or is it town land?

10 A I guess it would be private if it's my property,
11 but our town designates that conservation zone,
12 and we're very close, you could walk down in
13 half an hour to the banks of the Merrimack River
14 so it's a protection district for drinking
15 water.

16 Q All right. And does the current right-of-way go
17 right over the groundwater protection area?

18 A Yes.

19 Q And how about the conservation land? Does the
20 right-of-way cross that, too?

21 A Yes.

22 Q And I think the rest of my questions have been
23 answered. Thank you.

24 A Thank you.

1 PRESIDING OFFICER HONIGBERG: I have no
2 other Intervenors on the list looking to ask
3 questions of Ms. Lee. Did I miss anybody? Mr.
4 Needleman next. Mr. Needleman?

5 MR. NEEDLEMAN: No questions.

6 PRESIDING OFFICER HONIGBERG: Anybody from
7 the Committee have questions for Ms. Lee? Ms.
8 Lee. Sit down for a second. Commissioner
9 Bailey?

10 **QUESTIONS BY COMMISSIONER BAILEY:**

11 Q Ms. Lee. Over here. Good afternoon.

12 A Hello.

13 Q Hi. You said you built your house in 1987?

14 A Yes.

15 Q Was the existing transmission line, the two 115
16 kV lines there when you built it?

17 A Yes.

18 Q And what was the tree cover like at that time?

19 A It's grown over far more than when we built the
20 house.

21 Q So when you built the house you could actually
22 see the transmission lines?

23 A Yes.

24 Q Okay. Thank you.

{WITNESS: LEE}

1 PRESIDING OFFICER HONIGBERG: Any other
2 questions from members of the Committee?

3 Ms. Lee, since you're not represented by
4 counsel, I'll ask you, based on the questions
5 you've been asked today, do you have anything
6 you want to add to your testimony in response to
7 further explain any of the answers that you've
8 given?

9 MS. LEE: Based on today's questioning, I
10 still have no definite maps of where exactly is
11 the right-of-way, where exactly is the edge of
12 the right of clearing, how close really is my
13 well from the construction pad. I know it's in
14 discussion, and I did speak to Ovid, and we had
15 discussed this program called OneTouch, and on
16 June 1st when we met we were all promised
17 updated definite maps which we don't have. We
18 don't have as homeowners. So I'm concerned
19 about property lines and about exact mapping,
20 and I'm also concerned that you had a chance in
21 June and prior to that great discussion about
22 having real maps, and we don't have real maps.

23 PRESIDING OFFICER HONIGBERG: Okay. Thank
24 you, Ms. Lee. You can return to your seat.

1 MS. LEE: You're welcome.

2 PRESIDING OFFICER HONIGBERG: I believe
3 next is going to be Dr. Publicover. Is that
4 right?

5 (Whereupon, *David Publicover* was duly
6 sworn by the court reporter)

7 **DAVID PUBLICOVER, DULY SWORN**

8 PRESIDING OFFICER HONIGBERG: Mr. Clough?

9 MR. PLOUFFE: Thank you, Mr. Chairman.

10 **DIRECT EXAMINATION**

11 **BY MR. PLOUFFE:**

12 Q Please state your name and your place of
13 employment.

14 A David Publicover, Appalachian Mountain Club,
15 Pinkham Notch Visitor's Center, New Hampshire.

16 Q What is your position at the Appalachian
17 Mountain Club?

18 A I'm a senior staff scientist and Assistant
19 Director of Research.

20 Q Am I correct that you hold a doctorate from the
21 Yale School of Forestry which is why we're
22 calling you doctor, Doctor?

23 A That's correct.

24 Q And what work have you done on behalf of the

1 Appalachian Mountain Club relative to the
2 Northern Pass Project?

3 A I have been involved for most of the past year.
4 I was assigned the task of serving as a witness
5 on the environmental impacts of the new northern
6 right-of-way. I have reviewed the Application.
7 I have reviewed subsequent submissions. I have
8 reviewed Prefiled Testimony and Supplemental
9 Prefiled Testimony of all the witnesses. I have
10 reviewed much of the correspondence between the
11 Applicant and state and federal agencies. I
12 have reviewed relevant sections of the federal
13 Draft and Final Environmental Impact Statement,
14 and I've done a site visit to the site of the
15 new northern corridor.

16 Q You've submitted Prefiled Testimony in this
17 docket that's dated December 30th, 2016, which
18 has been marked as NGO Exhibit 101. Is that
19 correct?

20 A Yes.

21 Q And do you have a copy of that testimony with
22 you today?

23 A I do.

24 Q And are there some corrections to your prefiled

1 testimony that are in the nature of errata that
2 you want to make?

3 A Yes. There are five which are shown on the ELMO
4 screen. They are all minor typographical
5 corrections, and I'm not sure I need to read
6 them. They will be submitted as an errata
7 exhibit.

8 Q And they do not change the substance of your
9 Prefiled Testimony, correct?

10 A Correct.

11 Q And we'll be submitting those as NGO Exhibit
12 132. Just to save the Committee's time, we're
13 not going to go through each one of those.

14 So as amended by your errata, do you adopt
15 your Prefiled Testimony?

16 A I do.

17 Q Now, Dr. Publicover, let me do a slightly
18 different aspect of this. Do you have any
19 updates or additions to your testimony that are
20 based on information that has become available
21 in the record subsequent to April 17th, 2017,
22 which was the deadline for the filing of
23 Supplemental Prefiled Testimony?

24 A Yes. I actually have six.

1 Q Okay. Would you walk the Committee through
2 those items? And I'm going to ask Dr. Kimball
3 here to use the ELMO so the Committee can see
4 which pages of your Prefiled Testimony these
5 comments relate to.

6 PRESIDING OFFICER HONIGBERG: Mr. Plouffe,
7 can you do us a favor, and just, I think it's
8 going to be an easy one for you. Can you break
9 it up for Dr. Publicover so we don't have one
10 answer to that question that goes on for however
11 many pages it's going to go?

12 MR. PLOUFFE: Okay. Be happy to.

13 PRESIDING OFFICER HONIGBERG: If you could
14 walk him through one at a time, I think it will
15 be easier for all of us to read.

16 MR. PLOUFFE: Of course.

17 BY MR. PLOUFFE:

18 Q First, if we could go to page 2, Footnote 1 of
19 Dr. Publicover's testimony, and the applicable
20 portion of that I want to focus on is you wrote
21 the requested documentation of this
22 determination has not been received by the
23 Applicant. This is in regards to the exemplary
24 status of NHSF-1. Is that correct, Dr.

1 Publicover? What update would you like to make
2 to that statement?

3 A Yes. I would just like to point out that the
4 documentation is now available in Applicant
5 Exhibit 124, link 130.

6 Q And since you filed your Prefiled Testimony,
7 that information has become available, correct?

8 A Yes.

9 Q On page 6 of your testimony on line 19, you used
10 the term "cumulative," and you wish to change
11 that?

12 A Yes. In my testimony, I used the term
13 cumulative impacts. I was using that in the
14 common sense of the word. In light of the
15 discussion with Mr. Dodson last Friday realized
16 that was the improper word to use because it has
17 a specific meaning in the SEC rules referring
18 only to wind power and referring only to the
19 combined effects of multiple projects. So we
20 need a different word to describe the combined
21 effects, multiple effects of a single Project,
22 and I would use the word combined. I believe
23 Mr. Dodson suggested overall. But throughout
24 the document where I refer to cumulative

1 impacts, that should be changed to combined
2 impacts.

3 Q And that's to clarify the intent of your
4 testimony, correct?

5 A Yes. Well, it's to indicate that I am not
6 using, I did not intend to use the word
7 cumulative in the sense in which it is used in
8 the SEC rules.

9 Q Okay.

10 A It has a very specific meaning in the SEC rules.

11 Q Also on page 6, line 19, where you discuss what
12 you then called cumulative impacts, what you're
13 now referring to as combined impacts, you speak
14 to the impacts of the northern corridor to the
15 Great North Woods, the newly cut corridor, on
16 rare plants and natural communities. And in
17 lines 23 through 25 you state including the
18 northern hardwood seepage forest described
19 above. Proposed right-of-way would impact one
20 exemplary rare natural community, three
21 potential exemplary rare natural communities,
22 and so on.

23 What would you like to add to your
24 testimony regarding that sentence?

1 A We have subsequently learned that one of the
2 potentially exemplary rare natural communities
3 which is designated NHSF-4, another occurrence
4 of the northern hardwood seepage forest has been
5 determined by the Heritage Bureau to be
6 exemplary, and that is indicated in Applicant
7 Exhibit 124, link 203.

8 The Project would have severe impacts to
9 this second exemplary community occurrence,
10 basically passing right through the middle of
11 it. Therefore, the impacts to documented
12 exemplary rare natural communities are greater
13 than described in my Prefiled Testimony.

14 Q Let's turn to, again, this time it will be page
15 9, line 19. There you have a quote from the US
16 Department of Energy Draft Environmental Impact
17 Statement. I understand that that language has
18 been slightly modified in the Final EIS. Do you
19 want to comment on that?

20 A Yes. That quote was slightly modified in the
21 Final EIS, and it now reads, that quote should
22 now read habitat loss and/or modification of
23 existing habitats in the study area during
24 construction would also have adverse impacts on

1 wildlife resources. Forest interior dwelling
2 species would experience long-term adverse
3 effects based on habitat loss and fragmentation,
4 ellipses. The removal of approximately 463
5 acres, parentheses, 187 hectares of forest lands
6 to create the new transmission corridor which
7 include portions of forest interior habitats
8 would have a long-term adverse effect on forest
9 dwelling species such as the American marten,
10 ellipses. The removal of forest lands would
11 result in adverse impacts to forest interior
12 species through loss of interior forest lands
13 and habitat fragmentation.

14 Q So you want to substitute that language for
15 what's in your report?

16 A Yes.

17 Q On your Prefiled, page 12, lines 5 through 9,
18 you make reference to the New Hampshire DES
19 progress report of May 16th, 2016, in which they
20 requested revised plans utilizing the Route 3
21 corridor from Pittsburg to Northumberland. Do
22 you want to update us on that as part of your
23 testimony?

24 A Yes. We recognize that the DES's final decision

1 of March 1st of this year rescinded this
2 request. However, based on the EPA's comment
3 letter to the Army Corps of Engineers of
4 September 26th which is Applicant Exhibit 224 A,
5 and the inclusion of EPA's recommended hybrid
6 alternative as a practical alternative in the
7 Department of Energy's Final Environmental
8 Impact Statement, this hybrid alternative
9 substitutes Route 3 for the new northern
10 right-of-way. We reiterate and hold to our
11 belief that the new northern right-of-way does
12 not effectively avoid, minimize or mitigate
13 relevant impacts as required by SEC rules.

14 Q Okay. And, lastly, Dr. Publicover, you recall
15 that in the Supplemental Prefiled Testimony of
16 April 17th, 2017, Dennis McGee of Normandeau
17 Associates made the following statement:

18 Question, has the NHNHB signed off on the
19 Applicant's avoidance and minimization measures,
20 AMMs?

21 Answer: Yes, it has. In fact both NHNHB
22 and NHDES have concurred with the 6 recommended
23 AMMs arrived at after consultation with NHNHB.
24 End of Normandeau's, Mr. McGee's, response. Do

1 you want to comment on that?

2 A Yes. On May 25th, I emailed Natural Heritage
3 Bureau with a few questions intended to clarify
4 my understanding of their role in this process.
5 The answers from Sabrina Stanwood, the Natural
6 Heritage Administrator, are dated July 6th and
7 as follows to three of my questions.

8 Q I think we have a copy of your email from --

9 A Yes. That will be --

10 Q Sabrina?

11 A That will be submitted as NGO 131.

12 Q And those are up on the ELMO now?

13 A Yes.

14 Q Can you briefly go through those?

15 A Yes. My first question was it is my
16 understanding that Natural Heritage takes no
17 position on Applications and makes no
18 recommendation to either the SEC or DES as to
19 whether a Project should be approved; is this
20 correct? And Ms. Stanwood's answer was yes.

21 My second question. Has Natural Heritage
22 Bureau made any statement on the record as to
23 whether or not Northern Pass's impacts to rare
24 plants and natural communities constitute an

1 unreasonable adverse effect. Her answer, no.

2 My third question. It is my understanding
3 that Natural Heritage will work with an
4 Applicant to minimize the impacts to rare plants
5 and natural communities of a Project as proposed
6 and that this service is provided without regard
7 to Natural Heritage opinions on whether or not
8 the Project should be approved or whether or not
9 the impacts are acceptable. Is this correct?

10 Her answer, yes.

11 And I submit this because I think it's
12 important that the Committee understand what
13 Natural Heritage Bureau's approval of the AMMs
14 does and does not imply. In no way should it be
15 considered a de facto approval of the project by
16 Natural Heritage. Nor should it be considered a
17 conclusion by them that the adverse effects to
18 rare plants and natural communities are not
19 unreasonable.

20 Q Thank you, Dr. Publicover. With that, he is
21 ready for questions.

22 PRESIDING OFFICER HONIGBERG: Mr. Pappas.

23 MR. PAPPAS: Thank you, Mr. Chairman.

24 **CROSS-EXAMINATION**

1 **BY MR. PAPPAS:**

2 Q Dr. Publicover, your testimony focuses on the
3 impacts of the proposed new 24-mile right-of-way
4 in Coos County; is that right?

5 A Well, 32.

6 Q 32. Correct.

7 A 32 miles.

8 Q And you looked at three things. Rare natural
9 communities, plants within those communities,
10 and forest habitation fragmentation. Do I have
11 that right?

12 A Yes.

13 Q So I want to start by asking you some questions
14 about rare natural communities. The specific
15 rare natural community you looked at was the
16 northern hardwood seepage forest. Is that
17 right?

18 A Yes.

19 Q And I understand that this northern hardwood
20 seepage forest are somewhat common in northern
21 New Hampshire; is that right?

22 A They are more common in northern New Hampshire.

23 Q Am I also correct that for New Hampshire as a
24 whole those forests are rare?

1 A They're classified as rare, yes.

2 Q And generally, the northern hardwood seepage
3 forest occurs in lower mountain slopes in that
4 area?

5 A Yes.

6 Q And they contain both upland and wetland areas;
7 is that right?

8 A Yes.

9 Q Now, the northern hardwood seepage forest like
10 other forests are rated; is that right?

11 A Are?

12 Q They are rated. They have a rating --

13 A Yes.

14 Q -- system, and the rating system goes from S1 to
15 S5?

16 A Yes.

17 Q And an S1 and a S2 rating means the forest is
18 considered exemplary because they're rare?

19 A No. The exemplary rating is separate from the
20 rarity rating.

21 Q Okay. Am I correct that in S1 and S2-rated
22 forest, are those considered exemplary?

23 A I believe all the, basically the rarer a
24 community the less perfect it has to be to be

1 considered exemplary. I believe all S1
2 communities, no matter how degraded, are
3 considered exemplary. When you get to the other
4 end of the scale, S5 which is the most common
5 widespread, it would essentially have to be a
6 patch of old growth to be considered exemplary.

7 Q Okay.

8 A S3s are somewhat in the middle. Exemplary
9 communities can have some evidence of past
10 impact, but they still need to maintain most of
11 the characteristics of a natural community.

12 Q Okay. Thank you. Am I correct that the New
13 Hampshire Heritage Bureau has identified 13
14 exemplary occurrences of this northern hardwood
15 seepage forest?

16 A Yes.

17 Q And as I understand it, all but one of them is
18 less than 25 acres in size?

19 A Yes, of the ones that were documented prior to
20 Normandeau's work.

21 Q Okay. And most of them are, in fact, less than
22 six and a half acres in size; is that right?

23 A I believe so.

24 Q And one of them is a little over 61 acres; is

1 that right?

2 A Yes.

3 Q Now, the new proposed right-of-way in Coos
4 County is going to impact five of these
5 identified northern hardwood seepage forests; is
6 that right?

7 A Well, the 13 are exemplary occurrences.

8 Q Right.

9 A There are two more that were identified by
10 Normandeau. So there are now 15 documented
11 exemplary occurrences.

12 Q Okay.

13 A The right-of-way would impact two of them. It
14 would also impact three other occurrences of
15 this natural community that are not exemplary.

16 Q Okay. Thank you. So just to, so I'm clear, two
17 exemplary forests are going to be impacted and
18 three hardwood seepage forest but they're not
19 exemplary?

20 A Yes.

21 Q Okay. And am I correct in saying that one of
22 them is in Stewartstown, correct?

23 A One, I believe, is on the Dixville/Stewartstown
24 line, and one of them is in Dixville.

1 Q And the others are in Dixville and one of them
2 is in Dixville, a little bit into Millsfield. I
3 want to get the geographic area that we're
4 talking about.

5 A I'll accept that. I don't have the locations of
6 the others memorized.

7 Q Okay. Fair enough. Dr. Publicover, what's on
8 the screen now is Applicant's Exhibit 1,
9 Appendix 35, which is Normandeau Associates'
10 October 2015 report on rare, threatened and
11 endangered plants and exemplary natural
12 community. Do you see that?

13 A Yes.

14 Q And you're familiar with this report?

15 A Yes.

16 Q For the Committee's benefit, this report is
17 marked "confidential," and I have conferred with
18 the Applicant and the portions that I'm going to
19 refer to aren't confidential. They can be
20 discussed in public.

21 Dr. Publicover, if you can look at what's
22 on the screen now which is page 21796 of this
23 exhibit, and the second one down has northern
24 hardwood seepage forest; do you see that?

1 A Yes.

2 Q And it's rated S3. Do you see that?

3 A Yes.

4 Q And under threats, it indicates threats likely
5 include loss of habitat, disturbance from
6 logging and ATV use, fragmentation and invasive
7 plants. Do you see that?

8 A Yes.

9 Q And this is what the Normandeau chart described.
10 Do you agree with that?

11 MR. NEEDLEMAN: Mr. Chair, I'm going to
12 object. This is an October 2015 report. I
13 think this and everything else leading up to
14 this could have and should have been included.

15 PRESIDING OFFICER HONIGBERG: Mr. Pappas?

16 MR. PAPPAS: What I'm trying to do is just
17 give the Committee some context and setup so I
18 can get to pure cross, but I think it's
19 necessary for the Community to understand where
20 I'm going.

21 PRESIDING OFFICER HONIGBERG: Okay. You
22 can proceed.

23 MR. PAPPAS: Thank you.

24 BY MR. PAPPAS:

1 Q Do you agree with those comments, Dr.
2 Publicover?

3 A Yes.

4 Q Thank you. What's on the screen now in front of
5 you is page 21812 from the same report, and I'm
6 not going to bother reading it for the record
7 because it's in the record, but if you could
8 just look at tell me generally if you also agree
9 with what Normandeau Associates described as the
10 current condition of these four forests of which
11 we're talking about this afternoon.

12 A No. I believe NHSF -- okay. Yes. No, that is
13 correct. Yes. As far as I can tell, based on
14 the information in the record and my field
15 visit, I would agree with those.

16 Q Okay.

17 A Actually, no. Excuse me. NHSF-2 was one of the
18 potentially exemplary communities. I believe
19 Normandeau submitted to Natural Heritage
20 information that that occurrence had almost been
21 completely logged in probably 2016 so NHSF-2 is
22 no longer an intact forest. It is now heavily
23 logged.

24 Q Okay. All right. Now, you also in your Direct

1 Testimony identified an additional exemplary
2 community. Which of the forests recently
3 received that designation prior to this report?

4 A Well, NHSF-1 which is not in this table was the
5 first one to be determined to be exemplary.

6 Q Is that the 61-acre one?

7 A That's the 61-acre one. NHSF-4 was subsequently
8 also identified as exemplary.

9 Q Thank you. What's on screen now in front of you
10 is page 21770 which is a table from Normandeau's
11 report, and it shows four of these forests, and
12 if you look at the right-hand side it indicates,
13 well, actually I take it back. I'm interested
14 in the first one. Do you see the first one
15 which is NHSF-1?

16 A Yes.

17 Q And that's the 61-acre forest?

18 A Yes.

19 Q And Normandeau indicated that the impact would
20 be 24 percent to this forest?

21 A That would be the amount of that occurrence that
22 would be cleared for the new right-of-way.

23 Q Okay. On the screen now is page 21782, and if
24 you look at the bottom table, it has the NHSF-2,

1 3, 4, and 5. Do you see that?

2 A Yes.

3 Q And those are four of the other forests that
4 we're discussing, correct?

5 A Yes.

6 Q And Normandeau, on the far hand side, indicates
7 the area of impact ranging from 21 percent up to
8 80 percent; do you see that?

9 A Yes.

10 Q So for these five forests, the impact ranges
11 from a low of 21 percent to the number 2, all
12 the way up to 80 percent of forest number 5.
13 Correct?

14 A Yes.

15 Q Okay. And am I correct that the impact that
16 we're talking about is the cutting of the trees?

17 A Yes.

18 Q And clearing of the land?

19 A Yes.

20 Q Am I also correct that if these forests are cut,
21 logged, but left in the natural state, they can
22 rejuvenate themselves and grow back?

23 A Yes. In fact, both of the occurrences that
24 Heritage has designated as exemplary, NHSF-1 and

1 NHSF-4, the indications are that they have had
2 previous logging perhaps 40 years ago, but they
3 have recovered enough to be considered
4 exemplary. They have returned to a relatively
5 natural condition.

6 Q Okay. But if the Northern Pass Project is built
7 and these forests are cut, they will remain
8 cleared, and, therefore, won't have the
9 opportunity to regenerate; is that correct?

10 A That's certainly true.

11 Q Okay. Now, as I understand it, you believe that
12 the impact to the one 61-acre parcel, the
13 northern hardwood seepage forest, in and of
14 itself, you think that that is significant
15 enough to be unreasonably adverse; is that your
16 opinion?

17 A It is.

18 Q And am I correct that the Applicants have a
19 different view of that, Applicant's consultants
20 have a different view, correct?

21 A I don't want to speak for the Applicant.

22 Q Okay. Fair enough. Now, would I also be
23 correct in saying that with respect to the --
24 well, let me ask you about the most recent

1 designated exemplary community because that
2 happened after your Prefiled Testimony.

3 A Yes.

4 Q Do you have an opinion on whether or not the
5 impact to that forest alone would be
6 unreasonably adverse?

7 A I believe it would be. I mean, this is a rare
8 natural community, that there's a very limited
9 number of exemplary occurrences. I believe
10 NHSF-4 even though it's smaller is still, I
11 believe, the fifth largest in the state, and I
12 believe that makes it a significant occurrence
13 or significant component of the natural
14 environment. And clearing a corridor right
15 through the middle of it to me is a severe
16 impact.

17 The SEC rules require them to consider both
18 the significance of the resource and the nature,
19 extent and duration of the impact. To me this
20 is a significant occurrence of a rare natural
21 community, and it is a very severe impact. So
22 to me it meets the standards for an unreasonable
23 adverse effect. If it doesn't, then these
24 resources essentially have no standing and no

1 protection under SEC rules.

2 Q Okay. Am I correct in saying with respect to
3 the other forests that we're talking about, by
4 themselves, individually, you don't believe that
5 the impact to them is unreasonably adverse?

6 A The nonexemplary occurrences?

7 Q Correct.

8 A No. I would not characterize that as
9 unreasonable.

10 Q But do you believe, is it your opinion that when
11 taken together, if you consider the impacts
12 together, do you consider that to be
13 unreasonably adverse?

14 A You mean to the three?

15 Q To the three nonexemplary, correct.

16 A Probably not. The impacts to exemplary
17 communities are far more severe because
18 exemplary occurrences are, while this community
19 may be, I don't want to use the word common but
20 more abundant in the North Country, exemplary
21 occurrences and especially large exemplary
22 occurrences are quite rare. Smaller and
23 degraded occurrences are, you know, somewhat
24 more common, and there are other opportunities

1 for restoration of those.

2 Q Now, in your updated Prefiled Testimony, you've
3 changed a word from cumulative to combined. I
4 just want to make sure I understand what you're
5 saying in that part of your testimony.

6 Are you saying that you think that these
7 other three should be combined with the two
8 exemplary communities?

9 A No. I'm saying I stopped using the word
10 cumulative because that has a specific meaning
11 in the SEC rules.

12 Q Yes.

13 A So I needed to find just a different word, a
14 more common word to describe the multiple
15 impacts. In combination, the new corridor would
16 actually impact, I believe, something like, I
17 can't remember the exact number, but somewhere
18 in the order of 30 separate rare natural
19 community occurrences. Other than the two we've
20 been talking about, none of them are exemplary.
21 They are all degraded to one degree or another
22 by timber harvesting or roads. They are all
23 potentially restorable, absent the impacts of
24 the corridor.

1 So I think that combined impact to a large
2 number of potential, of rare natural
3 communities, whether or not they're exemplary,
4 would be considered undue adverse, particularly
5 in light of the fact that we believe there are
6 alternative routes that would not have this
7 impact.

8 Q Okay. All right. Thank you. Let me just ask a
9 couple questions about the other issue, forest
10 fragmentation. Now, I understand it's your
11 opinion that the new right-of-way will cause
12 forest fragmentation; is that correct?

13 A Yes. I don't think it's an opinion. I think
14 it's a fact.

15 Q And you also opine that this forest
16 fragmentation will have an unreasonable adverse
17 impact?

18 A Yes.

19 Q Now, you also talk about right-of-way edge or
20 forest edge. I want to make sure I understand
21 what you're talking about there. Could you just
22 clarify what it is you're talking about in terms
23 of forest edge?

24 A An edge is a boundary between an area of forest

1 and an area of nonforest habitat. That
2 nonforest habitat can be natural such as an open
3 wetland. There is natural fragmentation. But
4 it also includes roads, developments, farm
5 fields, transmission line corridors, anything
6 where the forest vegetation is removed.

7 That removal can be permanent or it can be
8 temporary as in the case of timber harvesting,
9 and the creation of that edge where you had a
10 continuous forest and now you have a forest
11 butting up against nonforest creates a number of
12 impacts extending into the forest away from the
13 edge.

14 Q So it's your view that that then creates
15 problems inside the forest?

16 A Yes.

17 Q Okay. Now, is your opinion in terms of forest
18 fragmentation, are you considering the 32-mile
19 right-of-way just within the context of the 32
20 miles or are you considering the context of the
21 larger area? I want to get a sense of the
22 context in which you think, which you believe
23 about this forest fragmentation.

24 A Well, I try to think of it in terms of the

1 absolute magnitude of the impact. Again, you
2 can consider it the Applicant's fragmentation
3 analysis considered a 2-mile zone around the
4 corridor. You consider it in the context of
5 northern Coos County. You can consider it in
6 the context of the entire state. The bigger the
7 context you consider it in, the smaller the
8 impact appears.

9 I tend to look at it in absolute terms
10 rather than relative terms. How much potential
11 interior forest habitat is lost. Not, you know,
12 a number such as was in the Application that
13 there is a 11 percent increase in edge within
14 this 2-mile zone to me is somewhat meaningless
15 because that 2-mile zone is fairly arbitrary,
16 but there is an absolute loss of interior forest
17 habitat, and I believe that to be significant.

18 Q So would I be correct in saying that that's sort
19 of the nub of your disagreement with the
20 Applicant in that you view it in absolute terms
21 and the Applicant views it in relative terms
22 relative to a larger area?

23 A I think the nub of our disagreement is that I
24 think it's an unreasonable impact and they

1 don't.

2 Q Besides that.

3 A Yes. Again, the idea that there's lots of
4 forest in Coos County so it doesn't matter if we
5 impact that. I mean, if you consider it in the
6 context of the entire state of New Hampshire, I
7 93 is an insignificant impact. This will be the
8 largest permanent fragmenting feature within the
9 largest relatively unfragmented block of forest
10 in the state of New Hampshire.

11 Q Thank you, Dr. Publicover. I have no other
12 questions.

13 PRESIDING OFFICER HONIGBERG: I don't see
14 Ms. Saffo here. Mr. Reimers, are you going
15 next?

16 **CROSS-EXAMINATION**

17 **BY MR. REIMERS:**

18 Q Good afternoon, Dr. Publicover. My name is
19 Jason Reimers. I represent the Society for the
20 Protection of New Hampshire Forests.

21 Your testimony focused on fragmentation and
22 natural communities in the northern segment of
23 the proposed Project. Did you analyze impacts
24 to southern New Hampshire?

1 A I read the Application materials, but that is
2 not part of my testimony. My testimony is
3 limited to the new northern corridor so anything
4 south of that is outside the scope of my
5 testimony.

6 Q In your Prefiled Testimony which is NGO 101 at
7 page 13, line 5, you state that the Applicant
8 has failed to take best practical measures to
9 avoid, minimize and mitigate certain impacts.

10 After seeing the final AMMs and final
11 compensatory mitigation plan, do you still draw
12 that same conclusion?

13 A I do.

14 Q Why is that?

15 A Well, the AMMs as far as natural communities or
16 the exemplary natural communities are
17 essentially meaningless. There are two of them.
18 One of which is if you're going to clear part of
19 an exemplary natural community, do it on frozen
20 ground and put timber mats down on the soil if
21 you did it in the summer.

22 That does nothing to minimize the clearing
23 of the forest. You still cleared a quarter of
24 this occurrence. To me, that is somewhat

1 equivalent to me saying I'm going to take a
2 machete and slash up the Mona Lisa and having
3 the museum director come out and say well, we
4 can't stop you, but please don't nick up the
5 frame. You know, it's a minor mitigation of a
6 major impact. So the AMMs really do nothing to
7 stop the impacts to these communities in any
8 significant way.

9 And the compensatory mitigation was
10 developed in entirely the wrong way. Normally,
11 if you're looking to mitigate for unavoidable
12 impacts, you know, you identify the impacts that
13 need to be mitigated for, you seek to provide
14 mitigation that is of equal or greater value to
15 the impacts, and then and only then do you look
16 for mitigation parcels that will satisfy those
17 criteria.

18 The mitigation parcels proposed in the
19 final compensatory mitigation plan were not
20 chosen for their mitigation value. They were
21 left over parcels from the Applicant's real
22 estate dealings and route selection. And after
23 the fact they have attended to highlight what
24 mitigation value they have, but they were not

1 chosen for that purpose, and they are woefully
2 inadequate in terms of mitigation for the
3 impacts.

4 The impacts to two exemplary rare natural
5 communities, they didn't go out and try to find
6 other exemplary rare natural communities. They
7 happen to have a degraded occurrence of a
8 northern hardwood seepage forest on one of their
9 parcels, and they're putting that forth as
10 mitigation. It's completely the wrong way to go
11 about it.

12 Q When you're saying they're putting that degraded
13 northern seepage forest as mitigation, you mean
14 that they're going to make that larger or that
15 they're going to conserve it?

16 A They're going to conserve it. They're going to
17 protect it from further degradation, and they
18 are claiming that as mitigation value.

19 Q And by further protecting one and impacting
20 another, do you still have -- my math says that
21 you still have a net loss.

22 A Yeah, there's clearly a net loss. The
23 mitigation for those rare natural community
24 impacts do not equal or exceed the value of what

1 is impacted.

2 Q In your Prefiled Testimony, again, NGO 101, at
3 page 1, line 21, you testified that you were an
4 expert witness in the Granite Reliable docket;
5 is that correct?

6 A Yes.

7 Q And in that Project, you and AMC were involved
8 in a Settlement Agreement. Weren't you?

9 A Yes.

10 Q And that Settlement Agreement was relative to
11 the mitigation for impacts to high elevation
12 spruce fir forest and species of concern such as
13 the pine marten and Bicknell's thrush; is that
14 right?

15 A Yes.

16 Q Could you please explain how the mitigation plan
17 was developed in that Project?

18 MR. NEEDLEMAN: Objection. This is
19 information that could have been included.

20 PRESIDING OFFICER HONIGBERG: What's the
21 relevance, too, Mr. Reimers?

22 MR. REIMERS: First addressing Mr.
23 Needleman, Dr. Publicover is not a Forest
24 Society's witness. Had he been, I might have

1 added additional detail in his Prefiled
2 Testimony.

3 The relevance is I'm going to ask him to
4 compare how the mitigation plans in the two
5 cases were developed because he's in a unique
6 position having been involved in both dockets to
7 add some insight on that topic.

8 PRESIDING OFFICER HONIGBERG: Sustained.

9 BY MR. REIMERS:

10 Q You were discussing with Attorney Pappas a
11 particular, I think, northern hardwood seepage
12 forest that was in a commercial logging area; is
13 that correct?

14 A They're all in commercial logging areas.

15 Q And when answering Mr. Pappas's questions, you
16 mentioned an exemplary forest recovering after
17 40 years of logging or logging that had taken
18 place approximately 40 years ago.

19 A Yes. Both of the exemplary occurrences of
20 northern hardwood seepage forest that would be
21 impacted by the Project appear to have been
22 logged some number of decades ago.

23 Q And then --

24 A We don't know -- I'm not saying they were

1 clearcut, but there was harvesting that took
2 place.

3 Q And then he asked you about the impact of a
4 continually cleared right-of-way. And in your
5 opinion, what is the difference in ecological
6 impacts of fragmentation caused by logging
7 versus the proposed right-of-way?

8 A Again, logging is a temporary and transient
9 impact. Forests recover from logging. And if
10 left alone for a sufficient period of time they
11 can recover to what would be considered an
12 exemplary status. A timber harvesting adjacent
13 to an exemplary natural community may have some
14 edge effects, but those will disappear as the
15 adjacent forest regrows. If that corridor is
16 permanent and kept open, those edge effects, you
17 know, the loss of whatever part of that
18 community is cleared will be permanent, and also
19 the edge effects into the interior of what's
20 left will be permanent and alter the nature of
21 that edge zone.

22 Again, forests, this may be an industrial
23 forest now. It hasn't always been one, and it
24 may not always been one. Land ownership

1 changes, forest practices change. AMC owns
2 75,000 acres in Maine that was previously owned
3 by Plum Creek and International Paper and was
4 very heavily harvested. Over the course of our
5 ownership, that is going to change. We are
6 leaving large parts of it alone and the portions
7 that we do harvest are harvested much less
8 intensively. So the fact that is this is now an
9 industrial forest that is heavily harvested is
10 not necessarily a permanent condition, and it
11 should not necessarily excuse other permanent
12 impacts to this same forest area.

13 Q Thank you. I don't have any further questions.

14 PRESIDING OFFICER HONIGBERG: Ms. Menard,
15 does your group have any questions? No? Ms.
16 Draper?

17 **CROSS-EXAMINATION**

18 **BY MS. DRAPER:**

19 Q Good afternoon. I'm Gretchen Draper, and I'm
20 part of the Pemigewasset River Local Advisory
21 Committee. And I would like to just ask you a
22 few questions and they come from the technical
23 session that happened in March of this past
24 year.

1 In the Technical Session you spoke of New
2 Hampshire being heavily forested and then from
3 the 1980s on, it's been declining. Do you
4 remember that? Or is that true?

5 A It's true. I can't specifically remember saying
6 that, but it's certainly true.

7 Q It's true. Thank you. And so what I'm
8 wondering is if you would say something about
9 the current status of New Hampshire forests, and
10 since you spent your time in the northern part
11 doing your analysis you could use that as an
12 example? So what's, I'm interested in the
13 health of the forest.

14 MR. NEEDLEMAN: Objection. That's, first
15 of all, relevance. Secondly, it's overly broad.

16 PRESIDING OFFICER HONIGBERG: Ms. Draper,
17 how is this relevant?

18 MS. DRAPER: Because the SEC, of course,
19 wasn't at the Technical Sessions, I felt that
20 this witness had important information about the
21 loss of trees over time, and that this Project
22 is, in fact, impacting that even more so. So
23 I'm looking at what his opinion is, the health
24 of our forests and what, you know, what's going

1 to happen when Northern Pass clears as many
2 trees as they do in the plans.

3 PRESIDING OFFICER HONIGBERG: And that's
4 not sufficiently covered in your view in his
5 testimony, the effects of the Project on New
6 Hampshire? That's what his testimony was about,
7 as I understood it.

8 MS. DRAPER: Yes, but it didn't seem to me
9 to be specific to looking at it over time. I
10 mean, to me there's an impression that New
11 Hampshire is heavily forested which is true
12 except when you start to think that it hit its
13 peak in the '80s and is going down.

14 PRESIDING OFFICER HONIGBERG: I'm going to
15 let you go a little ways here and see what
16 happens.

17 MS. DRAPER: Okay.

18 PRESIDING OFFICER HONIGBERG: Do you
19 remember the question?

20 A (Publicover) I believe so. You know, it's hard
21 to give an answer about the health of New
22 Hampshire forests. You know, it's true, after,
23 you know in the time of the Civil War New
24 Hampshire was about 70 percent cleared.

1 Q Right.

2 A As farms got abandoned, into the '80s, it got up
3 to about 80 to 85 percent forested. Since then
4 it's been declining. It's gone down maybe a few
5 percent, down to 80 or 79 percent. Most of that
6 loss has been from development in southern New
7 Hampshire. The forest area in northern New
8 Hampshire is, I believe, relatively stable.
9 Large parts of it are owned by commercial timber
10 companies that harvested it relatively
11 intensively, but there's also been an increase
12 in conservation land in which the forests are
13 either managed less intensively or left as
14 reserved. So in that sense they've gotten
15 healthier.

16 I think they've gotten healthier as a
17 result of, you know, there was a lot of concern
18 about acid rain and spruce decline. There have
19 been some changes to clear air that have
20 improved that. Forest health is declining
21 because of the dangers of spreading invasive
22 insects, most of which have not reached the
23 North Country, but you have things like the
24 hemlock wooly adelgid and the emerald ash borer,

1 all of which could potentially impact it.

2 Climate change is certainly going to have
3 an impact on these forests, probably shifting
4 the species composition reducing spruce and fir.
5 So, again, forest health goes in both ways.
6 Overall, I think the forests of southern New
7 Hampshire are probably at greater risk than the
8 forests of northern New Hampshire.

9 Q Thank you. And I guess, let's see. When we're
10 talking about the amount of trees that are going
11 to be taken out of the northern forest, for
12 example, for the right-of-way, I guess I'm
13 looking at what happens with the kind of extreme
14 weather events that we're having? Is that going
15 to have a problem with regenerating trees,
16 things like that?

17 MR. NEEDLEMAN: Objection.

18 PRESIDING OFFICER HONIGBERG: Ms. Draper,
19 now we're making assumptions about things and
20 making assertions. If you have a focused
21 question about what the witness thinks will
22 happen, go ahead. But focused that calls for a
23 focused answer if you can.

24 MS. DRAPER: Fine.

1 BY MS. DRAPER:

2 Q Of course, our focus is on the Pemigewasset
3 River water body streams, and I guess my
4 question would be from your expertise, what's
5 the biggest problem to water resources when
6 there's a loss of tree cover.

7 A Well, I don't think there's necessarily an
8 impact to water resources. It can lead to
9 warming, if appropriate shade, if the corridor
10 crosses streams and appropriate shade isn't
11 left. If proper techniques are maintained
12 during construction and revegetation, erosion,
13 you know, the erosion can be controlled. I
14 think removing trees actually leads to more
15 water flowing into the streams because you're
16 reducing evapotranspiration. On the scale of
17 the amount of water that flows out of northern
18 New Hampshire, I don't think clearing of this
19 would have a significant impact on that.

20 One of the biggest impacts was extreme
21 weather events is not necessarily related to
22 water but to wind. I think last week showed us
23 the type of things we maybe expect more of. And
24 high wind events, long straight edges create

1 significant potential for additional blowdown
2 along those edges. So in terms of the greatest
3 risk from extreme weather events from the new
4 corridor, it would probably just be spreading
5 areas of blowdown which would tend to in some
6 ways expand the corridor upon the area actually
7 cleared.

8 Q Okay. Thank you very much. That's all I have.

9 PRESIDING OFFICER HONIGBERG: Mr. Bisbee,
10 you have some questions, I assume? Why don't we
11 take a ten-minute break. Actually, before we do
12 that, did I miss anybody? That was all the
13 Intervenors I had who had indicated they had
14 questions for Dr. Publicover. All right. Now,
15 yes, we'll take a break and when we come back
16 we'll have the Applicant cross-examine.

17 (Recess taken 2:36 - 253 p.m.)

18 PRESIDING OFFICER HONIGBERG: Mr. Bisbee,
19 you may proceed.

20 MR. BISBEE: Thank you, Mr. Chairman.

21 **CROSS-EXAMINATION**

22 **BY MR. BISBEE:**

23 Q Dr. Publicover, good afternoon.

24 A Good afternoon.

1 Q We know one another. I'm Dana Bisbee, one of
2 the attorneys representing the Applicants. I
3 want to start with the exhibit that your counsel
4 introduced earlier this afternoon at the start
5 of your testimony that's NGO 131. Dawn, if you
6 could bring that up.

7 This is an email exchange that you had with
8 NHB that you went through partly earlier. I
9 want to look at several pieces of it that you
10 didn't touch on with Mr. Plouffe. So if you
11 would turn to paragraph 4.

12 Dawn that's on the last page. And just
13 highlight that paragraph number 4.

14 The response from NHB to your questions is
15 in the bold black, Dr. Publicover, that's
16 correct?

17 A Yes.

18 Q And your question here is whether NHB had signed
19 off meaning approved the Project. And the last
20 sentence is the most direct answer to that
21 question. And that reads, I'll paraphrase it,
22 that NHB provides recommendations to avoid and
23 minimize impacts to the species under their
24 concern. But they don't, quote, approve, close

1 quote, projects, correct?

2 A Yes.

3 Q So they do provide recommendations on avoidance
4 and minimization, correct?

5 A Yes.

6 Q And mitigation, too?

7 A Yes.

8 Q Let's look at paragraph 7 or item number 7 in
9 that email exchange that you had with NHB.
10 Again, their answer is in the bold black. Your
11 question was whether NHB had approved Northern
12 Pass's final compensatory mitigation plan, and
13 their answer was that NHB had worked with
14 Normandeau on an ongoing basis to agree to the
15 terms of the rare plant avoidance and
16 minimization plan.

17 You don't disagree that NHB has agreed to
18 the terms of the rare plant avoidance and
19 minimization plan, do you?

20 A No.

21 Q And when they say rare plant avoidance and
22 minimization plan, do you think that they assume
23 within the rare plant term exemplary communities
24 as well?

1 A There is, in the AMM there is one short section
2 on exemplary natural communities under the rare
3 plant section.

4 Q Okay. Then, Dawn, if you go back to the first
5 page of this document. Excuse me. Second page.
6 The first page of his original email which is
7 the third page of this PDF. One more. That's
8 the page I'm looking for. Thank you. And if
9 you would highlight the Q & A there, Dawn?

10 In your email, this is you quoting from the
11 McGee testimony, correct?

12 A Yes.

13 Q So the Q & A there are his Q & As in his
14 Prefiled Testimony.

15 A Yes.

16 Q The question that he asked or was asked is has
17 NHB signed off on the avoidance and minimization
18 measures, and Mr. McGee said yes, it has. You
19 don't disagree that NHB had signed off on the
20 avoidance and minimization measures, correct?

21 A No.

22 Q Okay. Okay. No more on that, Dawn.

23 Just looking at what you have done in your
24 testimony, Dr. Publicover, it's clear you've

1 really focused on the north 32 of new
2 right-of-way. And your main focus is on rare
3 plants and exemplary natural communities and not
4 wildlife, correct?

5 A Correct.

6 Q You do touch on wildlife habitat, I guess,
7 through the fragmentation issue, but that's
8 about your only reference to wildlife issues?

9 A I believe so.

10 Q Okay. Of the four specific areas that you
11 addressed in your testimony, do you believe that
12 the most important single aspect then is the
13 exemplary natural communities that you have been
14 discussing?

15 A I don't know if I'd put that as more or less
16 important than the large fragmentation impact.
17 I think they're equally important.

18 Q All right. But let me now ask you this. The
19 most important aspect of your testimony as I
20 read it, and tell me if I'm correct if you
21 would, is that the reason why you believe that
22 there's an unreasonable adverse effect to the
23 exemplary communities, for instance, is because
24 the impacts were avoidable. Is it fair to say

1 that that's your most significant point?

2 A Yes, and they're not avoidable, I think they
3 would be unreasonably adverse. They're
4 unreasonably adverse because of the nature of
5 the impact and also because they don't satisfy
6 the avoidance and minimization.

7 Q Dawn, could you go to the Publicover testimony,
8 NGO Exhibit 101, please? And if you have it
9 with you, Dr. Publicover, you can turn to it
10 yourself. We'll see it on the screen. Page 7.
11 And I'm interested in looking at lines 14 and
12 15. This is in the section on what you're now
13 calling "combined" impact?

14 A Yes.

15 Q And you have italicized here, you've emphasized
16 it yourself, that the reason why the SEC should
17 find that this impact is an unreasonable adverse
18 effect is because it's avoidable, and you made a
19 point of emphasizing that, correct?

20 A Yes.

21 Q And you did that for a reason.

22 A Yes. That's discussing, again, the combined
23 effect, you know, the impacts on nonexemplary
24 natural communities, on populations of state

1 watched or, yes, state-watched plant species
2 that may not obviously be on the rare plant
3 list. Those in and of themselves individually,
4 I don't think, would be considered unreasonable.
5 In combination they are. And again, I think
6 they do not satisfy the directive to use the
7 best practical measures because I believe there
8 are alternative routes that would avoid this
9 impact.

10 Q Right, and we'll talk about that in a minute.
11 But the point that you're emphasizing in this
12 part of your testimony is the avoidable part.

13 So Dawn, let's look at another reference to
14 this. Page 11. Lines 3 and 5.

15 Here's another instance. This is in the
16 fragmentation section, and you're saying here
17 again that you believe that that impact alone
18 constitutes an unreasonable adverse effect
19 because of the magnitude and because, and you
20 emphasized this, because it's avoidable.

21 A Yes.

22 Q So what we discussed before applies here as
23 well. You're really emphasizing the avoidable
24 part.

1 A Yes.

2 Q So just looking at this line on page 3 and 4,
3 you say that the fragmenting impact constitutes
4 an unreasonable adverse effect. Let me ask you.
5 On what is the unreasonable adverse effect that
6 you were discussing here? What is the
7 unreasonable adverse effect?

8 A It is on the natural environment and multiple
9 components of that, and in my testimony I think
10 I focused on the effect on interior forest
11 species.

12 Q Dawn, would you pull up the regulation, the SEC
13 rule setting forth the criteria? It's
14 301.14(e). If you'd just highlight those five
15 sections, please.

16 So there's a statutory reference, Dr.
17 Publicover, in RSA 162-H that relates to
18 unreasonable adverse effect, correct?

19 A Yes.

20 Q And that references the natural environment,
21 correct?

22 A Yes.

23 Q And these are the rules that provide a little
24 more specificity to what the unreasonable

1 adverse effect to the natural environment
2 consists of, right?

3 A Yes.

4 Q And the natural environment as listed here
5 includes wildlife species, rare plants, rare
6 natural communities and other exemplary natural
7 communities all together, correct?

8 A Yes.

9 Q So you're dealing with the rare plant and
10 exemplary community aspect of the Application,
11 not the wildlife aspect.

12 A Well, I think the primary effects of
13 fragmentation other than when they're impacting
14 rare plants and natural communities are on
15 wildlife, and I spoke of that particularly with
16 reference to interior forest birds because that
17 was the focus of the Applicant's fragmentation
18 analysis.

19 Q You did not deal with specific wildlife species
20 as the Counsel for the Public's experts did that
21 we've heard from the last two days, right?

22 A I did not. I did not.

23 Q Okay. Section 4 of this rule that we looked at
24 quite a bit when the Arrowwood Panel was here,

1 and you were here for only a small part of that,
2 Dr. Publicover? You were not here yesterday?

3 A No, I was not here yesterday.

4 Q You were here for a little bit of their
5 testimony this morning?

6 A I was here from the beginning this morning.

7 Q Oh, you were. All right. So you're very
8 familiar with this section of the rules which is
9 the one that requires as one of the criteria for
10 the SEC to consider the analyses, and more
11 importantly, the recommendations from various
12 agencies, right?

13 A Yes.

14 Q Do you know which agencies have provided
15 recommendations for avoidance and mitigation of
16 impacts on this Project?

17 A I believe New Hampshire Fish & Game provided
18 information as part of the DES permitting
19 process though I haven't seen directly any
20 comments or materials from New Hampshire Fish &
21 Game other than included in your agency
22 correspondence. I believe U.S. Fish & Wildlife
23 Service probably had input into the Department
24 of Energy Environmental Impact Statement, though

1 I don't know that for a fact. I believe they
2 will have input into the Army Corps of
3 Engineers' permitting process.

4 Q DES was one of the agencies that provided
5 recommendations also, correct?

6 A Excuse me?

7 Q DES was one of the agencies that provided
8 recommendations on this Project?

9 A They provided recommendations, but I believe
10 their recommendations relative to wildlife
11 reflected New Hampshire Fish & Game.

12 Q And NHB has already provided recommendations as
13 we've discussed?

14 A Yes.

15 Q Okay. Quickly on U.S. Fish & Wildlife Service.
16 Have you read the biological opinion that's been
17 issued by that agency?

18 A Yes. It was given to us noon on Friday. I had
19 a chance, quick chance to look at it.

20 Q I didn't see anything in there that related much
21 at all to your testimony. Am I correct in
22 saying that?

23 A Yes. Their biological opinion deals
24 specifically with the limited number of federal

1 threatened and endangered species that are under
2 their jurisdiction. So it's very narrow, covers
3 a very narrow subset of issues.

4 Q And there was one plant in particular?

5 A I believe there was one plant. Might have been
6 the lupine related to Karner blue.

7 Q Well, KBB was one of the six species, yes. The
8 lupine, I don't remember directly, but it was a
9 small whorled pogonia?

10 A Small whorled pogonia, yes.

11 Q You don't have any reason to disagree with what
12 the Fish & Wildlife Service said about the small
13 whorled pogonia in their biological opinion?

14 A No. I don't believe it's found in the North
15 Country.

16 Q So let's talk about what DES has done here.
17 Have you reviewed the decision that DES reached
18 on March 1?

19 A I have.

20 Q You have reviewed it?

21 A Yes.

22 Q Did they make any findings with respect to rare
23 plants and natural communities?

24 A I believe their findings were that the Applicant

1 has consulted with Natural Heritage Bureau.

2 Q Dawn, would you pull up Applicant's Exhibit 75,
3 please? And page APP 44455. This is from that
4 DES decision, Dr. Publicover.

5 If you would look at findings 11 and 12?
6 Just take a quick minute and look at that, if
7 you would.

8 A Yes.

9 Q I know you've updated your testimony on the
10 number of exemplary communities of the northern
11 hardwood seepage forest variety, but DES did
12 make findings specific to plants and natural
13 communities, correct?

14 A Yes.

15 Q And Dawn, if you would also go to finding 13
16 which is on page 44456. We've already covered
17 this, but DES found, this is one of their
18 findings, that the Applicant had coordinated and
19 will continue to coordinate with NHB, correct?

20 A Yes.

21 Q Okay. And, Dawn, look at 17, please, on that
22 same page. Next page. Sorry.

23 And the same is true with New Hampshire
24 Fish & Game, that the Applicant has coordinated

1 and will continue to, but that's the finding of
2 DES, correct?

3 A Yes.

4 Q Okay. So based on the various findings that DES
5 made in their Wetlands Permit decision, they
6 also established certain conditions that will
7 apply to this Project going forward.

8 A Yes.

9 Q So let's look at three of those conditions.
10 Dawn, if you would turn to condition number 7 on
11 page 44448. We're still in Applicant's Exhibit
12 75. The DES decision. Condition 7 first.

13 This is the requirement that the Applicant
14 finalize the avoidance and minimization measures
15 with New Hampshire Fish & Game, correct?

16 A Yes.

17 Q And what is your understanding of the status of
18 those efforts to finalize AMMs with Fish & Game?

19 A I have no recent information on where they
20 stand.

21 Q So you did not review the most recent version
22 from last Friday?

23 A I did not. I have not seen that, no.

24 Q And Dawn, if you look at condition number 9.

1 So this is a condition, again, a condition
2 of the Wetlands Permit that requires prior to
3 and during construction that Northern Pass will
4 coordinate with Natural Heritage Bureau
5 regarding avoidance measures among other things,
6 correct?

7 A Yes.

8 Q Let's look at one more condition, Dawn.
9 Condition 2. It's on page 44447. Again,
10 Applicant's Exhibit 75. This is the standard
11 DES condition and wetlands decision that is
12 included early on in their decisions to make
13 sure that the decision reflects the documents
14 that constitute what the Project is and how it
15 shall proceed, and this particular condition
16 says the work shall follow the operational
17 standards, the construction standards, the time
18 of year restrictions as detailed on wetland plan
19 notes, and then it references the notes.

20 So this is the condition that says that the
21 Applicant, in this case the Permittee, shall
22 follow the notes that it had submitted as part
23 of its Application, correct?

24 A Yes.

1 Q And those include the plant and natural
2 community AMMs, correct?

3 A Yes.

4 Q And the wildlife AMMs?

5 A Yes.

6 Q The right-of-way management procedures as well?

7 A I don't see right-of-way management in here,
8 but I will agree that this condition requires
9 the Applicant to follow these various measures
10 that have been developed.

11 Q And these include the measures we were looking
12 at this morning with the Arrowwood Panel for the
13 Environmental Monitors as well, correct?

14 A I believe so.

15 Q Okay. And you don't disagree that New Hampshire
16 Natural Heritage Bureau has approved the plant
17 and natural community-related AMMs, correct?

18 A Yes. I believe they've approved those. But as
19 they said in their response to me, their job is
20 to minimize the impacts of the Project as
21 proposed. They have no authority to say you
22 shall not destroy this natural community
23 occurrence. I don't believe they even have any
24 opportunity to submit comments. There certainly

1 aren't any in the record to indicate what they
2 think. So whether, you know, I will agree that
3 the Applicant has worked with them to minimize
4 the impacts of the Project as proposed, but the
5 question of whether those impacts constitute an
6 unreasonable adverse effect is a decision for
7 the SEC to make.

8 The DES, I do not believe, has the
9 jurisdiction to turn down a permit on the basis
10 of habitat fragmentation. That's beyond their
11 jurisdiction. In fact, the word fragmentation
12 appears nowhere in the SEC decision. The words
13 unreasonable adverse effect or reasonable
14 adverse effect appear nowhere in the DES
15 decision. The SEC's mandate is broader than the
16 DES's, and it is their job to consider the
17 reasonableness of these impacts. DES has a
18 defined and more limited jurisdiction.

19 And the Natural Heritage Bureau, and I
20 assume Fish & Game is in the same position, of
21 making recommendations to minimize impacts to a
22 Project as proposed, but a bad route in which
23 the impacts have been minimized is still a bad
24 route, and that is the decision for the SEC to

1 make.

2 Q Well, you went quite some distance in answering
3 my question on whether the NHB had signed off on
4 the AMMs which we had already established
5 anyway.

6 But, Dawn, would you go back, please, to
7 NGO 131? I just want to look at that again.

8 Dr. Publicover, are you really saying that
9 NHB would sign off on avoidance and minimization
10 measures and on mitigation requirements if they
11 thought it was going to provide an adverse
12 effect that was not reasonable?

13 A I think making that determination is beyond
14 their authority. I understand why the avoidance
15 and minimization measures are the way they are.
16 I don't understand why Natural Heritage didn't
17 push for stronger mitigation. I disagree with
18 them on that. I think they, it says they have
19 reviewed the final compensatory mitigation plan,
20 did not submit formal comments, and I think they
21 dropped the ball on the mitigation for those
22 impacts.

23 Q That's one way to put it. Another way to put it
24 is that they were satisfied with the mitigation

1 package, right? Isn't that to be read into
2 this?

3 A I don't want to read into anything what they
4 think. I would love to be a fly on the wall
5 when they were having their own discussions
6 about the Project.

7 Q So let's go back again to NHB's role here. They
8 don't issue a permit, correct?

9 A Correct.

10 Q You've said that. There's no disputing that.
11 But they have a special role here of advising
12 DES, and, in this case, advising the SEC on what
13 they believe to be appropriate avoidance and
14 minimization and mitigation requirements?

15 A Yes.

16 Q If they weren't satisfied, they wouldn't say
17 yes, would they?

18 A I think they said yes within the limits of their
19 jurisdiction. They don't have the authority to
20 say this Project should not be approved; the
21 route should go somewhere else. I believe
22 that's beyond the scope of their authority based
23 on the answers I got to my questions.

24 Q They could say we need to do, we, Northern Pass,

1 needs to do more mitigation.

2 A They could have, and I think they should have.

3 Q NHB could have said the proposed avoidance and
4 minimization measures are not adequate. You
5 need to do more. Correct?

6 A Yes. But I don't think they have the authority
7 to say, I mean, they could, they may very well
8 have wanted the route to go down Route 3, and
9 they may have suggested that to you in private,
10 but, again, as they responded to me, they
11 evaluate the Project as proposed.

12 Q There's no limit to their authority to tell
13 Northern Pass, to tell the SEC, to tell what
14 their view is of the avoidance, minimization and
15 mitigation measures, correct?

16 A I don't know what the limits to their authority
17 are.

18 Q Okay. Let's move to Fish & Game at this point.
19 I think we're going to have a comparable
20 discussion here.

21 Dawn, if you go back, I'm sorry, to
22 Applicant's Exhibit 75, and Bates number 44447.

23 This is the same condition 2 that we were
24 looking at before. This does require that the

1 Applicant follow the wildlife avoidance and
2 minimization measures as well. You said earlier
3 you're not familiar with exactly where it stands
4 with Fish & Game. But the SEC knows from prior
5 testimony that there was a revised version
6 submitted by the Applicant last Friday to Fish &
7 Game which incorporates the changes that Fish &
8 Game had requested.

9 So assuming that Fish & Game signs off on
10 those or a similar version of AMMs for wildlife
11 avoidance and minimization, that would be the
12 opportunity for Fish & Game to weigh in on
13 what's appropriate for the Applicant, what
14 measures they need to take to avoid minimize and
15 mitigate for wildlife as well, correct?

16 A I assume, yes.

17 Q Okay. Dawn, if you could go to finding 5.

18 This is the last part of the DES decision
19 we'll look at. It's on page 44453. This is the
20 DES's overall conclusion, and this is, again, a
21 finding of DES in that section of their
22 decision. And I want to focus just on the
23 lead-in sentence to that. DES has found that it
24 does provide the least, this proposed Project

1 provides the least adverse impact to areas and
2 environments under DES's jurisdiction. That's
3 what that says?

4 Did you hear my question or are you still
5 reading it?

6 A Yes.

7 Q Is that what it says?

8 A Yes.

9 Q Do you agree with it?

10 A Again, could you point out the specific section
11 that I'm agreeing with?

12 Q The lead-in sentence to finding number 5.

13 A I will agree that that's what the sentence says.

14 Q Do you agree with the conclusion?

15 A As far as the areas and environment
16 environments, and, again, it says it is the
17 alternative with the least adverse impact to
18 areas and environments under the Department's
19 jurisdiction. Some of the issues that have been
20 raised I don't think are under their
21 jurisdiction, but -- and in terms of the
22 alternative routes, I do not agree that the
23 proposal is the alternative with the least
24 adverse impact to areas and environments because

1 I think there are alternative routes that
2 clearly have far less impact.

3 So they may agree that they may have found
4 that with the subset of alternative routes that
5 go through the North Country and involve a new
6 corridor, but as the Final Environmental Impact
7 shows, an alternative that does not include a
8 new corridor in the North Country has far lower
9 impacts. So the fact that they've agreed to
10 this means that that alternative was not part of
11 their consideration.

12 Q Well, you know that it was a part of their
13 consideration --

14 A It was originally.

15 Q -- because you've made reference to it.

16 A Yes, but in terms of their final decision. And
17 if they say that the new North Country, the new
18 corridor in the North Country has less
19 environmental impact than burial down an
20 existing corridor, no, I do not agree with that.

21 Q Do you know what the wetlands requirements are
22 for a final DES approval?

23 A I do not. I am not a wetlands expert, and
24 wetlands are not the scope of my testimony.

1 Q So the overall requirement is that the
2 Application be for the alternative which has the
3 least practicable, the least impacting
4 practicable alternative?

5 A Right.

6 Q So you disagree with DES's finding on that; is
7 that what you're saying?

8 A No. It appears that they have agreed with your
9 conclusion that a Route 3 burial is not
10 practicable.

11 Q Okay. That's what I want to ask you about next.

12 So one of the aspects of your testimony is
13 that the Applicants did not avoid and minimize
14 sufficiently, and as I understand it, Dr.
15 Publicover, you're saying that the Applicants
16 ought to bury the entire line. Is that not
17 fair?

18 A It should -- not the entire line. I make no
19 statements about anything south of the new
20 corridor.

21 Q Okay. So we're talking about the north 32,
22 so-called?

23 A Yes.

24 Q And you believe that that entire section ought

1 to be undergrounded.

2 A I believe it should, most importantly, it should
3 be located along existing disturbed corridors.
4 If it was aboveground on Route 3, it would still
5 have less environmental impact than a new
6 corridor that would obviously create impacts in
7 other areas.

8 Q Can we look at your testimony again? So it's
9 NGO Exhibit 101. This time pages 11 and 12.
10 And look at lines 2 to 4, if you would, Dr.
11 Publicover.

12 A Yes.

13 Q So the sentence starting on line 2 is the one
14 where you say we thus conclude that burial along
15 existing corridors is available, effective and
16 economically feasible.

17 Couple of questions on this. What do you
18 mean by existing corridors?

19 A Existing either roads or transmission corridors
20 that have already been disturbed. They could
21 include logging roads. Instead of creating a
22 new corridor through the forest, there are
23 multiple places where that corridor parallels a
24 logging road. I don't see that burial along

1 those logging roads was ever considered.

2 Q Okay. And who's the "we" that is the pronoun?

3 A The Appalachian Mountain Club. Speaking for the
4 Appalachian Mountain Club.

5 Q Okay. So you would agree with me that
6 "economically feasible" is one of the aspects of
7 what is defined as the best practical measures
8 that the SEC has adopted as the definition in
9 its own rules?

10 A Yes.

11 Q Have you done an assessment of economic
12 feasibility for burying 32 more miles up north?

13 A No.

14 Q Your opinion then that burial is available as an
15 alternative and is feasible is based primarily
16 on the fact that there are two other Projects
17 that have been proposed in the northeast?

18 A Two other projects that have been proposed and
19 the DOE EIS which considers it a practical
20 alternative.

21 Q Can you explain where in the EIS it says that
22 it's practicable?

23 A I would have to search through it, but I don't
24 believe they conclude alternatives that they do

1 not consider practical.

2 Q Didn't your testimony say something about that
3 they were talking about the alternatives that
4 they were analyzing, and they didn't make any
5 findings on whether they were practicable?

6 A My understanding is that for an alternative to
7 be considered it needs to be practical.

8 Q This is to be considered for analysis, correct?

9 A For analysis, correct.

10 Q So how do they know what's practicable before
11 they've analyzed it?

12 A Well, I don't believe the EIS concluded that it
13 was not practical.

14 Q That's not what I asked. I asked if they
15 concluded that it was practicable.

16 A I would have to go back and reread it. I
17 believe the EPA letter also made reference to
18 the fact that it was a practicable alternative.

19 Q So looking at other two minimization questions
20 unrelated to burial, Dr. Publicover, I think you
21 would agree, and you've pretty much said it a
22 minute ago, that placing a new transmission line
23 in an existing transmission corridor would
24 reduce impact.

1 A Yes.

2 Q And let me ask you about placing a new
3 right-of-way in land that's already heavily
4 managed as timber land is also a way to reduce
5 impacts that would otherwise happen.

6 A As opposed to putting it through a wilderness
7 area, yes. As opposed to putting it down a
8 highway, no.

9 Q Underground down a highway.

10 A Yes.

11 Q Okay. Couple of questions on your combined
12 impact section of your testimony.

13 Well, so the analysis that you did for, was
14 your cumulative impact analysis and now your
15 combined impact analysis, consisted of reviewing
16 the material that you described earlier that you
17 had read and kind of synthesizing it into the
18 couple of pages in your testimony?

19 A Yes.

20 Q You did not do an independent analysis of
21 combined effects?

22 A No.

23 Q No quantitative -- I don't know how you would do
24 it, but you didn't do a quantitative analysis?

1 A I counted up the impacts that --

2 Q Or some other independent analysis of all of the
3 impacts and then how significant they are?

4 A No. I summarized the impacts that were included
5 in the Application.

6 Q And you said the same thing about the economic
7 feasibility. You haven't, you've done no study
8 of that?

9 A No.

10 Q And AMC hasn't either?

11 A No.

12 Q You have looked at the exemplary natural
13 community. So I thought at the time of the
14 Technical Session earlier this year you had not
15 visited the specific site of northern hardwood
16 seepage forest number 1 designated by
17 Normandeau. Am I misrepresenting that?

18 A No. I visited it subsequent to the Technical
19 Session.

20 Q That was my next question. Thank you.

21 How much time did you spend on the site?

22 I'm just curious.

23 A Three or four hours.

24 Q You didn't write up a report or anything about

1 it?

2 A No.

3 Q Okay. Did you go to northern hardwood seepage
4 forest number 4?

5 A I did not. It's similar slope, it's in close
6 proximity, perhaps a quarter mile away. But I
7 ran out of time, and I assume it's fairly
8 similar.

9 Q You've talked about the documented occurrences
10 of exemplary occurrences at this particular
11 natural community, the northern hardwood seepage
12 forest that we're talking about. There were 13,
13 there are now 15, known occurrences, correct?

14 A Known documented exemplary occurrences, yes.

15 Q And the reason it went from 13 to 15 is why?

16 A Because Normandeau found them during their
17 surveys of the corridor.

18 Q And is that how they're documented is when other
19 consultants are out in the field and they
20 encounter areas that might be exemplary, they
21 report those to the NHB?

22 A I don't know how most natural communities. I
23 think some of them have been known for a while.
24 Some of them are done by Natural Heritage

1 surveys of specific areas, you know,
2 particularly conservation lands. Some of them
3 may be reported by landowners. I really don't
4 have a good sense of the source of the
5 information of every documented natural
6 community.

7 Q Have you reported any to NHB?

8 A I have not reported any, but I have been on
9 field investigations that have found some, found
10 at least one, that I believe was probably
11 eventually recorded in the Heritage database. I
12 have reported potential exemplary natural
13 communities on our land in Maine to the Maine
14 Natural Areas program. But I have not in New
15 Hampshire.

16 Q Okay. The two northern hardwood seepage forest
17 natural communities that have been deemed
18 exemplary by NHB that are along the Project
19 route, they're both on the land managed by
20 Wagner Forest Management, correct?

21 A I believe so. Yes.

22 Q And that's obviously up in the North Country.
23 So let me ask you about Dan Sperduto and his
24 views of the commonality of this type of natural

1 community. You cited a publication from
2 Sperduto from 2004 in your testimony.

3 A Yes.

4 Q I take it that Dan Sperduto is a well-regarded
5 botanist in New Hampshire?

6 A Extremely.

7 Q And he knows New Hampshire species well?

8 A Yes.

9 Q Okay. I'd like to bring up a document from his
10 book from 2011, and do you know, Dr. Publicover,
11 was the 2011 publication by Sperduto and
12 Nichols, was that a revision of the 2004 or was
13 it an entirely different --

14 A I believe it was a revision update.

15 Q Dawn, if you would pull up what we've marked as
16 Applicant Exhibit 384. You recognize the cover
17 to that publication?

18 A I have a -- I don't have that hard copy. I have
19 a 2011 digital version that does not have this
20 nice cover on it.

21 Q I know. That is a nice cover. Okay.

22 So, Dawn, if you go to page 200 of this
23 publication and zoom in on the northern hardwood
24 seepage forest section there on the left bottom.

1 I think you've already covered this, but
2 this is, I think, the source for most people
3 stating that this type of natural community is
4 common in the northern part of the state?

5 A Yes. The 2011 document I have, I believe this
6 is, looks like sort of more of a general
7 interest document, sort of their more official
8 document, the natural, I believe it's Natural
9 Communities of New Hampshire which is actually
10 their more detailed guide, uses the term "more
11 abundant" in the northern part of the state. It
12 doesn't use the term common.

13 Q Did you not say earlier that they are common in
14 the North Country or the north part of the
15 state?

16 A I would say, I said they were more common.
17 They're more common in the north than the south.
18 I'm not sure what, I think we're arguing over
19 semantics. I'm not sure what --

20 Q I was trying to remember.

21 A -- what the precise line of common is, but by
22 definition they are rare, and by statute, they
23 are rare. Or by SEC rules they are rare.

24 Q That's given their S3 designation?

1 A Yes.

2 Q Can you give us the definition of S3?

3 A S3 is -- I can. I had it, and it's not coming
4 to mind right now. But it is, I can't remember
5 the exact words they use in it. I should. I've
6 had it in my mind. But it is not to the extent
7 of rare and imperiled. It is, I think, uncommon
8 I think, is perhaps one of their words they use.
9 I should know that. I'm embarrassed that I
10 cannot recall.

11 Q Vulnerable? Does that sound right?

12 A Excuse me?

13 Q Vulnerable?

14 A Vulnerable, yes.

15 Q And isn't it also true that it is considered
16 rare in the broadest connotation of that word.

17 A Yes.

18 Q But it can be rare in part of the state but not
19 in another part of the state?

20 A Something can be locally common. Alpine
21 communities are locally common in the
22 Presidential Range.

23 Q And northern hardwood seepage forests are
24 locally common according to Sperduto in the

1 north part of the state, correct?

2 A Correct.

3 Q And you agree with that?

4 A I agree with that they could be considered
5 common. I would say that exemplary occurrences
6 are not common.

7 Q Okay. So let's talk about that. Coming back to
8 the 13, now 15, known occurrences of the
9 exemplary variety of this, those are just the
10 ones that NHB has on its database, correct?

11 A Yes.

12 Q Doesn't mean that there aren't more?

13 A No. There most likely are.

14 Q And there could be a lot more. We just don't
15 know; is that fair to say?

16 A I think it's unlikely there's a lot more. I
17 think that it's extremely unlikely there are a
18 lot more exemplary occurrences of the size of
19 the one that would be impacted by this Project.

20 Q But you don't know.

21 A I don't know.

22 Q And NHB doesn't know either?

23 A No.

24 Q Okay.

1 A I would hesitate to add if they are so common
2 why couldn't you find better examples for
3 mitigation.

4 Q We'll talk about that in a minute.

5 One quick point. You indicated in your
6 testimony that on at least one of the two
7 exemplary natural communities here that you're
8 interested in, there were 7 plants, I think it
9 is the number, this is for northern hardwood
10 seepage forest number one, again designated by
11 Normandeau, there were 7 plant species that were
12 on the state watch or indeterminate list; is
13 that right?

14 A I believe it was 7 state watch and one
15 indeterminate.

16 Q Neither one of those categories is rare,
17 however, correct?

18 A They are not officially on the rare plant list
19 maintained by New Hampshire. No.

20 Q Do you know if that's also true for the second
21 exemplary community that we've been talking
22 about?

23 A Because that one was designated exemplary fairly
24 recently, I haven't, I'm not as familiar with

1 the rare plants that are present in that one.

2 Q Had you reviewed the Arrowwood Panel testimony?

3 A Yes.

4 Q Do you know the coverage then of the topics that
5 they addressed?

6 A Yes.

7 Q And this issue of the northern hardwood seepage
8 forest natural communities was not among them,
9 correct?

10 A Correct.

11 Q One last question on these communities. You've
12 indicated that they have been impacted to some
13 extent by logging. The northern hardwood
14 seepage forests. The S3 communities in general.
15 Have either of the two that are still exemplary
16 been logged recently?

17 A The largest one had, a portion of it was logged
18 in, apparently, in 2016.

19 Q And that was the exchange you had a couple
20 months back?

21 A Yes.

22 Q With Lee Carbonneau asking her about whether, in
23 fact, the exemplary status had been affected by
24 the logging that had occurred?

1 A Yes.

2 Q Okay. Couple questions on your habitat
3 fragmentation testimony.

4 Dawn, if you would pull up page 7, please,
5 of NGO Exhibit 101.

6 That's your testimony again. You
7 criticize, on lines 26 and 27, you criticize the
8 Applicant's work by saying that the
9 fragmentation analysis is incomplete,
10 inconclusive and inadequate. And I'm focusing
11 on the inconclusive part there. So you're
12 criticizing Normandeau for not being conclusive
13 in its fragmentation analysis. Is that a fair
14 reading of that?

15 A I believe the fragmentation analysis --

16 Q Can I just ask you to answer yes or no? Is that
17 what you're saying? That in part the
18 fragmentation analysis is inconclusive?

19 A Yes.

20 Q And, Dawn, if you'd go to page 10 of the
21 testimony.

22 And look at line 10, Dr. Publicover. This
23 sentence on line 10 reads that quantitative
24 assessment of fragmentation will be

1 inconclusive. So I'm a little confused. Here
2 you're saying it's going to, a quantitative
3 analysis in any event will be inconclusive, but
4 you're being critical of Normandeau for not
5 being conclusive. So what's the answer?

6 A Using the two of them in a different sense.
7 When I say it here in line 10, we're basically
8 saying there's no hard line. We don't know, you
9 know, it can give you a measure of how much
10 fragmentation is taking place, but there's no
11 hard line that you cross that a little bit more
12 fragmentation it's not going to cause the
13 collapse of the forest. It will cause increased
14 impacts. It's like when does black turn to
15 white on a scale of gray. You know, at some
16 point you have to make a decision based on
17 available information.

18 Q And that's the judgment call that you're
19 referring to on lines 13 and 14?

20 A Yes.

21 Q Of your testimony?

22 A But the analysis done by Normandeau of their
23 fragmentation did not even provide good
24 information. They misinterpreted their primary

1 reference, and the conclusions they -- perhaps
2 the first reference it would be better to say,
3 not say it was inconclusive. It's inconclusive
4 because it's wrongly applied.

5 Q But on the subsequent page here, the one we're
6 looking at now, you're saying that any
7 assessment is inconclusive, and it's a judgment
8 call in any event as to how significant the
9 impact is?

10 A It is an informed judgment call that can be
11 informed by data, but at some point, there has
12 to be a judgment as to whether that impact
13 crosses a line into unreasonable.

14 The Normandeau assessment did not provide
15 the correct data on which to make an informed
16 judgment, and, you know, when we say and any
17 quantitative assessment of fragmentation will be
18 inconclusive, it would probably be better to say
19 it will not be definitive. You know, you can
20 pretty much tell in a human if your fever gets
21 up to a certain point you're really in trouble
22 because your metabolism is going to not function
23 correctly. In forest fragmentation, it's
24 probably a broader and a grayer line. There's

1 no cliff that you drop off in terms of
2 fragmentation. There's a gradual decline in
3 habitat value. But the Normandeau analysis was
4 done incorrectly and did not provide good
5 information on for which the Committee can base
6 a decision.

7 Q You've said that in your testimony, and I
8 understand you're repeating it here. But your
9 position is that even though the quantitative
10 assessment is inconclusive, you've made a
11 conclusive determination that there's an
12 unreasonable adverse effect. And just let me
13 ask you. The analysis that you did is in your
14 Prefiled Testimony, correct?

15 A Yes.

16 Q Based on review of other people's work?

17 A Yes.

18 Q You didn't provide a report, you didn't do a
19 report --

20 A I did not.

21 Q -- on this issue other than what's in your
22 Prefiled Testimony?

23 A I did my own analysis, the results of which are
24 presented in the testimony.

1 Q Okay. So does logging have an effect on
2 fragmentation as well?

3 A Yes, but it's a temporary effect.

4 Q Okay.

5 A And different kinds of logging will have varying
6 effects of effect. Clearcutting will have a
7 much greater fragmenting effect than a thinning.

8 Q Understood. So let's look at page 9 of your
9 testimony. That was something that, again, was
10 somewhat confusing to me, and it's particularly
11 so in footnote 14 on this page. This is a
12 footnote --

13 Dawn, I'm sorry. Would you go up on the
14 line on line 8 where the footnote appears?

15 So the footnote is to a paragraph or at
16 least a sentence where you've got some specific
17 numbers of impact.

18 A Um-hum.

19 Q Okay. So let's go back to the footnote. So
20 here you say that your analysis assumes that all
21 forest adjacent to the corridor is unfragmented,
22 meaning uncut.

23 A Um-hum.

24 Q And then your next sentence makes that clear.

1 Well, the next, the clause says that that would
2 not be the case if there has been a timber
3 harvesting activity that has occurred. And then
4 your next sentence says that you've ignored the
5 effect of timber harvesting. Right?

6 A In my quantitative analysis, yes. As did the
7 Normandeau analysis also treated all forest as
8 potentially interior.

9 Q But the reality is that it's logged regularly up
10 in this area as we've experienced even in these
11 northern hardwood seepage forest areas?

12 A There is a shifting mosaic of harvest units, not
13 all, again, some of which, but I imagine the
14 majority of which are not clearcuts. So even
15 areas that are harvested can maintain some of
16 the values of an interior forest and can return
17 to an interior forest condition in a shorter
18 time than, say, a clearcut.

19 Q When you're talking about not clearcutting, does
20 the experience that you're involved in in Maine
21 right now on the 75,000 acres that you own come
22 to mind where you can manage it the way you
23 wish?

24 A Yes.

1 Q You were here, I think, for Dr. Barnum's
2 testimony when she was asked about logging
3 activity in the five towns?

4 A Yes.

5 Q In the northern 32 mile section of the route?

6 A Yes.

7 Q And do you recall that she testified about data
8 that she had obtained from the Department of
9 Revenue Administration on logging activity?

10 A Yes.

11 Q Which indicated that for the three-year period
12 of 2013 to 2015 there was an average of 8,000
13 acres logged annually in those five northernmost
14 towns.

15 A Yes.

16 Q And do you recall what the clearing area is for
17 the Northern Pass clearing in those same five
18 towns?

19 A 467 acres. I have that exhibit in front of me
20 now.

21 Q I had written down 470 so we're close.

22 So your entire testimony is based on
23 concern about cutting 470 acres as opposed to
24 the ongoing logging activity of 8,000 acres

1 every year on average based on that data that
2 was derived earlier?

3 A Yes, and I recall that when that chart was put
4 up during the redirect of Ms. Barnum, I found it
5 to be very misleading, and I still believe it's
6 very misleading.

7 Q You disagree that there's an annual average of
8 8,000 acres that are logged in those five
9 northernmost towns?

10 A If you'll put up that exhibit, I can explain why
11 I believe it's misleading.

12 Q You're not recalling off the top of your head
13 what your problem was with it?

14 A Oh, no. I know what my problem was. I just
15 want the Committee to be able to see the chart
16 we're referring to.

17 Q All right. Let's pull it up, Dawn.

18 A Exhibit 175, Applicant.

19 All right. As we've said, this conflates
20 the permanent impacts of the corridor with the
21 temporary and shifting impacts of timber
22 harvesting. Second, the numbers are highly
23 skewed by the inclusion of Pittsburg. The
24 corridor cuts across one corner of Pittsburg

1 which is the size of 8 normal towns so you have
2 the great majority of your or not the great
3 majority but perhaps 40 percent of the
4 harvesting comes from Pittsburg which is
5 minimally impacted. And also, again, it says
6 nothing about the types of cutting. There may
7 be, you know, we don't know how many of these
8 acres are thinnings which would really have very
9 limit fragmenting impact as opposed to clearcuts
10 which do have a longer one.

11 But my major impact is, again, the
12 conflation of temporary versus permanent
13 impacts, and, again, mixing -- this chart may
14 give the impression, people may think, who don't
15 know a lot about timber harvesting, may think
16 this is all clearcutting, and I would say the
17 majority of it is not clearcutting and maintains
18 some interior amount of forest habitat. So,
19 again, I think those numbers are not comparable.
20 The fact that there's a lot of timber harvesting
21 in Pittsburg, you know, that kind of really
22 dilutes your numbers and the fact that the
23 corridor happens to go across one little corner
24 of Pittsburg is misleading.

1 So I don't, and, you know, if you look at
2 some of the towns where the corridor goes
3 through, basically bisects the towns, say
4 Dixville and Millsfield, there the corridor is
5 equivalent to about 12 to 14 percent of the
6 amount of harvesting. So it's a significantly
7 higher number that you show here in the
8 townships that are really bisected by the
9 corridor.

10 Q Let's address your two points. Let's take
11 Pittsburg out of the mix. Look at the average
12 column, the next to the last one on the right.
13 If you take Pittsburg out entirely, that still
14 leaves 5,000 on average, right?

15 A Yes.

16 Q As it compares with 470, that's about an order
17 of magnitude difference, right?

18 A Yes. I will agree that there's more timber
19 harvesting on average yearly --

20 Q Would you agree there's a lot more timber
21 harvesting than the 470 acres that will be cut?

22 A Yes. I would disagree that that's a meaningful
23 comparison.

24 Q Okay. So you're saying it's temporary. Let's

1 talk about the Wagner Forest Management
2 location. Twenty-four miles of the 32 north
3 section miles are on their property, correct?

4 A Um-hum.

5 Q Did they have any plans to stop logging that you
6 know of?

7 A Not in the immediate term but those types of
8 timber land investment management organizations
9 generally do not have a long-term horizon.
10 Bayroot's been here a little longer than we
11 expected, but those types of ownerships often
12 have an ownership turnover of 10 to 20 years. I
13 would not expect Bayroot to be here 25 or 50
14 years from now.

15 Q Do you expect the timber industry to be here 25
16 to 50 years from now?

17 A I suspect there will be a timber industry, but I
18 have no idea what kind of a land owner will own
19 that land and what kind of forestry they may
20 practice.

21 Q Even if Northern Pass were not even in our
22 minds, didn't even exist as a Project, this land
23 could be cut any time by the landowners, right?

24 A They could.

1 Q Let's -- go ahead. Sorry.

2 A I was going to say, Bayroot harvested a portion
3 of a rare exemplary natural community. I can
4 consider that to be unconscionably bad forestry,
5 but this it is not something that requires a
6 State permit, and it is not something that's
7 illegal.

8 Q All right. I want to finish up.

9 I recall you saying at the Technical
10 Session, and I'm coming back around to the DES
11 approval and the other agency's position, you
12 said then, as I recall, that it did not give you
13 much comfort that they had rendered a decision
14 on the Application. Am I misremembering that?

15 A The DES?

16 Q Yes.

17 A I don't recall saying it. I don't deny that I
18 said it.

19 Q All right. Does it give you comfort that they
20 have issued their decision approving the
21 wetlands application?

22 A No.

23 Q You disagree with their decision having done so?

24 A I wish they had made a different decision, yes.

1 I wish they had stuck to their guns and required
2 consideration of an alternative route in the
3 North Country.

4 Q And that NHB has approved the avoidance and
5 minimization measures; that, too, does that give
6 you comfort?

7 A Doesn't give me discomfort. I think they did
8 what they could within the limits of their
9 authority. I don't think their avoidance and
10 minimization measures are effective because the
11 destruction of portions of exemplary natural
12 communities are still going to take place.

13 Q Yes, but their avoidance and minimization
14 measures cover a whole lot more aspects of the
15 natural environment than that one natural
16 community, correct?

17 A Yes, and for those other aspects they may be
18 effective.

19 Q And the last question, you also said that NHB's
20 position on not requiring more mitigation was a
21 mistake. Or words to that effect.

22 A I believe they should have required more
23 mitigation. Yes.

24 Q And I wrote down your words earlier. Seemed

1 like you were getting a little excited when you
2 said that the minimization package was woefully
3 inadequate.

4 A Woefully inadequate, yes.

5 Q Are you sticking to that position?

6 A Yes.

7 Q So DES's decision to approve the mitigation
8 package you're saying is wrong.

9 A I disagree with it. Yes. I disagree with their
10 conclusion.

11 Q Well, that's different from saying it's wrong.

12 A Well, again, I'm not an expert on the full
13 limits of DES jurisdiction. They may have made
14 the correct decision for the resources under
15 their jurisdiction. I am not disagreeing with
16 their decisions on wetland impacts, but, again,
17 I think the SEC has a broader mandate than DES.

18 Q And the exercise of that mandate, they're
19 looking at DES, they're also looking to NHB's
20 position and your belief is that the mitigation
21 that NHB has accepted is woefully inadequate?

22 A Yes.

23 Q Same with Fish & Game?

24 A I haven't looked at the Fish & Game, the

1 wildlife mitigation measures in detail, because
2 that was not an aspect of my testimony. So I
3 have no comment on whether, on the adequacy of
4 Fish & Game's input.

5 Q Okay. So the bottom line on the consideration
6 of mitigation and consideration of their
7 position on avoidance, mitigation and
8 minimization measures is that the agencies are
9 not correct, but your position is, and,
10 therefore, there's an unreasonable adverse
11 effect?

12 A I think the SEC has to consider the agencies'
13 input, the agencies' decisions and also the
14 input they get from everyone else. They in the
15 end can make the decision as to how credible
16 they find my arguments.

17 Q I have nothing further, Mr. Chairman. Thank you
18 Dr. Publicover.

19 PRESIDING OFFICER HONIGBERG: All right.
20 Questions from the Subcommittee for Dr.
21 Publicover? Ms. Dandeneau.

22 **QUESTIONS BY MS. DANDENEAU:**

23 Q Good afternoon.

24 A Good afternoon.

1 Q Could you give me some clarification on what the
2 "moving window" is that you talked about in your
3 Prefiled Testimony?

4 A The moving window was the analytical technique
5 that Normandeau used to address fragmentation.
6 They took a series of points along the northern
7 corridor, and for each of those points they drew
8 a 2500-acre circle around that. So there's a
9 series of 2500 acres. The circle isn't really
10 moving. It's like a series of separate circles.

11 Q Okay.

12 A And within each of those points they analyzed
13 the extent of forest cover, the distribution of
14 forest block sizes, both before and after the
15 corridor, and used that to determine impact on
16 the scarlet tanager which was their proxy
17 species for interior forests, and it's that
18 analysis which I believe that was done
19 incorrectly.

20 Q Do you agree with the moving window analysis
21 that they used?

22 A I think it can be a useful technique. It was
23 new to me. I hadn't seen that type of analysis,
24 but I don't think it's an inappropriate way to

1 go about looking at things.

2 Q After having reviewed the way they used that
3 technique, do you think that those windows
4 should have been larger or smaller or if they
5 had been a different size, would it have
6 captured more information?

7 A No. Based on the reference they used as the
8 basis for that which was the Rosenberg scarlet
9 tanager document from Cornell Lab of
10 Ornithology, I think they chose the size that
11 was recommended.

12 Q We've heard a lot about the edge effect this
13 afternoon and you covered it in your Prefiled
14 Testimony, but I was wondering, there was one
15 part of your Prefiled Testimony where you talked
16 about how the edge effect really has to be
17 looked at in potentially a more broad view
18 because looking at how much the edge impacts an
19 area proportionally is dependent upon how big of
20 an area you're looking at.

21 A Yes.

22 Q So in this particular case, do I remember
23 correctly that the edge was 150 feet from the
24 right-of-way?

1 A The corridor is 120 feet wide.

2 Q Right, but then the area that falls under the
3 edge effect, was that 150 foot distance into the
4 woods from the edge of the right-of-way?

5 A Yes. Based on the Rosenberg reference he said
6 150 to 300 feet, and I believe in her
7 cross-examination, Ms. Barnum said that that was
8 a commonly used measure of how far its effects
9 can extend into a forest, and I've heard that
10 same number. It's one I've used myself.

11 Q Okay.

12 A There is a recent paper which I just saw on
13 Friday. I haven't seen the whole paper. I've
14 only seen the abstract. I saw it referenced in
15 Atlantic Magazine website about a new global
16 study of forest fragmentation where researchers
17 looked at multiple studies from around the world
18 looking at the distribution of large number of
19 different vertebrate species and trying to
20 understand which ones become more common closer
21 to edges and which ones become less common
22 closer to edges, and there's about an equal
23 number. You know, certainly there are species
24 that benefit from edges.

1 Q Sure.

2 A They tend to be the more common and generalist
3 species. The ones who shrink away from edges
4 tended to be the rarer and less common species,
5 vertebrate species. And they found that the
6 impacts of the edge extended up to, for some
7 species, up to 200 to 400 meters from the edge,
8 and their conclusion is that edge effects are,
9 depending on what impact you're looking at, can
10 be significantly more extensive than we've
11 previously thought.

12 Q So based on what you just said then, an edge
13 effect up to 400 meters into the woods from a
14 fragmentation of some kind could limit what
15 species would use those leftover habitat
16 patches?

17 A Yes. I would be hesitant to extend that to
18 these. I mean, a lot of the examples they
19 looked at were tropical forests.

20 Q Okay.

21 A And they may be different. So I would not go so
22 far as to say the edge effects here extend 400
23 meters, but I think 150 to 300 feet is a
24 reasonable zone --

1 Q Okay.

2 A -- to consider. Edge zone.

3 Q From a landscape scale, these areas that we've
4 talked about today that are going to be
5 potentially causing fragments across habitat in
6 the North Country, drop-in-the-bucket effect or
7 fairly big effect in the landscape scale? What
8 is your thought?

9 A I think at an instantaneous level or if you're
10 looking at the scale of Coos County, you can
11 probably make a case that it's a drop in the
12 bucket.

13 Q Um-hum.

14 A But the difference is, again, these are
15 permanent. Management changes. There have been
16 a number of lands both in northern New Hampshire
17 and in our management of our lands in Maine
18 where roads are abandoned --

19 Q Um-hum.

20 A -- and fragmentation is reduced. This will
21 remain a permanent fragmenting feature.

22 If you look at the Nulhegan Basin in
23 Vermont.

24 Q Um-hum.

1 A Which was formally Champion International
2 industrial timberland --

3 Q Yes.

4 A -- is now part of the US Fish & Wildlife Service
5 Conte Refuge. If it's not managed as a reserve,
6 it's certainly managed less intensively, but
7 there's a transmission corridor right down the
8 middle of it that's totally evident on satellite
9 imagery, and that's going to stay there. That
10 is an impact that will not recover.

11 And this is as, I said before, this is the
12 biggest permanent fragmenting feature within one
13 of the largest relatively undeveloped blocks of
14 forest in New Hampshire.

15 Q Okay. You mentioned that looking at wildlife
16 impacts was not part of your analysis or part of
17 your Prefiled Testimony, but do you, just off
18 the top of your head from your experience, could
19 you give us a list of wildlife species or bird
20 species that could be impacted in terms of the
21 fragmentation aspect of this right-of-way?

22 A Well, certainly the interior forest bird
23 species.

24 Q Can you give me some specific examples?

1 A Scarlet tanager, wood thrush, numbers of the
2 different warblers. I don't have a great list
3 on my head.

4 Q Okay.

5 A Another fragmenting impact is inhibiting
6 movement from one patch of forest to another.

7 Q Um-hum.

8 A This will remain vegetated, and different
9 species are going to react to it in different
10 ways. I don't know that moose would have much
11 of an issue of it.

12 Fish & Game obviously had some concern in
13 that they requested that certain parts of the
14 corridor that higher vegetation be left so
15 certainly they recognize that that is an impact.

16 Things like amphibians may be hesitant to
17 cross it. I know there's been work done in
18 Maine that looked at amphibian use after
19 clearcut, and they found the presence of large
20 rotten logs within a clearcut was a big
21 indicator of whether amphibians would get out
22 and recolonize that habitat. I don't know that
23 there's going to be a lot of large dead wood
24 retained in this habitat. So again, each

1 species going to react to it differently.

2 Q Differently. Okay. I just wanted to ask a
3 couple questions about the northern hardwood
4 seepage forest. Are there any species in
5 particular that key into that habitat type?

6 MS. DANDENEAU: I know. It's me, and I'm
7 squeaking, and I don't, are you looking at me
8 about that? Sorry.

9 PRESIDING OFFICER HONIGBERG: Could we put
10 on the record that that was about noise being
11 made in the sound system? Let's go off the
12 record.

13 (Discussion off the record)

14 BY MS. DANDENEAU:

15 Q So the northern hardwood seepage forest, are
16 there species that key into that habitat type?

17 A I'm not aware of any animal species that are
18 particularly associated with that. The Natural
19 Heritage Community Guide didn't list any. There
20 are certain plant species that are found
21 primarily in these types of enriched forest
22 conditions, but those conditions are necessarily
23 limited. There are other communities that may
24 also have those kinds of enriched conditions.

1 So, again, there are plant species that would be
2 much more commonly found in this type of habitat
3 but none that are entirely dependent on it that
4 I'm aware of.

5 Q So I'm not super familiar with this seepage
6 habitat type that we've talked about today. Is
7 there an increased potential for standing or
8 ponding water in these areas?

9 A Not so much standing. These communities occur
10 on fairly gentle lower slopes so there's lots of
11 wetlands where just water is running along the
12 surface but not necessarily in well-defined
13 stream channels.

14 Q Okay.

15 A But because of the slope you don't get a lot of,
16 except and unless there's little pockets, but
17 when I was out there there was water running all
18 over the place, but there weren't a lot of pools
19 or ponds.

20 Q Okay. I think that's it. Thank you so much.

21 A Thank you.

22 PRESIDING OFFICER HONIGBERG: Mr.
23 Oldenburg?

24 **QUESTIONS BY MR. OLDENBURG:**

1 Q Thank you. I want to continue on that line
2 because this northern hardwood seepage forest
3 thing is a mystery to me. If I dissect the
4 words in the title, they're hardwood trees?

5 A Yes.

6 Q And there's water involved but not wetlands?

7 A Well, some it is classified as wetland, and I
8 believe was mapped as wetland by the Applicant.

9 Q So hardwoods don't normally like water, right?
10 I mean, they don't -- or is it certain types of
11 hardwoods?

12 A Sugar maple likes, they don't like to have their
13 feet wet. They like to have moist soil. So the
14 sugar maple component of it may be a little more
15 on upper drier areas. Yellow birch is also
16 associated with wetter soils, and those are the
17 two primary tree species in the area.

18 Q So I think you mentioned before that there's
19 this exemplary examples.

20 A Yes.

21 Q The S3 version. But there's also less exemplary
22 or more common or not so exciting type of
23 versions. Do they change over time?

24 A Well, the S3 ranking is a ranking that is given

1 to that community type. All northern hardwood
2 seepage forests, even if they've just been
3 clearcut, are an S3 community. Exemplary refers
4 to sort of a certain minimum level of
5 naturalness in terms of, you know, how much
6 human impact there has been to it and how much
7 of the sort of natural condition. So ones that
8 are, have less human impact will at some, reach
9 a certain level and be considered exemplary.

10 They basically have four levels of, it's
11 called the element occurrence rank. There's
12 exemplary, there's good, there's fair and
13 there's poor, but they're all S3s.

14 Q So I guess I'm trying to grasp the concept of
15 you have a lot of water or water running down
16 sort of the hillside with trees. Do those
17 trees, I mean, I picture on the side of the road
18 when you see water and trees, the trees die
19 because of the water.

20 A This is not standing water. This is water
21 flowing over the surface. The soil is for the
22 most part wet but not saturated. Because again,
23 water is flowing downhill. It's not, it's not
24 ponding. So usually when that happens it means

1 there's, you know, when the water, when the soil
2 is saturated there's no air. Roots need air
3 just like we do.

4 Q So the soils, these trees wouldn't be, the soil
5 wouldn't be classified as wetland soil?

6 A It's classified as a wetland because it is
7 probably saturated for certain parts of the,
8 it's wet enough to be considered a wetland soil.
9 There are a lot of wetland soils that trees grow
10 in.

11 Q You had mentioned the compensatory mitigation,
12 the parcels that they want to put in
13 mitigation --

14 A Yes.

15 Q -- aren't good parcels because they, they were
16 leftovers. Are there other parcels out there
17 that you know of that would be better?

18 A I don't want to say that all the parcels are not
19 good parcels. I think they have good, there is
20 some good stuff on those parcels, but they were
21 not chosen for their mitigation value.

22 Q Okay.

23 A You know, I don't know northern New Hampshire
24 and that part of the state well enough. Most of

1 the parcels I know are the large commercial
2 landowner ownerships which for the most part
3 have been heavily harvested. So whether there
4 are other parcels out there that are available
5 for, could be available for mitigation and
6 provide better mitigation value, I can't answer.

7 Q Okay. So do you believe that there's a way to
8 mitigate for the impacts to a seepage forest?

9 A Yes. I would think, again, conserving examples
10 of equal or better value. So if you're going to
11 destroy a large part of a 60-acre exemplary
12 occurrence, you should go out and at least find
13 another exemplary 60-acre exemplary occurrence
14 to protect. I have no idea whether that such a
15 thing exists. You know, they've said it's
16 common so maybe it does. I don't know.

17 In the end, you're still suffering a net
18 loss. You know, you're protecting one and
19 losing another. You're not going to create,
20 unlike wetlands you're not going to create new
21 occurrences, but, you know, at some level you
22 could have significant enough mitigation that
23 yes, it would outweigh the impacts of the
24 Project.

1 That's the conclusion we reached in the
2 Granite Reliable. We originally opposed the
3 construction of those turbines in high elevation
4 because we were able to negotiate a mitigation
5 package that far outweighed the impact. 58
6 acres of high elevation impact versus 1700 acres
7 of high elevation protection plus more money for
8 additional. So at that point the balance became
9 okay, yes, this is an impact, but you're going
10 to protect so much other stuff that on balance
11 it's not an unreasonable impact. I don't think
12 that balance is here in this Project by any
13 stretch of the imagination.

14 Q I think you covered my next question is wetlands
15 people, agencies, have tried to create wetlands
16 where they don't exist today --

17 A Yes.

18 Q -- as mitigation. It doesn't, I think by your
19 answer, it doesn't seem reasonable that you can,
20 you could create a hardwood seepage forest.

21 A No. Because they're tied to a very specific
22 geophysical condition. I don't know how you
23 would create, it's a soil that has a hard dense
24 layer that prevents the water from seeping all

1 the way down and flowing downhill. And in
2 wetlands, when you're creating new wetlands, you
3 may be recreating the wetland functions in terms
4 of water storage and flood control and things
5 like that. You're not recreating the wetland
6 community, I would suspect, and especially if
7 it's a rare one.

8 Q The fragmentation issue. Is there a way of
9 mitigating for the fragmentation of the corridor
10 creation?

11 A Yeah, you could leave 50 percent tree cover, but
12 that's obviously going to interfere. I don't
13 believe there is a way to mitigate the -- if
14 you're going to clear the corridor, some things
15 you can do is feather the edges, you know, so
16 that you don't have a hard edge with light
17 shining into the adjacent forest that you have,
18 becomes a fuzzier edge and provides some
19 protection of that interior climate. You can
20 mitigate the wildlife crossing issue by
21 providing areas of taller vegetation as Fish &
22 Game has requested.

23 So I think, you know, it might be possible
24 to mitigate or minimize some of those impacts to

1 some limited degree but overall, no, if you put
2 a big hole in the forest, it's a big hole in the
3 forest, and the forest around it is going to
4 feel the effect.

5 Q I think you just read my mind with my next
6 question is if I look at the plans and what the
7 corridor shows, it shows 120-foot wide
8 right-of-way.

9 A Um-hum.

10 Q And the Northern Pass tower line is centered in
11 it, 60 feet on either side, and it's the only
12 line in there, unlike other sections, so there's
13 the one line that's down the center.

14 Now, when we were out on our site visits,
15 one area that pops in my mind is behind
16 McKenna's Purchase, there was a lot of
17 vegetation under the line. You know, trees that
18 were allowed to grow 15, 20 feet tall, and out
19 in other areas that was a lot of brush and
20 everything else. Just because the right-of-way
21 is 120 feet doesn't mean it has to necessarily
22 be clearcut for that 120 feet. It could be, as
23 you say, tapered and cleared only where directly
24 underneath the lines or where they need for

1 maintenance, correct?

2 A It probably could, but if you're going to
3 maintain that vegetation, other, if you're not
4 going to let the corridor grow up and turn into
5 a 50-foot wide corridor, it's going to be a lot
6 of maintenance on that fuzzy vegetation on the
7 edges, and if you're not clearing it back to
8 ground zero, you're going to have to be going in
9 and cutting individual trees, and I would
10 imagine it would be extremely expensive and
11 time-consuming to try to maintain a sort of
12 feathered edge over the long-term.

13 Q Well, maybe it's not maintaining it, but it's
14 allowing the trees to grow up and then as part
15 of your regular maintenance doing something
16 different like going in and cutting it all.
17 Allowing it to grow back, like you said, the
18 forestry does.

19 A Yeah. Again, I'm not an expert. To me, it
20 would seem like that would be impractical from a
21 management standpoint and probably not all that
22 effective.

23 Q Okay. All right. Fair enough.

24 MR. IACOPINO: Mr. Chairman, may I just ask

1 a followup question?

2 **QUESTIONS BY MR. IACOPINO:**

3 Q Dr. Publicover, when you talk about
4 fragmentation, the definition of fragmentation
5 that you use, does it require the cutting down
6 to the ground or at what level is there no
7 longer, what height level is there no longer
8 fragmentation?

9 A Again, it would have to be to the point where
10 the adjacent vegetation had grown up into the
11 crowns. To the level, maybe the lower level of
12 the crowns of the adjacent forest. Because if
13 the vegetation is too low, you're creating sort
14 of an unvegetated window below the crowns of the
15 overstory trees but above the adjacent
16 vegetation, and that's an area where wind and
17 sunlight gets in, changing the environment.

18 So if you're talking about a 50, 60-foot
19 forest adjacent to the corridor, I would
20 probably say if you're going to block those edge
21 effects, the vegetation on the corridor should
22 probably have to be at least 40 feet high.
23 Again, that's a rough guess, but, again, it
24 would have to be tall enough and dense enough to

1 effectively create, you know, a forest on both
2 sides of that edge. That's what would be needed
3 to keep the interior forest from feeling the
4 effects of the opening.

5 Q Thank you.

6 MR. OLDENBERG: That's all I had. Thank
7 you.

8 PRESIDING OFFICER HONIGBERG: Commissioner
9 Bailey?

10 COMMISSIONER BAILEY: Thank you.

11 **QUESTIONS BY COMMISSIONER BAILEY:**

12 Q Have you ever visited the mitigation parcels
13 that have been set aside?

14 A I have not.

15 Q So how do you know that they aren't appropriate?

16 A Well, in terms of just, again, mitigation for
17 the rare and natural community impacts, we have
18 two exemplary natural communities, two exemplary
19 natural communities that will be impacted.
20 There is one occurrence of that same natural
21 community on one of the mitigation parcels. It
22 is smaller, and it will have the corridor
23 running right through the middle of it.

24 So basically in terms of mitigation for

1 that specific impact, in-kind mitigation, you're
2 taking two exemplary occurrences, one of which
3 is quite large, replacing it with a smaller
4 degraded, you're conserving a smaller degraded
5 occurrence.

6 Q But I thought I heard you say that degraded
7 occurrences could grow back if you leave them
8 alone for 40 years.

9 A This one can, but it has the corridor and a
10 transition station in that community occurrence.
11 So that's not going to grow back. You've
12 basically taken your mitigation, you know, your
13 mitigation community occurrence and the corridor
14 is going to go right through the middle of it.
15 So you're leaving 25 acres in like three little
16 scattered pieces on the edge.

17 Q So what did you mean by the leftover parcels of
18 land, that there were pieces of land that are on
19 land that the corridor --

20 A Again, the mitigation parcels they've proposed
21 are not parcels that were chosen for the purpose
22 of mitigating the impacts. They were parcels
23 that Northern Pass had purchased for a potential
24 route.

1 Q Right. But what if they work?

2 A They may work to some extent. I make no
3 question about their adequacy in mitigating for
4 wetland values, but I think if you read
5 Arrowwood's testimony in terms of the impact to
6 pine marten, they said this new corridor, I
7 think they said, would impact 238 acres of
8 potentially high quality American marten
9 habitat. On the mitigation parcels they
10 identified 75 acres of potential high quality
11 marten habitat. So, you know, in that impact
12 they are less. Certainly compared to what we
13 got for Granite Reliable where we got 1700 acres
14 of mitigation for 58 acres of impact. This is
15 much less than that ratio.

16 There is no, these parcels are scattered.
17 They are not protecting a large block of
18 unfragmented forest from maintaining interior
19 forest habitat. You know, if they had said
20 okay, here's a 10,000-acre parcel and we're
21 going to set it aside and stop and let it grow
22 back, we might be having a different discussion.
23 But I don't think that the mitigation parcels,
24 the values of the mitigation parcels that I've

1 looked at in regards to the impacts I've talked
2 about, come close. I don't think the values of
3 those are equivalent to the values of what would
4 be impacted.

5 Q When you say that you've looked at, do you mean
6 just the acreage, the numbers of acres?

7 A The acreage, the quality of the, you know,
8 what's there.

9 Q How do you look at that on paper?

10 A They have maps, they have community maps. There
11 are aerial photos that can give you an
12 indication of sort of the condition of the
13 forest in those areas. So there's a fair bit of
14 information that you can get without having to
15 be on the ground.

16 Q Okay. Thank you.

17 A Again, they may be adequate for some, for
18 mitigating some impacts. I don't think they
19 were adequate for mitigating the impacts that I
20 describe in my testimony, and I think mitigation
21 should usually be targeted to identify proper
22 mitigation parcels that meet that need rather
23 than taking parcels that you already have in
24 your portfolio and trying to justify their

1 mitigation value after the fact.

2 PRESIDING OFFICER HONIGBERG: Mr. Iacopino?

3 MR. IACOPINO: I just have two questions,
4 Mr. Chairman.

5 **QUESTIONS BY MR. IACOPINO:**

6 Q Dr. Publicover, during your examination you
7 referenced as a possible alternative running the
8 line in logging roads. Do you recall that
9 testimony?

10 A Yes.

11 Q Do you think that that's really a practical
12 consideration?

13 A I have no idea. I've never seen any information
14 that it's even been looked at.

15 Q Have you ever seen either a transmission line or
16 any other kind of utility buried in a logging
17 road other than in a wind facility?

18 A I can't say that I have.

19 Q Does any of the AMC's land that has logging
20 roads on it have utilities built into logging
21 roads?

22 A No. I don't believe we have any utilities
23 crossing our land.

24 Q And then the only other question I have is about

1 the 61-acre seepage forest parcel that there's
2 been some testimony that it's been partially
3 logged. Do you know if Bayroot or the owner of
4 the land or the fee intends to further log that
5 parcel?

6 A I have no idea.

7 Q Okay. Is there a common way that one can find
8 that out?

9 A No.

10 Q Okay. Thank you.

11 PRESIDING OFFICER HONIGBERG: Any other
12 questions from the Committee for Dr. Publicover?

13 Mr. Plouffe, do you have any further
14 questions for the witness?

15 MR. PLOUFFE: I just have two,
16 Mr. Chairman.

17 **REDIRECT EXAMINATION**

18 **BY MR. PLOUFFE:**

19 Q Dr. Publicover, you were being questioned by
20 Attorney Bisbee regarding the economic
21 practicality of burial, and in your response you
22 just made a passing reference to the EPA letter.

23 A Yes.

24 Q What were you referring to?

1 A That was the recent comment letter, their letter
2 of September 26th, 2017, which was submitted as
3 Applicant Exhibit 224 A, and it is their comment
4 letter to the Department of Energy on the Final
5 Environment Impact Statement.

6 Q Why was that letter relevant to Mr. Bisbee's
7 questioning?

8 A Well, because the EPA, they state in this, based
9 on the information presented to date, the hybrid
10 alternative is less damaging to the aquatic
11 environment than Alternative 7 and appears
12 practicable. Alternative 7 is the route as
13 proposed. The hybrid alternative would keep
14 that same route except for the new northern
15 corridor.

16 Again, and they say the increased cost of
17 the hybrid alternative while greater than
18 Alternative 7 represents a small portion of the
19 overall Project cost. Further work to determine
20 the practicality of the hybrid alternative is
21 clearly warranted to determine its status in the
22 mix of practicable alternatives going forward.

23 Q And that alternative involves burial?

24 A The hybrid alternative is the same route except

1 for the new northern corridor it would be buried
2 along Route 3.

3 Q Okay. My other question for you had to do with
4 Attorney Bisbee's analysis or comparison of the
5 annual acreage harvested in the North Country.
6 8,000 acres, I think you said, versus the 467 or
7 470 acres of right-of-way that would be cleared
8 in the 32 miles of new right-of-way in the North
9 Country. And I'm not really understanding the
10 comparability or the applicability of the
11 8,000-acre figure.

12 As I understand your concern, your
13 testimony, with respect to edge effect, we're
14 talking about the edges on each side of the
15 right-of-way which would be 32 miles times 2.
16 Am I correct?

17 A Yes.

18 Q So that's 64 miles of edge that's created by the
19 proposal to create a new right-of-way, correct?

20 A Yes.

21 Q So if 8,000 acres of forest land is harvested
22 each year, does that tell us anything about the
23 amount of edge that's created by that
24 harvesting?

1 A It does not. Many types of harvesting do not,
2 again, thinnings or various types of moderate
3 partial harvestings do not really create edge
4 and do not have a fragmenting effect.

5 Q Or even if I were to clearcut a one mile by one
6 mile by one mile by one mile square, that's only
7 four miles of edge?

8 A That's four miles of edge and 640 acres of
9 harvesting.

10 Q Okay. I have nothing else, Mr. Chairman.

11 PRESIDING OFFICER HONIGBERG: Thank you,
12 Dr. Publicover. I think we're done. You can
13 return to your seat, although I don't think
14 there's anything else we're doing today, right?

15 Then we will adjourn and see you all
16 tomorrow.

17 (Hearing recessed at 4:29 p.m.)

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C E R T I F I C A T E

1
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17 Dated at West Lebanon, New Hampshire, this 15th
18 day of November, 2017.

19
20 _____
Cynthia Foster, LCR
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23
24