June 23, 2017 - 1:48 p.m. 49 Donovan Street Afternoon Session ONLY Concord, New Hampshire
\{Electronically filed with SEC on 07-10-17\}

IN RE: SEC DOCKET NO. 2015-06 Joint Application of Northern Pass Transmission, LLC, and Public Service Company of New Hampshire d/b/a Eversource Energy for a Certificate of Site and Facility.
(Hearing on the merits)

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE: Chrmn. Martin P. Honigberg Public Utilities Comm. (Presiding as Presiding Officer)

Cmsr. Kathryn M. Bailey Dir. Craig Wright, Designee Dept. of Environ. Serv. Christopher Way, Designee William Oldenburg, Designee Patricia Weathersby Rachel (Whitaker) Dandeneau Alternate Public Member

ALSO PRESENT FOR THE SEC:
Michael J. Iacopino, Esq., Counsel to the SEC (Brennan, Caron, Lenehan \& Iacopino) Pamela G. Monroe, SEC Administrator
(No Appearances Taken)
COURT REPORTER: Susan J. Robidas, NH LCR No. 44
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A. (Carbonneau) Yes. I'm not sure the work was being done by Eversource personnel. It was the geotechnical subconsultants working for Eversource.
Q. Right. Well, someone was out there --
A. (Carbonneau) Yes.
Q. -- with a drilling rig?
A. (Carbonneau) Yes.
Q. Okay. So there was a Normandeau scientist out there reflagging the wetland boundaries along the existing access road before that work started; is that right?
A. (Carbonneau) That's right.
Q. You were that scientist?
A. (Carbonneau) I was not.
Q. Were you on site?
A. (Carbonneau) I was not.
Q. Okay. Do you happen to know if the wetland boundaries, those flags were pink?
A. (Carbonneau) Yes, I believe they were.
Q. Okay. Well we'll get back to that in a minute.

So you weren't there. You didn't see the flagging being done; right?
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A. (Carbonneau) Right.
Q. Okay. So the heavy machinery working out there at the substation had crossed a wetland; right?
A. (Carbonneau) Yes, there is an existing access path through the wetland that the machinery was meant to traverse in that location.
Q. All right.

MS. BRADBURY: So can we get those pictures of that.

BY MS. BRADBURY:
Q. I believe I have been told by Mr. Johnson that that he believes is a drill rig. Have you seen one of those before?
A. (Carbonneau) I have.
Q. Yeah, that was one of the machines. And then we have the Morooka rig. Not actually sure what the Morooka does. Do you know? It's got the big tracks on it.
A. (Carbonneau) I'm not sure what specifically that machine was for.
Q. Okay. So the wetland was initially dry.

Rubber mats were laid at the wetland
crossing; correct?
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A. (Carbonneau) Correct.
Q. And then it started to rain.
A. (Carbonneau) Yes, once they had started getting their equipment back in to the locations where they needed to drill.
Q. Yes. And the contractor continued driving the heavy rig through the wetland; correct?
A. (Carbonneau) Yes.
Q. And the wetland got increasingly damaged and rutted; correct?
A. (Carbonneau) Where the rubber mats were, it was not rutted. But on either end approaching those where those mats were, then rutting was occurring, yes.
Q. Okay. So you can -- okay.

MS. BRADBURY: So just go back to that first picture, Jeanne.

BY MS. BRADBURY:
Q. So it was -- there was a Normandeau representative or contractor out there. I believe it was a Normandeau representative that instructed the contractor driving the rig to deploy some additional matting; right?
A. (Carbonneau) That's right.
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Q. Okay. And that additional matting consisted of rubber mats and plywood boards; right?
A. (Carbonneau) Yes.
Q. Okay. And was Normandeau aware that rubber mats and plywood boards were going to be used by the contractor to cover the wetlands so that the heavy drilling rig could ride through it?
A. (Carbonneau) Not initially, although at the time the work had begun, it seemed reasonable at the time, because having just gone through a summer drought it was really dry and hard out there at the time.
Q. Yeah, okay. But there was a geologist out there; right?
A. (Carbonneau) I believe that's true, yes.
Q. Was the geologist working for Normandeau or someone else?
A. (Carbonneau) No, it was not a Normandeau employee.
Q. Okay. And the geologist, that day when it was raining, tried to reposition those mats, those rubber mats, and the plywood boards several times to try to protect the wetlands;
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right?
A. (Carbonneau) That's my understanding. MS. BRADBURY: Okay. So can I get the second photo up there now? BY MS. BRADBURY:
Q. Okay. So would you agree that use of rubber mats and plywood boards is not Best Management Practices for protecting wetlands from heavy equipment?
A. (Carbonneau) In this situation, it was considered not adequate. That's correct.
Q. Thank you.

MS. BRADBURY: Can we get the third picture up there?

BY MS. BRADBURY:
Q. And do you agree that it is the responsibility of Eversource to ensure that Best Management Practices are being observed by its contractors?
A. (Carbonneau) Yes. The Applicant, in this case, Northern Pass, that would be their responsibility.
Q. Okay. And contractors should follow the BMPs; right?
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A. (Carbonneau) Right.
Q. Otherwise, all the work you've done and many other people have done would be for naught; would you agree?
A. (Carbonneau) Yes. The idea of Best Management Practices is that they're followed.
Q. Right. And it is their, the contractor's, responsibility to actively protect the wetlands when they're working with that heavy equipment; right?
A. (Carbonneau) It's their responsibility to come up with Best Management Practices that accomplish the goals. And in some cases they need to revise the exact methods that they're using to adjust for changing environmental conditions.
Q. Right. So would you agree that the contractor should have put the timber mats in place before crossing the wetland?
A. (Carbonneau) Not necessarily. I think their initial approach was satisfactory for the conditions at the time. But as the conditions changed, then clearly a different
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method was needed.
Q. Right. So would you agree that Best

Management Practices require stopping work to obtain the timber mats to protect the wetlands once the rain comes?
A. (Carbonneau) Work was stopped until the timber mats were placed once the rutting was observed to have become a problem on the site.
Q. Okay. But it was you who instructed the contractor to deploy timber mats to cover the ponded and rutted portions of the wetland in the access road; right?
A. (Carbonneau) Yes.
Q. And that was done three days after the damage was done; is that correct? On the 15 th or something --
A. (Carbonneau) I'm not sure of the exact dates, but there had been some rutting that took place prior to the timber mats being deployed, yes.
Q. Right. So in order for the --

MS. BRADBURY: Can we get that picture, the first picture back up again,
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Jeanne?
BY MS. BRADBURY:
Q. In order for that kind of rutting to take place, he would have driven through there a number of times while it was raining or soon thereafter; right?
A. (Carbonneau) It looks like it could have taken a couple of trips for that, yes.
Q. Yeah. Okay. So you agree that reliance on contractors to observe Best Management Practices is at the heart of this project?
A. (Carbonneau) No, I don't agree with that. I think it's a combination of having training for the contractors and having monitors available to help make those decisions and having the appropriate materials available in a timely manner.
Q. So would it normally be a geologist who's expected to reposition those mats while the drilling contractor is running through there?
A. (Carbonneau) It could be anyone who is so delegated that authority who would be responsible. But it would need to be somebody who has some experience with
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implementing Best Management Practices.
Q. Okay. So the geologist must have some idea because he did try to reposition them; right?
A. (Carbonneau) I don't know. I don't know the individual myself. I don't know his qualifications. But I would assume that he had some involvement.

MS. BRADBURY: Okay. So can I get the second picture back up, Jeanne? I told you I mixed those up.

BY MS. BRADBURY:
Q. All right. So you see the matting there. Would you agree that something like that, that kind of matting --

MS. BRADBURY: Let me have the other picture, too, the next picture after that, Jeanne.
(Discussion off the record)
BY MS. BRADBURY:
Q. Okay. Well, those kinds of mats to support a heavy drill rig -- plywood, rubber -- you would not expect that to support a heavy drill rig in a rainy situation, would you?
A. (Carbonneau) It depends on what the substrate
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is like. In a rainy situation, it's preferable to have timber mats.
Q. Yes.
A. (Carbonneau) And those were eventually brought in.
Q. Right, after everything was done. You then --
A. (Carbonneau) Not after everything was done, no. The work was still ongoing at that point.

MS. BRADBURY: I'm going to need that letter.

BY MS. BRADBURY:
Q. I have an exhibit here that shows your response to the complaint that was forwarded to you by the DES. And you describe what we've just been through in the paragraph that's marked with a big bracket. And then the next paragraph you note that, even though the geologist was trying to reposition all those mats while the contractor was running back and forth, ruts are now extending beyond that. And that was -- you spoke to the contractor on the $15 t h$, which is the date of
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your e-mail; is that correct? According to the next paragraph after the bracketed paragraph --
A. (Carbonneau) Yes, that would be correct then.
Q. Okay. So that the damage in the photo that was taken on the 12 th happened before you called in the rubber -- the timber mats; correct?
A. (Carbonneau) Yes.
Q. All right. Thank you. Okay. Moving right along.

MS. BRADBURY: Jeanne, can I have Deerfield Abutter 109.

BY MS. BRADBURY:
Q. This is a complaint that was filed on the $12 t h$ of December, about a month or so after the incident with the drill rig. And there was a complaint made by a concerned citizen about some logging that took place out at the substation. Are you familiar with the logging that took place out there in early December last year? Have you been out there?
A. (Carbonneau) If it was associated with actually accessing the locations for the
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geotechnical work, that would be my understanding of what was needed so that they could actually get to the geotechnical boring sites with their drill rig. It's a forested site, so they might have needed to cut some trees down. I don't know if this is exactly what's referenced in this e-mail --
Q. Well, he, with this --
(Court Reporter interrupts.)
A. So with his e-mail he also forwarded some photographs.

MS. BRADBURY: So I'd like to put the first one up there. I'd like to see the wet area at the bottom of the photograph.
Q. Okay. This was taken, this photo was taken on December the 4 th.

MS. BRADBURY: Okay. Now, can you pull that down a little, Jeanne, so we can see the top. We're going to reference a big rock up there and those towers.

BY MS. BRADBURY:
Q. Okay. So you're not specifically familiar with it. You weren't out there observing or supervising any of that being done?
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A. (Carbonneau) I believe the label on the bottom of this photo referenced the C129 line.
Q. Yes.
A. (Carbonneau) That does not overlap this project area for Northern Pass.
Q. Okay. That's all right. So you weren't out there because it wasn't Northern Pass. But it is logging that took place out there. And the complaint refers to the logging that took place out there.
A. (Carbonneau) I'm not familiar with that.
Q. Okay. So you're not familiar with it. Can you then -- okay. So I'd like you to note the area of water at the bottom of that photograph. So you see the water there. So now turning to the next photograph that was taken seven days later, it is the same wetland, and you see that the wetland is filled there --

MS. BRADBURY: No, that's not it.
Not it.
(Pause in proceedings)
MS. BRADBURY: So you can put
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that one up, Jeanne.
BY MS. BRADBURY:
Q. Okay. So that's the same photograph. You might recognize that same rock up there near the top and the towers up there. But you... you can see that's been covered over, filled, that wet area down there. It's -- can you see that?

MS. BRADBURY: Yeah, let's go back to the week before. Yeah, that's the week before right there.

BY MS. BRADBURY:
Q. So you can see the wet area there. Okay. And if you -- you can see top of that. You can see the big rock, okay.

MS. BRADBURY: So let's go to the next week.

BY MS. BRADBURY:
Q. The week later we can see that the loggers have filled that in; correct?

CHAIRMAN HONIGBERG: Okay. Can you tell me what's happening here? What are you doing?

MS. BRADBURY: I'm asking her if
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she can see --
CHAIRMAN HONIGBERG: I haven't
heard an "ask" of any sort about these pictures.
MS. BRADBURY: Okay. I asked her
if she could see that the loggers had filled that in.

BY MS. BRADBURY:
Q. Can you see that in the photo?
A. (Carbonneau) I can't tell exactly what I'm looking at in this photo, if that's a filled-in wetland or not.

CHAIRMAN HONIGBERG: Let alone who may have filled it in. MS. BRADBURY: Sorry? CHAIRMAN HONIGBERG: Let alone who may have filled it in. MS. BRADBURY: Let's go back to the complaint.

BY MS. BRADBURY:
Q. Okay. So you see there the complaint made on December 12th by a concerned citizen, and he's describing what he found out there and --

CHAIRMAN HONIGBERG: Wait. She's
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trying to read it.
MS. BRADBURY: Okay.
CHAIRMAN HONIGBERG: I can tell she's trying to read it. So why don't you let her read it.

MS. BRADBURY: All right.
(Witness reviews document.)
A. (Carbonneau) I've read it.
Q. Okay. So it describes logging that took wetland is not Best Management Practices?
A. (Carbonneau) Unless the filling of the wetland is associated with a permit of some kind, then it is likely not Best Management Practices. Whether or not having some organic material go into the wetland, I can't say that's necessarily an impact. But I'm not familiar with on the field exactly what
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happens. So $I$ have to only assume that this person has an accurate assessment of what's going on out there, and I don't --
Q. Okay. I'll go on to my next --
(Court Reporter interrupts.)
MS. BRADBURY: So can I get the
fifth, pardon me, the sixth photograph in that...

BY MS. BRADBURY:
Q. Have you been out to the substation to see that? Have you seen that crushed culvert?
A. (Carbonneau) No.
Q. You haven't seen it. Okay.

MS. BRADBURY: Let me get you the next photo, the grease container.

BY MS. BRADBURY:
Q. Have you seen that out there by the substation?
A. (Carbonneau) I have not been out there recently.
Q. So you were there in November; right?
A. (Carbonneau) No, that was not me, as I testified.
Q. Okay, okay. So you didn't see it. Okay.
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MS. BRADBURY: All right. Let me get to the next photograph, the silt fencing. BY MS. BRADBURY:
Q. Okay. So you haven't seen it in person. But when you -- isn't a silt fence supposed to be upright to protect wetlands? Is that a silt fence?
A. (Carbonneau) I don't know if that's a silt fence. If it's supposed to be a silt fence, then it is not doing its assigned job.
Q. So anyone out there with heavy equipment shouldn't knock them down; right?
A. (Carbonneau) If they're still meant to be operational, then they should be standing. MS. BRADBURY: Okay. Now can I get to the pink flagging?

BY MS. BRADBURY:
Q. Is that the kind of pink flagging that you use to flag a wetland?
A. (Carbonneau) That's possible. It looks like surveyor's flagging. In some cases we use pink flagging that says "wetland boundary" or "wetland delineation" on it, and we would normally label it with a flag number.
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Q. So when you flag a wetland, you expect it to be an area that they don't run their heavy machines through; correct?
A. (Carbonneau) Not necessarily. It's to mark the boundary of the wetland in the event that work is being conducted near it or through it, in which case, if there is a flag that's in the path that needs to be taken, then it could be knocked down during the construction process. But its goal is to alert the contractors that they are at the wetland edge and they need to recognize that.
Q. Okay. So would you agree that what transpired as described in the complaint made on the 12 th of December out at the substation -- that would be the 12 th of December 2016 -- that that is troubling, given the efforts that you made to try to resolve the situation that had just occurred out there in November?

MR. WALKER: Objection. Mr.
Chairman, I've been patient here, and there has been really very little foundation for this. And I understand that the rules of evidence do
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not apply, but now she's asking questions on an unrelated matter where Ms. Carbonneau has explained that she has no -- she hasn't been out there, hasn't seen this area.

CHAIRMAN HONIGBERG: Not clear to me what the question here was going to be. What question were you about to ask?

MS. BRADBURY: The question was whether Ms. Carbonneau found it troubling that other events at the wetland only a month after she had tried to resolve a situation at the substation had taken place. CHAIRMAN HONIGBERG: As you've just phrased it, that's pretty objectionable. Do you want to ask her, if something happened like was described in that e-mail just a month later, would that, along those lines -MS. BRADBURY: Yes. CHAIRMAN HONIGBERG: -- because when you're asking her to -- when you do it the way you want to do it, you're asking her to basically confirm an understanding that she doesn't have. It's apparent she doesn't have it.
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MS. BRADBURY: Okay.
CHAIRMAN HONIGBERG: So if you want to ask her about how these things are supposed to work, ask her how it's supposed to work, and if something like that happened, would that be a good thing, a bad thing or something else in her view. You understand what I'm -where we're going?

MS. BRADBURY: Yes. Yes, I'm just trying to remember it.

CHAIRMAN HONIGBERG: Let me try for you.

Ms. Carbonneau, you remember the e-mail from -- that was signed I think by Mr. Page?

WITNESS CARBONNEAU: Yes.
CHAIRMAN HONIGBERG: He described
an incident. But you don't know if that happened or not; right?

WITNESS CARBONNEAU: Right.
CHAIRMAN HONIGBERG: If that
happened, which I understand was about a month after you had had a conversation with someone out there, would that cause you concern?
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WITNESS CARBONNEAU: If what happened was something that was not covered under a permit, then perhaps that would be something to be concerned about. But I don't know that.

CHAIRMAN HONIGBERG: You'd want to know more about the situation.

WITNESS CARBONNEAU: Absolutely.
I don't know enough about it to know if that's concerning or not.

BY MS. BRADBURY:
Q. With respect to equipment anywhere along the right-of-way, Mr. Bradstreet testified that equipment will be washed down and at times produce polluted water. I don't know if you're reading the transcripts, but this was from an earlier panel, a construction panel.

So have you provided any opinions with respect to the disposal of the polluted water?
A. (Carbonneau) I have not. I'm assuming that Best Management Practices for washing down equipment that might have potential
contaminants would need to be followed.
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Q. Okay. But you haven't been asked to offer that opinion to anyone except today; right?
A. (Carbonneau) Right.
Q. Do you agree that wetlands should be avoided in the selection of the sites where they wash down the equipment?
A. (Carbonneau) Yes. Typically you would not want to wash your equipment down in a wetland.
Q. Okay. And you would agree that discarding polluted water could be -- could prove toxic to a wetland.
A. (Carbonneau) If the water happened to have hazardous materials in it, then preferably that would not be released to a wetland or a stream.
Q. Okay. Last week, in response to a question from Ms. Manzelli for the Forest Society, you noted that Normandeau did everything it could to avoid and minimize impacts to wetlands; is that right?
A. (Carbonneau) Yes. Our project design plans include a strong effort to avoid and minimize impacts wherever we could conceivably do
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that.
Q. Also, on Tuesday of this week, you noted that -- you said that every effort was -"Every effort was made to avoid and minimize impacts to wetlands." Do you remember that?
A. (Carbonneau) I don't remember my exact words, but probably something along those lines.
Q. Okay. Have you reviewed the wetlands maps provided by the Applicant? And those were dated October 8, 2015.
A. (Carbonneau) Yes.
Q. You have. Did you start, you and your people, start the effort to protect the wetlands along the 192 miles before the October 15 th wetlands maps were produced?
A. (Carbonneau) Yes.
Q. And have you -- you've been over those maps with the construction team?
A. (Carbonneau) Yes. We have offered suggestions on several iterations of plans through that period to make some modifications, and even others since then.
Q. Okay. And so on multiple occasions you have worked with the construction team, pointing
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out things you wanted them to do; is that correct?
A. (Carbonneau) The engineering team.
Q. Okay. All right. And would you say -- how many times would you say that happened, those conversations?
A. (Carbonneau) Oh, they're not necessarily in meetings. A lot of this was done by e-mail, lists of locations where we suggested shifting a road, shifting a structure if possible. So, I don't know. Four or five.
Q. Four or five --
A. (Carbonneau) Iterations I would say.
Q. So when was the last time you reviewed the maps and offered an opinion with the engineers then; right?
A. (Carbonneau) Right. Well, we've done so quite recently, actually, in regards to rare, threatened, endangered species. So as things come to our attention, maybe changes in what's happening on the ground or additional comments from an agency or from someone else who points out something, we've made changes. So the most recent ones that were submitted
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to New Hampshire DES I think went in, in January of this year.
Q. Would it be accurate to say that once those October 8th, 2015, wetlands maps were published, did you instruct the Project Team to move some of the crane pads and access roads so they would avoid more of the wetlands and vernal pools?
A. (Carbonneau) Yes, there have been those types of changes since 2015.
Q. And there are what, four or five times you're talking about?
A. (Carbonneau) Oh, I meant not four or five since 2015. I mean, in total. We've given them chunks of recommendations over the years. The most recent ones have occurred this winter and...
Q. And so six new sheets of wetlands maps dated the 19th of January 2017 were produced. Did you participate in the production of those maps?
A. (Carbonneau) We participated in the changes to the design that resulted in those plan sheets. We didn't make the plan sheets
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ourselves. But, yes, we participated in that.
Q. Is six the right number?
A. (Carbonneau) I'm not sure, actually.
Q. I've been looking. I could only find six. I'm just wondering if you know of more.
A. (Carbonneau) I don't know exactly how many sheets changed. Some were done with multiple changes on them. They may have involved wetland avoidance or vernal pool avoidance. Others were done to avoid rare plants. And I'm not sure exactly how many sheets that is. WITNESS CARBONNEAU: Jake, do you
have any idea?
A. (Tinus) I'm trying to remember. There were two submittals in December and January, so I believe there's some sheets in each follow-up submittal.
Q. So, how many?
A. (Tinus) $I$ just can't recall the exact number.
A. (Carbonneau) They are part of the record though. They've been submitted to the SEC as well.
Q. Can you tell me exactly where I might find
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them?
A. (Carbonneau) I think I can.
(Witness reviews document.)
A. (Carbonneau) I take it back. Maybe I can't.
Q. Okay. That's okay. We'll keep looking. If you find them later, is there a way you could let the Deerfield Abutters know where they are? Okay. All right.

CHAIRMAN HONIGBERG: Ms.
Bradbury, there's people over on that side of the room feverishly looking for it now. I'm guessing that there will be an answer fairly soon.

MS. BRADBURY: Okay. Okay.
We'll come back to --
A. (Carbonneau) January 25th --

MR. WALKER: We found at least one of the -- Exhibit 74. Sorry. Applicant's 74.

MR. IACOPINO: You have reinforcements coming from the back.

MR. WALKER: They're not as
feverish as we are. Exhibit 74 is the January submittal.
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MS. BRADBURY: January of 2017.
MR. WALKER: Yes. That's
correct.
MS. BRADBURY: And are there six?
MR. WALKER: And the other Exhibit is 72 , which is the December submittal, the December 2016 submittal. As far as the number of sheets, $I$ think we'd have look at the exhibits to --

MS. BRADBURY: All right.
BY MS. BRADBURY:
Q. Okay. So were those -- the ones that came out in January of 2017 and in December of 2016, are those sites relocating towers your only changes along the 192 miles of the Project?
A. (Carbonneau) Since? Since we submitted the Application?
Q. No, since -- yeah, since 2015, since October 8th of 2015. We know we have some from January of this year and we know we have some, thank you, from December of 2016. So were those the sheets that showed the only changes that were recommended for moving
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towers and access roads?
A. (Carbonneau) So far, yes. My understanding is there may be a few other sheets in progress now. But as far as being submitted, I think those are the two submittals that have the changes.
Q. Okay. If additional maps are going to be published, do you intend to render opinions on them?
A. (Carbonneau) Typically the changes that would be occurring on them will be to reduce impacts. So I think, in general, my opinion is going to be that they're favorable. If for some reason there's a change in the design that was to cause additional impacts that we were not anticipating, then I guess -- I'm not sure what you mean by "rendering an opinion."
Q. Well, I mean look at them to say, well, I really wanted them to move that farther away, or I wanted them to move it east instead of west --
A. (Carbonneau) Oh, sure.
Q. -- something like that.
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A. (Carbonneau) We do look at those plan sheets to make sure that we accurately quantify changes in impact, because we have to let -especially if they're wetland-related, we need to let the New Hampshire Wetlands Bureau know if the impact area has increased or decreased and where that takes place. That has to be done.
Q. Well, okay. Okay.

MS. BRADBURY: Mr. Chairman, the
Deerfield Abutters would like to reserve the right to speak to this panel again when we get a chance to look at those new maps, respectfully. MR. WALKER: We would object. CHAIRMAN HONIGBERG: I think we'll deal with that when it comes. MS. BRADBURY: All right.

BY MS. BRADBURY:
Q. So I'd like to go through a few maps relating to some wetlands. And I will not go through every map in the Project. I have selected a few. Okay. We'd like to ascertain whether changes have been recommended in these areas. Okay. So this is Map 689 from the
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October -- can you read the --
MS. BRADBURY: Can you bring up the key at the bottom? October 8th, 2015? MS . MENARD : Yes.

BY MS. BRADBURY:
Q. So can you see that?
A. (Carbonneau) $I$ can see the map, yes.
Q. Okay. You can see there the magenta, the solid magenta line delineates a vernal pool; is that correct?
A. (Carbonneau) It does, yes.
Q. And then you see that there's an access road right through the middle of that vernal pool?
A. (Carbonneau) Yes, that's what's shown on this plan.
Q. And you also see a dotted purple line that encircles the vernal pool that's farther out.

Do you see that?
A. (Carbonneau) Yes.
Q. Okay. Do you agree that the 100-foot line identifies a recommended distance from the edge of a vernal pool to an area of disturbance?
A. (Carbonneau) No.
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Q. So it's on the map. It shows in the key as a 100-foot vernal pool buffer. Presumably they had a reason for including that 100-foot vernal pool buffer.
A. (Carbonneau) We had a very good reason for it. It was a request specifically by the U.S. Environmental Protection Agency to quantify the area of tree clearing within 100 feet of a vernal pool so that we could quantify that as a secondary impact. It's not a state buffer. There's no buffers for vernal pools in the state.
Q. We'll get into that in a minute.

But if you're going to protect a pool, isn't it better not to have the access road running right through the middle of it?
A. (Carbonneau) It is preferable to not run through the middle of it.
Q. Did you ask for that map -- that access road to be altered in any of your discussions with the Applicant?
A. (Carbonneau) Yes, and it has been moved.
Q. So that's going to be one of the maps we're going to get soon?
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A. (Carbonneau) It's already been -Q. It's in there?

WITNESS CARBONNEAU: Is it in the works?

MS. BRADBURY: Is it in there or...

MR. WALKER: All of those maps have been submitted.

MS. BRADBURY: Okay. So we're not expecting any new maps at this point.

UNKNOWN SPEAKER: (inaudible)
MS. BRADBURY: Yeah. Yeah, that's a -- I wonder, did you submit them to --

CHAIRMAN HONIGBERG: Mr. Bisbee.
MR. BISBEE: If I may, Mr.
Chairman. These were part of the materials that were submitted to DES, one package in December and one in January, December of 2016 and January of 2017. And they were submitted to the SEC and other parties then, and they're also on our exhibit list.

MS. BRADBURY: Okay. And you can
pull it up? You can see it there on your computer? You were able to get it; right?
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MR. BISBEE: I haven't checked personally, but it is part of the package.

MS. BRADBURY: Okay. Well, we'll go looking for it.

BY MS. BRADBURY:
Q. So you've requested that it be moved. It's been moved you're telling me; right?
A. (Carbonneau) Yes.
Q. Where is it now?
A. (Carbonneau) It goes up towards what I would call on this the top of the page. I believe that's west. I'm not positive about the direction. I think that's west. And it goes sort of over around that rock ledge that you can kind of see there.

The reason it was put in the middle to begin with is just due to the constraints of the existing lines. As you can see, the current, the alignment that's shown on this plan weaves between the existing lines that are there. There's a strong preference not to drive a crane under one of the existing lines. It's very dangerous. The existing access road that shows in the background
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actually goes through the legs of one of the existing structures, so that's not a viable alternative either. But in looking at this further, the engineers have agreed that they will do whatever it takes to get that road up and out of the -- it avoids the wetland entirely, which is the green line. So it avoids the wetland and the vernal pool now.
Q. But it does make me curious that -- so there was a problem not only with the vernal pool being damaged by the access road with very heavy equipment going across it, but there was also a problem with lines overhead --
A. (Carbonneau) Yes.
Q. -- in that area. And there was also a problem with it going right near the base of the towers. So there were multiple problems with that access road there.
A. (Carbonneau) Well, there were multiple reasons why it was placed where you see it now. But they have managed to relocate it at this time.
Q. Okay. So would it be accurate to say that the -- was it the engineering team that came
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up with the first set of maps?
A. (Carbonneau) Yes, I think that's fair to say. Q. So would it be fair to say that the engineering team, when they did that, missed all those problems with this particular access road?
A. (Carbonneau) No. What I'm saying is the reason it was placed where you see it on this was because of those other problems.
Q. Okay.
A. (Carbonneau) Because of the location of the lines, as you can see, the vernal pools sort of straddle those two lines to run right between them all. It's safer than to go under the lines along the right-of-way. So that's why it was placed there in the first instance. And this is a temporary impact. It would have timber mats laid across the vernal pool and then removed later on.
Q. Okay. Well, we'll come back to that.

So would you agree that weight and
frequency of passage of heavy equipment plus the matting that would have to be placed down, because those yellow areas with the
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dots indicate matting --
A. (Carbonneau) Yes.
Q. -- that the weight of the mats and the equipment in and near wetlands, including vernal pools, is going to cause significant damage?
A. (Carbonneau) No, I disagree with that. Timber mats are just --
Q. Okay. Let's assume we have a 200,000-pound construction crane and whatever number of mats are necessary and -- did I hear you say you don't think that will be damaging, causing significant damage to a vernal pool?
A. (Carbonneau) That's correct.
Q. Okay. Well, I have some other stuff.

So, well, would you agree with me that undergrounding the Project entirely along existing transportation corridors would cause less damage to wetlands?
A. (Carbonneau) I would say that's probably likely if it was in the road, already disturbed roadbed.
Q. Yes, I should have said "already disturbed roadbed." Absolutely. Thank you.
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So are you familiar with the document, "Good Forestry in the Granite State," published by DRED, Division of Forest and Lands?
A. (Carbonneau) I'm familiar with it. I don't know it all by heart, though.
Q. Can't recite it for us? It's only about 250 pages.

All right. So I'm going to -- so would you agree in that publication, when they say that vernal pools are unique wetlands that provide critical habitat for several amphibian and reptile species, would you agree with that?
A. (Carbonneau) Yes.
Q. Okay. Would you also agree that vernal pools offer essential habitat, but it's also the forest surrounding the vernal pool that's important?
A. (Carbonneau) Yes, the surrounding habitat is also important for those species.
Q. Okay. For example, would frogs, salamanders -- they breed there; right, Ms. Barnum?
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A. (Barnum) Frogs and some species of salamanders, yes.
Q. And they spend -- they breed in the vernal pool, but they spend more than 11 months of the year in the forest nearby; correct?
A. (Carbonneau) Yes, that's generally true.
Q. Okay. And would you agree, when DRED noted that juvenile wood frogs and salamanders, some species of salamanders, may disperse to vernal pools as far away as a half a mile to several miles away from the vernal pool where they were born, would you agree with that?
A. (Carbonneau) I think that's possible, yes.
Q. Okay. And would you agree with them when they say that these movements maintain genetic variability and they recolonize sites where the local amphibian populations are gone?
A. (Carbonneau) I would say that's possible.
Q. Okay. So can we --

MS. BRADBURY: Jeanne, can I get the Sheet 658? Oh, you know what? Before we get to 658, Jeanne, I want to go back. I'm doing what you did. Can we go back to Map 657,
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one of those that you have there?
BY MS. BRADBURY:
Q. Okay. So you see we got a sticker on there. Do you see that that wetland, which is easy to see because of the yellow with the red dots, that that wetland could be avoided by shifting that crane pad over to the west a little bit to the left?
A. (Carbonneau) Well, the crane pad needs to surround where the new structures are going, which the legs of which are indicated by red dots. So it can't completely avoid that wetland by being shifted. And I don't know if the construction team could even erect that structure if it were shifted substantially to the left.
Q. Really? So the moving of the tower -- could that tower not be moved a little bit over to the west to avoid that wetland? It couldn't be done?
A. (Carbonneau) I don't know if the tower itself could be moved without other ramifications. There's a lot of things that go into the location of a tower. In some cases, moving
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them requires them to be taller because of the terrain or the span that they have to --
Q. Understand. Is that one of the wetlands that you asked them to move the towers a little bit? Because it wouldn't take a very big distance to get away from it.
A. I don't recall specifically if this was one.
Q. Okay.

MS. BRADBURY: Let's go to the next map. That would be 650 .

BY MS. BRADBURY:
Q. Okay. So there you see another crane pad and a tower of course associated with it.

Was there a request to the engineers or the map producers to shift that a little bit over to the east, to the right, to get it out of that wetland there?
A. (Carbonneau) I don't know specifically. We did have conversations with them to minimize impacts to wetlands wherever they could. If it was not something that we specifically brought up to them, we asked them to do that. Again, they likely had a very good reason, but I couldn't tell you exactly what it was
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in this particular structure as to why it is where it is.

But again, those are temporary impacts associated with a construction pad, which in a wetland would be timber mats --
Q. Right. But with --
A. (Carbonneau) -- and if during the construction the contractors are able to tweak the size of the matting or to, you know, not have it exactly to be a square -we have to make some assumptions during the design plans -- then they will do that. And whatever minimization can be accomplished in the field will also be done and documented.
Q. So you're pretty sure that you did not ask them to move it over to the east a little bit?
A. (Carbonneau) I didn't say that. I said I can't recall --
Q. You can't recall.
A. (Carbonneau) -- specifically on this particular structure.
Q. Okay.
A. (Tinus) And can I add something? In this
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particular location, $I$ believe this is a location where you have a steeply sloped terrain to the right and that was a limiting factor. You have these situations that occur where you're trying to balance all of the things. And Lee mentioned a couple of them. Raising a structure height brings up other issues --
Q. Yes, but it was Ms. Carbonneau that had said repeatedly that the environmental team did everything you could to avoid and minimize damage to wetlands. I'm just trying to explore whether that was everything you could do to avoid and minimize the damage to the wetlands we've been looking at this afternoon. And we know it's steep. And we have seen that you guys can -- well, not you guys, but the construction team can build in pretty steep areas. We have seen that again and again.

MS. BRADBURY: Okay. What number

## is that?

A. (Tinus) And I think $I$ would just add, in this case, because it is where it is, in
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reflection of the steep slope there, the best bet for potentially minimizing this would be to reduce that crane pad size. But that's ultimately up to what the contractors can determine in the field, if they have enough room there to work off. But that is an ongoing effort that will continue.
Q. And will the landowners and other participants in these proceedings get an opportunity to see those new mats if it's ongoing and there will be -- are you saying that there will be new mats produced or not?
A. (Carbonneau) We are required to document very carefully what the impacts are associated with the Project during construction. When I say "we," I mean the Applicant. So one of the requirements of New Hampshire DES in the permit conditions of their approval is that we continue to, during construction, identify locations where the impacts are different from what is shown on the plans. And in most cases this is going to be a reduction. We use some conservative estimates on the size of the matting and the location of the
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matting and the width of the access roads to make sure that we didn't have to run back to them for every 2 square feet of additional impact. So if that can be done, and whether there's a shift in the location of the impact, that all has to be documented to New Hampshire DES. It's a requirement. And they'll be expecting that report.
Q. They will, but we won't get to see that; is that right?
A. (Carbonneau) I don't see why not. I mean, it's a public agency. And to the extent that any of our reporting to DES is available to the public, it's certainly available to the public.
Q. So is that -- will there be a notice that the new ones have come out --
A. (Carbonneau) I have no idea.
Q. -- so that we would know when to go ask for them? Or is that something we should ask for once a week or once a month?
A. (Carbonneau) It's a requirement of the construction process. So, assuming once construction is done, an as-built plan set
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showing where any changes occurred is available, that's when it would become available.
Q. But my question is how often do you suggest we go and request the DES provide us with that information? How often do you suggest?
A. (Carbonneau) I believe they're requiring us to report this every six months or quarterly. I can't recall exactly what the permit conditions says. But it's so they can also track and make sure that the mitigation is sufficient for any impacts on the Project. So, during construction, I would say at least every six months there will probably be some kind of documentation sent to New Hampshire DES. So I would say you can check with them every six months after construction begins.
Q. Okay. Six months after construction begins, do you think there's a chance we could get a tower moved?
A. (Carbonneau) If you have -- if you know that there's a tower that you want to have moved now, I would suggest you don't wait until construction starts.
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Q. Okay. Thank you. All right.

MS. BRADBURY: So, Jeanne, could
I get -- now going back to Sheet 658.
BY MS. BRADBURY:
Q. This is the high-quality vernal pool located in Deerfield, just east of Thurston Pond Road. And that has been moved. According to Mr. Bowes, the tower is now being moved to the west. Do you know precisely where?
A. (Carbonneau) I don't.
Q. What about the access road and the right-of-way? Will that remain immediately adjacent to that vernal pool on the left bank, left southern bank of that vernal pool?
A. (Carbonneau) I have not seen the redesign of a new structure location here. This reflects a shifting of the work pad.
Q. Yes.
A. (Carbonneau) So I have not seen a new plan yet.
Q. Okay. So if they -- so we don't know whether that access road is going to be moved. And right now, that access road is within inches of that vernal pool, the edge of that vernal
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pool; right?
A. (Carbonneau) I don't know if I'd say inches. It's very close to the edge of the vernal pool.
Q. Okay. I'll take that. All right. And you don't know if it's going to be moved.

Okay. So if it's not moved, Northern Pass will have excavation and heavy construction equipment weighing as much as 200,000 pounds within a few inches or right next to the vernal pool; correct?
A. (Carbonneau) Yes.

MS. BRADBURY: Okay. So, Jeanne,
can I get the pictures, No. DA 71 and 72.
(Discussion off the record)
BY MS. BRADBURY:
Q. Okay. So Jeanne's putting up a picture of that very vernal pool, okay. That's Deerfield Abutter 71. That's looking west. You can see the power lines, existing power lines?

MS. BRADBURY: And now let me have Deerfield Abutter 72, the next picture, Jeanne.
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BY MS. BRADBURY:
Q. And you see that's just also looking west, down at the end of the vernal pool. And that is right where that access road is showing on the wetland map we were just looking at, right there where those pieces of wet area are.

So would you agree that construction equipment running through there, even though the tower's been moved and the pad has been moved, that the construction equipment running right through there will cause ruts in the soil and will compact that area right next to the vernal pool? Would you agree with that?
A. (Carbonneau) Not if timber mats are used in that location.
Q. Wouldn't timber mats, the weight of the mats plus a 200,000-pound crane compact it?
A. (Carbonneau) Possible. I don't know for sure. But if they do compact it, then regrading would happen to try to uncompact it. So there may be a minor amount of compaction, but it would be difficult to
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|  |  |  | 54 |
| :---: | :---: | :---: | :---: |
| 1 |  | tell. Typically the timber mats really do a |  |
| 2 |  | very good job of spreading the weight around. |  |
| 3 | Q. | Well, it can't spread it to the right, |  |
| 4 |  | looking at that photo, because that's the |  |
| 5 |  | vernal pool, where the main body of that |  |
| 6 |  | vernal pool is. So it's got only one |  |
| 7 |  | direction, and that's off to the left. So |  |
| 8 |  | that timber mat is not likely to truly |  |
| 9 |  | protect that vernal pool, is it? |  |
| 10 | A. | (Carbonneau) As I recall, looking at the |  |
| 11 |  | other map, that showed the access road did |  |
| 12 |  | not cross the wetland either, so my |  |
| 13 |  | understanding is that little point there, |  |
| 14 |  | that the wetland mat is going to be |  |
| 15 |  | further -- or the access road is going to be |  |
| 16 |  | even further away than what's shown in that |  |
| 17 |  | photo because it's avoiding the wetland as |  |
| 18 |  | well. So it's going to be in the upland area |  |
| 19 |  | where you see trees are being cleared. |  |
| 20 | Q. | Okay. So they are going to move that access |  |
| 21 |  | road. You're sure of that now. |  |
| 22 | A. | (Carbonneau) I'm telling you that the way the |  |
| 23 |  | access road is shown on this plan, it does |  |
| 24 |  | not go through that wetland at all. Not the |  |

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vernal pool or the wetland.
Q. You see that it goes right next to the vernal pool.
A. (Carbonneau) It goes right next to the wetland line at that point. I think what the photo showed was that little point, that wetland that extends beyond the magenta vernal pool line, and that's where you saw those ruts.
Q. Okay. So --
A. (Carbonneau) You can almost see them on this aerial photo as well. The access road that is proposed for this project is not going to follow that route. It's going to be further into where the trees are now. Those trees will be trimmed.

MS. BRADBURY: Okay. Jeanne, could I have DA 63, which is "Good Forestry in the Granite State," Page 4.

CHAIRMAN HONIGBERG: Off the record.
(Discussion off the record)
CHAIRMAN HONIGBERG: Thank you,
Ms. Bradbury. You may continue.
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MS. BRADBURY: Down at the bottom of that page, Jeanne, $I$ want the bottom starred bracket.

BY MS. BRADBURY:
Q. Can you take a look at that bottom starred bracket? This is in the DRED document, "Good Forestry in the Granite State." They're discussing vehicle ruts next to a vernal pool.

Do you agree that ruts at any distance from a pool can cause breeding traps for amphibians? You'd agree they're concerned about ruts any distance from a vernal pool.
A. (Carbonneau) I see that's what it says. In our experience, we've actually found some ruts that are in the North Country from logging operations that are pretty substantial, and they actually function as pretty good vernal pools.
Q. Okay. Well, DRED is concerned about it. And you agree --
A. (Carbonneau) Yes.
Q. So do you disagree with them? Or you think --
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A. (Carbonneau) I don't disagree with them --
Q. -- because they didn't add the qualification to their --
(Court Reporter interrupts.)
CHAIRMAN HONIGBERG: Both of you,
one at a time. I know you're thinking conversation. Think question and answer, not conversation right now.

BY MS. BRADBURY:
Q. DRED didn't qualify it, did they?
A. (Carbonneau) Well, they did say, "most ruts dry too quickly."
Q. Yeah. Okay.
A. (Carbonneau) Ruts can reduce the length of time.
Q. Right.

MS. BRADBURY: So can we turn to
Page 5 of that document.
BY MS. BRADBURY:
Q. This is still the DRED document, "Good

Forestry in the Granite State." And if you
look at -- would you read the two starred -the double-starred, not single-starred, I'm not doing that one again, the two
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double-starred, checked, bracketed areas.
A. (Carbonneau) "Within 200 feet of a vernal pool, limit the activity of heavy equipment. Locate main skid trails and truck roads outside this buffer."
Q. Okay. So, given DRED's recommendation of limiting the activity of heavy equipment within 200 feet of a vernal pool, 200, wouldn't you agree that keeping heavy equipment at least 100 feet away from a vernal pool would be a good idea?
A. (Carbonneau) Well, under normal
circumstances, I would say yes. But
construction on this project, the access to these construction areas has to be limited to the right-of-way unless permission from a landowner to go outside of that right-of-way is granted. Particularly in the case of the map that you showed, there's really no way to get past that vernal pool and be 200 feet away. So the options are limited. I'm not saying it's not aspirational to do that. But in this situation, it's just not possible.
Q. Well, I think we've found something we can
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agree on: That vernal pool is in the way. Okay. I got -- are you familiar with a situation where when blasting occurred a basement filled with carbon monoxide?
A. (Carbonneau) I'm sorry. No, I'm not familiar with that.
Q. All right. That's all I have. Thank you.

CHAIRMAN HONIGBERG: Mr. Cote, why don't we have you go for a bit and then we'll take a break.

MR. COTE: Robert Cote, Deerfield Abutters. And Dawn, could you please turn on Apple TV? My questions are mostly intended for Mr. Tinus.

CROSS-EXAMINATION
BY MR. COTE:
Q. Welcome back. And the subject for most of my questions is the EPA stormwater permit for construction activity. Do you see the exhibit that I have up here?
A. (Tinus) Yes.
Q. And you agree that it's a National Pollutant Discharge Elimination System Permit?
A. (Tinus) Yes. This is the most recent permit
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that came out, on the $16 t h$.
Q. Okay. And with relation to construction activity, what would you -- how would you explain what "discharge" relates to in the context of this permit?
A. (Tinus) Construction-related discharges.
Q. Stormwater?
A. (Tinus) That's right.
Q. Okay. And in the case of construction activities, what would typical pollutants be that you might encounter?
A. (Tinus) Typical pollutants in stormwater would be potentially eroded materials from exposed surfaces.
Q. Okay. Going to look at this. It's Deerfield Abutter 99. And this is from the Notice of Intent, which is essentially the Application for coverage under the stormwater permit.

Does it look familiar?
A. (Tinus) Yes.
Q. And I realize you'll be submitting this electronically and not in paper format. But if you look at this document, at the upper left you see the column that says "Point of
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Discharge"?
A. (Tinus) Yes, I do.
Q. Okay. How many discharge points do you anticipate itemizing when you -- when the NOI is prepared?
A. (Tinus) I don't know. It hasn't been done yet.
Q. Do you have any rough idea?
A. (Tinus) I do not. The contractors are going to be preparing all this information. They will be filing the Notice of Intent.
Q. Going to bring up... this is Applicant's
Exhibit 1, Appendix 2. And I'm looking at what I've highlighted, the number of water bodies along the route of the Project. And you can see there's -- if you include all categories, there's over 2,000 water bodies along the route of the Project. And if the water body intersects the right-of-way, it would have two boundaries. Each water body could essentially have as many as two boundaries with upland areas adjacent to the water bodies. Do you agree?
A. (Tinus) Sure. Yes.
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Q. And if there's construction activity occurring adjacent to those water bodies and storm events occur, you would likely have runoff into the adjacent water bodies. Is that accurate?
A. (Tinus) You would if you didn't have Best Management Practices in place. The contractors are going to be required to manage stormwater by using various BMPs: Silt fence, straw waddles, diversion dams, temporary settling basins and the like.
Q. But are you saying the Best Management Practices are going to eliminate all stormwater runoff?
A. (Tinus) That's the goal.
Q. Could you explain to me how a hay bale will provide an impervious barrier to stormwater?
A. (Tinus) A hay bale is probably not the best choice. There's other technologies out there. It depends very much on the local conditions, the soils, the topography, the amount of precipitation that's expected, infiltration capacities of the soil, various technical properties. The selection of the
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Best Management Practices will reflect the local conditions.
Q. Isn't a silt fence designed to allow stormwater to flow through it and retain the sediment?
A. (Tinus) There is some passage through it. But the primary purpose of a silt fence is to stop the water from flowing across an area and allow the suspended solids to settle out.
Q. Do you agree that in submitting the Notice of Intent there may be potentially thousands of discharge points that you would need to identify?
A. (Tinus) That number is high. And in terms of discharge points, what you're trying to do in managing stormwater on a site is an active process. You're trying to break up the flow pads of stormwater. You're trying to contain it in small areas. You're trying to keep it from getting to a receiving or near water body or wetland that may be nearby. Ultimately it's dependent on that. And then it's also dependent on the permanent structures that you'll have in place at the
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facilities, the substations and the like where we're building detention basins, infiltration basins, grassy swales to treat the stormwater in more localized conditions.

But the first thing that I mentioned is the active part of construction. So you're trying to keep soil surfaces stabilized by mulching appropriately or getting grass to grow as quickly as possible after you're done working in that area and, as I said, employing various BMPs to keep stormwater from moving in the first place.

So whether or not there's thousands of those kinds of points where water could potentially reach another area, $I$ just don't know at this point. Those areas will be determined and included in the SWPP prior to filing the Notice of Intent. We do know where all the wetlands and streams and all those other features that you referenced are, so that's a good starting point.
Q. Okay. I'd like to stay on the subject a bit. This is an area of the right-of-way in Deerfield. And it's a little bit hard to
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see, but in the center of this photo you can see a little structure. And here's a better view of it. This is Deerfield Abutter 100, by the way, Exhibit 100. So, this being in the right-of-way, would you, for example, consider this a discharge point that would need to be identified and listed as part of your Stormwater Application?
A.
(Tinus) Yes, if it's directly draining to that wetland as you indicated, and it appears as though it probably emerges on the other side, then sure. Contractors need to be aware of that, and we need to have that shown, you know, in the plan, and then it will be decided what the appropriate measure is in that location.
Q. This is Pemi Exhibit 21-3, courtesy of Barry Draper. This is a segment of the right-of-way up north. I'm not sure exactly where, but it's part of their exhibit. You see a little bit of running water on the right-of-way. This is right after a storm. Normally that's dry. So that's only flowing when there's -- after a storm event or during
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a storm event. Would you consider this a discharge point that would need to be identified?
A.
(Tinus) To the extent that it collects drainage from an active construction area, yes. And to the extent that's within the Project area, yes.
Q. Okay. This is Deerfield Abutter Exhibit 34, just a slightly different situation. This is actually our property. This is during construction earlier this year. And I'll get back to this later.

But you can see that there are ruts created here. And those ruts, if you turn around, go right down into a wetland.

Would you agree that if it rains and water runs down that slope into a wetland, that that would be a discharge point that would be subject to the permit?
A. (Tinus) Perhaps, although this is less apparent to me. You know, I don't know the direction. The other photo you could see directly from the point of the stream looking up the hill. But here I don't know if what's
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behind it drains down to this area. So it's hard to tell I guess is what I'm saying.
Q. Okay. Do you know at this point who actually will be developing the Stormwater Pollution Prevention Plan?
A. (Tinus) Yeah, the contractors are going to be responsible for doing that, their environmental folks.

Earlier this year I sent a letter to Mr. Pelletier of DES asking for clarification on an item in their approval letter. I
should probably shift back to that. But let me just look at this while I've got it in front of the group. It says Item 12 of the DES approval letter requires turbidity sampling, and with respect to this requirement, please clarify at what points along the path of the Project did they intend for that requirement to apply. See if $I$ can find...

So here's... this is the NHDES March 1st of this year approval or recommendation that the Project be approved. And there is a condition for turbidity sampling. Are you
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familiar with that?
A. (Tinus) Yes, I am.
Q. And at what points do you think -- what points do you think that that requirement is intended to address, as far as sampling locations?
A. (Tinus) That hasn't been thought out. Again, the contractor is going to be preparing these plans. And as you can see, they're due 90 days prior to construction. So, exactly where and the frequency of the sampling has not been determined yet.
Q. Are you familiar with the guidance for SWPPs, the yellow highlight?
A. (Tinus) I am.
Q. Where is that available?
A. (Tinus) If you contact Greg Comstock at DES, he can probably send you a copy. I believe it was published on the web site, too, if I'm not mistaken.
Q. I did an extensive search actually for it but couldn't find it.
A. (Tinus) Maybe it was DOT. Maybe it was DOT's web site. Did you check there, too?
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Q. I did look there also, yes.

So those sampling locations -- let me just reconfirm. The sampling locations are still pending, so we don't know really what that plan is intended to address at this point; correct?
A. (Tinus) That's correct. The locations haven't been determined. And they need to be approved by DES, so...
Q. Now, this is Deerfield Abutter 33. It's a page from the Construction General Permit. And you see here that there's a requirement to post a Notice of Permit Coverage. And the notice is to be located so that it's visible from the public road nearest to the active part of the construction site.

How many notices do you anticipate will need to be posted?
A. (Tinus) I don't know. I haven't really thought about that. This is a new requirement that the EPA just put into this generation of the five-year permit. But we haven't thought where those will be located yet -- the contractors haven't.
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Q. Okay. This is Applicant Exhibit 97. It's your Supplemental Testimony. And do you see the yellow highlighted text?
A. (Tinus) Yes.
Q. So I'm going to go back to that reference in the DES March 1st letter, Condition No. 9. And the statement says that Condition No. 9 requires that Northern Pass submit the SWPP to DES. Doesn't it say there "if requested"? (Witness reviews document.)
A. (Tinus) Yes, but we were asked to produce a copy to DES. We were asked to give DES a copy.
Q. Okay. It says Condition No. 9 requires it. But that's not exactly what it says there, is it. But you're saying they have requested it.
A. (Tinus) They did request that we provide them with a copy.
Q. Okay. Does it say "at least 90 days prior to commencing construction activities"? Because the DES letter looks like it says "7 days of receiving a request." Just wondering where that --
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A. (Tinus) Well, it's not prepared. So what they want you to do is provide it within 7 days. If they request a copy of it, when it's been prepared, then they'll get it within a 7-day time frame.
Q. So where is the 90-day requirement in connection --
A. (Tinus) That was a verbal request -(Court Reporter interrupts.)
Q. Where is the 90 -day requirement in Item 9 of the DES letter?
A. (Tinus) It doesn't state that there. That was a verbal requirement -- or request of me.
Q. Are you familiar with the requirements for what needs to be included in a Stormwater Pollution Prevention Plan?
A. (Tinus) Yes.
Q. So if you take my... just flip through this quickly, just to show that -- this is Deerfield Abutter 33, by the way, and it's an excerpt from the Construction General Permit. But there's six pages of content. Would you say that the requirements are relatively comprehensive?
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A. (Tinus) Indeed.
Q. And this is also from the Construction General Permit. And you can see from the highlighted text that, in designing stormwater controls there are quite a few factors to consider, including the likelihood of precipitation events, the characteristics of the drainage area that the work might be occurring in, how large an area is being drained, what kind of soil conditions there are, the gradient.

So would you say that for most areas of the site that the controls that are being designed to implement Best Management Practices are very specific to the different locations along the route?
A. (Tinus) I would say there's specific
locations, but there's some commonalities in conditions. So you may see a lot of silt fence used or a lot of straw waddles used or
a particular measure because it's
appropriate for a variety of conditions.
Q. But isn't it true that there are -- if you go, for example, to the New Hampshire
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Stormwater Best Management Practices Manual, you will see quite a few different options of management practices identified.
A. (Tinus) That is true.
Q. So my follow-up question is maybe a little more for Lee, that there's still a lot of specificity that needs to be developed. I mean, for example, the discharge locations haven't even been identified at this point in time, let alone the specific controls that will be used to manage the water where potential discharges are coming from.

So could you explain how in the absence of that kind of information that you're comfortable finding that the Project doesn't represent an unreasonable environmental impact?
A. (Carbonneau) I think the quantity of information that we have submitted at this point is more than sufficient to address what we expect the impacts to be. And I think there's plenty of information about where erosion and sedimentation controls are expected to be needed. It's on the current
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permitting plans.
I would say that there are some things like the SWPP, which is typically not submitted until the contractors are on board, that will probably add a little refinement to the information that's already submitted. But that's very standard practice, and I don't think that it's unusual. I think, in fact, it's expected that when a project comes before the SEC, there are some minor details that still need to be worked out. That's very typical in the permitting process. And I don't think there's a lack of information upon which decisions need to be made.

I also don't think it's acceptable that the SEC relies in part upon the decisions made by the state agencies, the experts in water quality, for example. And we have received approval from New Hampshire DES for the 401 Water Quality Certificate and the Alteration of Terrain. They clearly had sufficient information to make decisions on this project.
Q. Do you think that a 197-mile project is a
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typical construction project?
A. (Carbonneau) The length may not be typical, but the techniques that are being proposed and the actual construction activities are quite typical.

CHAIRMAN HONIGBERG: Mr. Cote, let me know when you get to a break.

MR. COTE: I'm probably about five or ten minutes from being finished.

CHAIRMAN HONIGBERG: Promise?
MR. COTE: I think it will be pretty close to that.

CHAIRMAN HONIGBERG: Okay. Go ahead.

BY MR. COTE:
Q. I would like to come back to the question of Best Management Practices. And as I said earlier, this is -- it was an insulator replacement project on the existing 115 kV line. This is a steep slope leading down to one of the wetlands in Deerfield.

Would anybody like to comment on whether they think appropriate Best Management Practices were used?
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A. (Tinus) Again, I think I commented on this previously. It's kind of hard to tell what's going on with snow on the ground and vegetation that's been run over. Looks like it's a slope that leads from the roadway down to, you know, a lower point. But other than that, $I$ don't know what else to say about it. I mean, you truly need to look at these places in the field, to your early points.
Q. Can you tell that this is a vehicle that drove into a wetland?
A. (Tinus) It looks like there's tire ruts there, sure.
Q. So my question is: It's one thing for somebody to develop Best Management Practices, you know, in an office, and it's another thing for a contractor to actually follow them. How do you respond to that difficulty?
A. (Tinus) Well, I would just say, as we've said many times over, there's going to be comprehensive oversight of the Project with established environmental monitors and teams from the contractors, teams from Eversource.
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And I'm sure there's going to be other folks out there looking as well.
Q. So I think this is a question more for Lee, or possibly Ms. Barnum, Dr. Barnum. This is Applicant's Exhibit 3, the wetlands map. And this is the wetland in Deerfield. You can see right near the center of the photo there's sort of a tan square or diamond that represents an existing -- the existing 100 [sic] kV line. Do you see that?
A. (Carbonneau) Yes.
Q. And then it's kind of hard to see, but the purple line just to the left of the "G" is where that line is going to be relocated. Can you see that?
A. (Carbonneau) Yes.
Q. And that pad, that construction pad, it's in a wetland. It's about 100 by 100. So I'm guessing that pole is moving about 30 feet to the north, which would be up in this photo, and about 70 feet to the east, which would be towards the right. Do you see that?
A. (Carbonneau) I can't confirm your numbers, but that sounds about right.
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Q. So here's a photo of that area. And right in the center of the photo you see the existing pole that's going to be moved. So it will move left about 30 feet and away from this picture about 70 feet. And the construction panel's already seen this. But you see the beaver lodge right there?
A. (Carbonneau) I do.
Q. Did you advise the construction group that that's probably not a good location for a pole?
A. (Carbonneau) I did not discuss the beaver lodge specifically with them. However, they do have a little bit of flexibility in the field to shift a structure location by a couple of feet without necessarily impacting the design, and if that's appropriate then they will do that.
Q. If the construction pad is approximately 100 feet by 100 feet, wouldn't that impact that lodge?
A. (Carbonneau) That's possible. If they do the work in the winter, they may be able to avoid that area somewhat by shifting the work pad.
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But I don't have -- you know, obviously nobody wants to kill beavers in the middle of the winter when they're vulnerable and in their dens. So this is, you know, the kind of flexibility that the Project may need to minimize impacts in the field and make slight revisions here and there either to the access routes or the work pad locations or even a small shift in the structure location.
Q.

During our cross-examination of the construction panel -- and just to keep to my ten minutes, which I'm running close to, I won't bring up the transcript. But the construction panel indicated that between relocating that existing -- this existing line, disassembling it, moving it and putting up Northern Pass, that construction in this wetland could span from the start of one construction season to the end of another, the next construction season, which would be about an 18-month period. And so the question arose of what happens to their temporary access roads and this wetland if construction is going to be active in an area
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like this for 18 months.
A. (Carbonneau) Well, typically the construction matting across the wetland would not be left for the entire construction period. To the extent possible, they will be placing mats down in the winter, if they can do work during the winter, and then removing them and then placing the mats down again when they next have to do the next phase of construction. So there's typically some site preparation work that takes place and then they move on somewhere else. And then they will need to do, you know, foundation-related work, and then they'll move on. And then they have to put the structures in, and they'll move on again. And eventually they get to string the conductors. So, in between those work efforts, wherever possible, they will remove timber matting from wetlands, or whatever mechanism they're using to cross it, so that they don't have that material down. In fact, they need to re-use it typically in another location. So the mats would not necessarily remain in place during the
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duration.
Q. But they might remain in place?
A. (Carbonneau) I think it's unlikely. But it's not my call.
Q. Okay. And there's been some discussion about turtles. And if Blanding's turtles were present in this area and the mats were placed -- you can see this is late winter, and it's still not -- it's already -- the ice is definitely not stable enough for equipment to be sitting on top of it.

Would overwintering turtles in this
wetland possibly be crushed under mats?
WITNESS CARBONNEAU: You want to
take that?
A. (Barnum) Yes, that's a possibility. There's no practical means of locating overwintering turtles in the muck or relocating them, if you could locate them.
Q. That concludes my questions. Thank you. CHAIRMAN HONIGBERG: All right.

We'll take a ten-minute break.
(Brief recess was taken at 3:12 p.m., and the hearing resumed at 3:30 p.m.)
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[Mr. Varney not present for remainder of hearing.] CHAIRMAN HONIGBERG: Before we resume with the intervenors, we're going to have questions for Mr. Magee from the Committee so we can finish Mr. McGee's questioning, and then he shouldn't have to come back at that point. Make sense, Mr. Walker?

MR. WALKER: Yes. Thank you for that accommodation.

CHAIRMAN HONIGBERG: I know that
Mr. Oldenburg had some questions for Mr. McGee.
WITNESS MAGEE: And again, thanks for the accommodation. Appreciate it very much. INTERROGATORIES BY SUBCOMMITTEE MEMBERS

BY MR. OLDENBURG:
Q. There's just a few. Not very complicated either. But I figured you're there, I'll ask you questions.

So, of the plants that are on the state threatened or endangered list, however that is, that doesn't necessarily mean that they're on the verge of extinction; correct?
A. (Magee) No. Many of these plants that are on the state threatened or endangered lists
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oftentimes are due to a range extension, due to maybe not a lot of population distribution within state. There's various reasons. But it doesn't mean they're imminently in danger of extinction or anything like that.
Q. So that was actually my second question was the range. So it's possible that one of the plants that we talked about that was endangered, this is the fringe of its range in New Hampshire.
A. (Magee) Right.
Q. Are any of those that were listed that we talked about earlier?
A. (Magee) Solidago odora, the licorice goldenrod, and the Aristida, the threeawn grass, these are known from other locations. You know, they're not as well known in this state because the numbers are perhaps diminishing due to habitat changes and whatever. But they're certainly abundantly known throughout the region.
Q. And my last question is, of the plant species that you studied along the corridor, was there one in particular that you're most
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concerned about that could be impacted by the Project?
A. (Magee) More concerned than others. But I believe that with the avoidance and minimization measures and with the monitoring that we're going to be doing and with the corrections that will be made if necessary that these aren't going to be long-term impacts.

MR. OLDENBURG: That's all I had. CHAIRMAN HONIGBERG: Ms.

Weathersby.
MS. WEATHERSBY: Thank you.
BY MS. WEATHERSBY:
Q. There was an assertion by I believe someone in Franklin that there may be an endangered species of plant in the area of the Franklin terminal. Was that looked into, and was anything found?
A. (Magee) Do you recall what it was that they thought might be in the Franklin --
Q. I can, but $I$ would have to put it into -- I think it's a confidential --
A. (Magee) And also, I question whether it's
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truly a state threatened or endangered, or is it simply a listed species? Is it a watch or an indeterminate species?
Q. Ms. Carbonneau, it looks like you might have some insight here?
A. (Carbonneau) I recall that someone mentioned that. And I have not seen anything specific since then. Certainly if someone had some information that we could review, we would be happy to go out and do that. But I have not received anything specific about what that was and where it was.
A. (Magee) Because it makes a big difference if it's a small whorled pogonia that's federally listed or if it's one of the state-listed species --
(Court Reporter interrupts.)
A. (Magee) If it's a federally-endangered species that makes a big difference as opposed to a even if it's a state-listed, threatened or endangered species, that means something. If it's a state watch or indeterminate species, that has another status. So, knowing what it is is important
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to answer the question.
Q. And Ms. Carbonneau, I think you know the plant I'm referring to. Can you tell him what category that falls into?
A. (Carbonneau) I don't. I don't even know what the plant was.
Q. I think where I found this, actually, was in a letter from Normandeau in response to this person's concern. And it said that, you know, they were going to look into it or something. I can find that letter. I just didn't know if it had been looked into and if anything was found.
A. (Magee) We've looked into any lead that we have. First of all, we went with the NHB listings of element occurrences. We investigated every right-of-way segment that had a right-of-way -- that had an element occurrence within a mile; the federally-listed species we looked into within 5 miles. And so this included watch, indeterminate, threatened and endangered species. So, yes, any records of occurrence we had, we made a thorough search.
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A. (Carbonneau) But if this was brought up by someone else, I don't recall specifically. And I have a vague recollection of this, so you may be right. And we probably responded that, you know, we would be happy to look into it. I'm not sure if we got any more specific information to help us with that search, so $I$ don't recall that we actually went out in the field after that. But this was some time ago.
Q. I think what I'll do then, I'll try to find that letter and then ask you, Ms. Carbonneau, about it later, and we can specifically look at what I'm looking at --
A. (Carbonneau) Perfect.
Q. -- and follow up rather than me trying to remember.

CHAIRMAN HONIGBERG: Commissioner Bailey.

BY MS. BAILEY:
Q. Mr. Magee, if the line were buried under a wild lupine patch, would that harm the root system, or would that avoid the patch?
A. (Magee) I think it would perhaps, from what $I$
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understand about burying, the burying process, it would be very well below the rooting surface. The rooting surface is fairly near the surface of the ground, and so if it was buried under the ground, if it was tunneled, then that would certainly be well under the rooting system zone.
Q. Okay. And is it possible to dig up a lupine patch and move it someplace else?
A. (Magee) I don't have any direct experience with transplanting lupine, but $I$ know it's a hardy species. It does well in open, disturbed conditions. And my initial reaction is that it would do well.
Q. So why wouldn't you do that to avoid a wild lupin? Well, it wouldn't avoid the wild lupine patch, but $I$ guess it would mitigate it?
A. (Magee) I think we are in the mitigation area, we are seeding and planting lupine.
Q. You're seeding. But I didn't hear anything about digging up existing lupine and moving it.
A. (Magee) Yeah, the NHB didn't -- we talked
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about transplanting. And at this point, the NHB said let's not think about that yet. Let's consider this during the two-year monitoring period that we have. If necessary, we'll do something like that. But they didn't jump on that right away.
$Q$. Do you understand why?
A. (Carbonneau) I don't. I do know that lupine don't transplant very easily. I think they have a pretty long tap root. They're not that easy, I don't think, to transplant. But I think they are also somewhat adapted to disturbance. And so having construction activities in the right-of-way isn't necessarily a bad thing in all cases for lupine. By scarifying the soil a little bit, it allows the seeds to germinate, can actually help the population in some locations. National Heritage Bureau would prefer that we do to the construction and then monitor afterwards, see how the plants regenerate. And if they're not satisfied that the population is rebounding
sufficiently, then they would consider -- we
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would need to go back and discuss with them what other options should be done. It could just be more monitoring, it could be bringing in seed from somewhere else, but transplanting was not their choice.
Q. And is there somewhere in the record that you can refer me to that has correspondence from them, from the bureau?
A. (Carbonneau) I don't know that we have anything that specifically says "don't transplant," but we did work out the avoidance and minimization measures with then. So $I$ know we threw out options like bringing in -- collecting seed and then reseeding afterwards. And we discussed that with them. I don't know if the meeting notes specifically go into detail. But that was not something they wanted to do.

So what we do have for the avoidance and minimization measures that are on the plan set that were submitted in December or January, this past winter, reflects what the Natural Heritage Bureau wanted to see. They reviewed those. We went through them several
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times. They made edits, and they accepted what was in the plan set ultimately. So that's probably the best place to find what the Natural Heritage Bureau would like to see us do in those locations.
Q. Okay. And it's probably because I'm not a botanist or familiar with plants very much at all, but you said that they have a long tap root. And Mr. Magee, you said they --
A. (Magee) Well, reasonably long. You know, it's not -- they can be transplanted. But, again, it wasn't NHB's position. It's got a long tap root, but it can be transplanted.
Q. Well, what about tunneling underneath it?
A. (Magee) Well, it's not -- when we're talking tunneling underneath, I think they're going to be at least 10 feet below the surface of the ground.
Q. Okay. Right.
A. (Carbonneau) Right. Trenching would be an impact because you're disturbing the subsoil, you're changing the drainage potentially. Trenching is a little bit different. You have to carefully stockpile and make sure
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you're stockpiling the soil in a way that those plants and roots wouldn't be disturbed. So there's a possibility that might not work very well, but --
Q. But tunneling is different than that?
(Court Reporter interrupts.)
A. (Carbonneau) Directionally drilling under the ground is less disturbing to the soil surface except at either end where you need to excavate to actually get your equipment down in. But my understanding is that the Project doesn't necessarily have rights to be underground in that area. Their right-of-way rights are for overhead lines.
Q. Okay. Thank you. Do you have anything to add, Mr. McGee?
A. (Magee) No.

CMSR. BAILEY: All right. Thank you.

CHAIRMAN HONIGBERG: Mr. Wright.
MR. WRIGHT: Thank you.
BY DIR. WRIGHT:
Q. Mr. Magee, the questioning here kind of got me thinking a little bit. I know in the
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Concord Pine Barrens they periodically do prescribe burns; is that correct?
A. (Magee) Where?
Q. In the Concord Pine Barrens.
A. (Magee) Yes.
Q. Is that to help maintain the lupines?
A. (Magee) It's to help main -- well, because it's a fire subclimax community. Pitch pines, scrub oak is maintained under natural conditions by fire. In fact, it reproduces by the -- the cones are sealed by resin that opens under the heat of a fire and they shed their seeds that way. So it's dependent upon fire.
Q. Okay.
A. (Magee) It's more for the overstory component than it is for the lupine.
Q. Okay. Thank you.

MS. WEATHERSBY: I found my
reference for my question. This was -- it's a public exhibit. It's a letter dated July 18, 2016, from Normandeau Associates to Roy D.

Gilbreth, the chair of the Franklin Conservation
Commission. And you're writing -- it's signed
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by Ms. Carbonneau. And you're writing in response to his letter, and you state, "We are not aware of wild lupine at the converter terminal site, and this information was not included in data provided by the New Hampshire Natural Heritage Bureau for this location. But please provide us with specific information, and we will investigate this and coordinate as appropriate with NHB."

So did you ever receive any more information concerning wild lupine perhaps being present at the Franklin converter terminal site?

WITNESS CARBONNEAU: Not to my recollection, but I will go back and doublecheck on that.

MS. WEATHERSBY: Thank you.
WITNESS MAGEE: And it depends also whether it's -- you know, there's several species of lupine, and it depends upon whether it's Lupinus perennis or the other lupine which is invasive.

MS. WEATHERSBY: Thank you.
CHAIRMAN HONIGBERG: Okay.
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Anything else from the Committee for Mr. McGee? [No verbal response]

CHAIRMAN HONIGBERG: All right.
I think we're good. Now the Pemi Group can come on down.

CROSS-EXAMINATION
BY MS. DRAPER:
Q. Hello, I'm Gretchen Draper, and I'm one of the Pemigewasset River Local Advisory Committee. We have Mr. Stamp, Max Stamp, with us, who's been Chairman, and Barry Draper, who was the New Hampton representative. So we represent the Pemigewasset River from Franconia, more or less, right down to Franklin. And I have questions that are mainly related to procedure, procedural things. Mr. Stamp is going to talk more about some of the river crossovers and areas of the river that we're really concerned about, like around Ashland and Plymouth. And Mr. Draper is going to bring on the live show. We like to make sure your Friday afternoons end with something good. And it's going to become a tradition,
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I think.
Okay. So these are some of the things I'm interested in. Has Normandeau been contracted to work with the Northern Pass Project for the next $X$-number of years? I mean, are you going to see this through post-construction?
A. (Carbonneau) We do not have a contract at this point that runs past the end of September.
Q. End of September. Hmm-hmm.
A. (Carbonneau) But we have been informed that we will likely be involved in some way if the Project is permitted.
Q. So it really pretty much depends on whether it's permitted or not, or you just --
A. (Carbonneau) Well, once the design portion of the contract is complete, then it's likely that other entities will also be engaged in the Project. We just don't know what our specific role will be going forward.
Q. Okay. Thank you.

And let's see. I was wondering who Normandeau's forestry expert is. So far, I
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haven't heard anything about like an arborist or someone who would be concerned with tree cutting. Is there someone on staff that does that?
A. (Carbonneau) I don't believe we have a forest expert in-house at Normandeau. We do confer regularly with the arborist for Eversource, Kurt Nelson. He's an excellent arborist.
Q. All right. Okay. So now you've worked extensively in sort of the preconstruction and design and setting things up. Have you worked mainly with the construction team or the engineers? Who has been your main contact in all of this?
A. (Carbonneau) Well, we've been working with the design team and the Applicant. So it's a mixture of people from Eversource, from the design engineers, Burns \& McDonnell personnel, as well as their legal counsel and a variety of other experts as appropriate.
Q. Okay. I had a lot of questions thinking you were going to be around for years, so I'm going to have to skip over those. Although, I might ask, if you were in fact going to be
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continuing to work on the Project, would you expect to be included in, like, hiring environmental monitors or people like that, or would that be something that would go to Eversource or whatever?
A. (Carbonneau) I don't know if that would be a role for Normandeau. We certainly have personnel that meet the criteria that Fish \& Game or the Natural Heritage Bureau would expect specific monitors to have as they relate to overseeing work around rare plants or implementing the avoidance and minimization measures that are specific to wildlife. But I have no expectation that our role is in, you know, hiring monitors.
Q. Okay. Mr. Tinus, now, you're with Burns \& McDonnell; right? So you may have a job that extends; is that right?
A. (Tinus) No, that's not correct.
Q. Okay. Not correct. Okay. You're wondering, too, about after September. Okay.

I was -- one of the things that we talked about with the construction panel was the constructability experts. And we were
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sort of saying, so who are they? And it seemed to me that they're going to be some of your construction monitors; is that right? And many of them are from Burns \& McDonnell; right?
A.
(Tinus) I believe the current thinking is that Burns \& McDonnell have a role, but that's not clearly defined yet going on. Parr, the presumed contractor for the Project, if it's permitted, would have the lead role in, you know, anything construction-related, if you will.
Q. So we really don't know who these experts are going to be, do we?
A. (Tinus) Well, they have to be appropriately credentialed, meaning they have to be wetland scientists, wildlife biologists, certified professionals in erosion and sediment control or erosion control inspectors, stormwater-certified people, professional engineers. There's a lot of different categories of people that could be involved.
Q. All right. And we're always interested in how independent these monitors are going to
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be from the Northern Pass hierarchy. And that seems to be kind of questionable. Would you agree with that, that the Applicant may be hiring these people rather than coming from outside?
A.
(Tinus) It's the typical arrangement for projects in New Hampshire. Nobody's going to do it for free, so somebody's got to pay.
Q. No, I didn't expect for free. I guess $I$ was just wondering who was going to be doing the hiring. It's a question of what's independent is what I'm wondering. Okay. And that's up for grabs, too?
A. (Tinus) Well, I mean, we know what we've stated at this point.
Q. Okay. Who has authority when you're in the field? So on a construction site you've got your monitors, you've got your construction people, you've got whoever's in charge of that site. Who has the sort of final authority as to what happens day to day?
A. (Tinus) I think the construction panel got a little into this and how they view the hierarchy of the field. There's a field
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supervisor; there's project managers out there; there's staff; there's different leads for different functions for safety, for environmental, for the different kinds of construction activities. So I guess in terms of whatever context you're thinking, there is a different lead person. Ultimately, the Project director at Eversource is responsible. But, you know, it's a whole tiered approach, if you will.
Q. And how about, have you ever served as an environmental -- any of you been an environmental monitor on this sort of a construction project?
A. (Tinus) I have.
A. (Carbonneau) And I have, too.
A. (Barnum) I have.
Q. I'm interested in what's your experience in those kinds of situations.
A. (Carbonneau) Well, I can tell you about some experience I've had on an Eversource project as an environmental monitor after helping a project get through the permitting process and once the construction started and the
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contractor was brought on board.
We had weekly construction meetings that were attended by the Project manager, the health and safety director for the Project, the contractors and the environmental monitors. At every one of those meetings the issues that would be applicable to the work to be conducted that week were discussed; areas of sensitivity were discussed; exactly what was hoped to be accomplished, and what the schedule was was discussed, and then every morning out on the site there was also a tailboard meeting to go over exactly what was going to be done that day. And, you know, everybody sort of got their marching orders.

The monitor typically, you know, in the projects $I$ worked on, my job was to make sure the erosion and sedimentation controls were placed as expected based on the plans that had been developed, that they were functional; that there were no turtles or snakes, you know, in front of the equipment as they would move along the area; that
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timber mats were placed where they needed to be placed on the wetlands. We previously had to re-flag wetland boundaries so they were very obvious in the field. And then photographs and notes were taken, documentation of the actual impacts to wetlands. Any other activities that were out of -- that were not in compliance we were able to discuss with the contractors on site. We would have them stop work if necessary and bring in more materials if appropriate. And then we had to combine all of these into an inspection report that was submitted pretty much weekly to the client and compiled into a monitoring report for New Hampshire DES. It's generally a permit condition.
Q. Okay. Thank you. So you were pretty much there every day, is that right, on that site? Or did you travel around to different places?
A. (Carbonneau) It depends. There are many situations where we had to be there for a certain amount of time to get the equipment where it needed to be and make sure everything was ready. We weren't necessarily
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there every day, and we weren't there necessarily all day for the days that we were there. But we identified what those key periods would be, where something new was happening that we needed to watch or some movement was happening, where, you know, if the season was right and we needed to check for snakes and turtles. Or if they were in the process of doing some restoration, we needed to be there for that. So we were not there every day, we were not there all day, but we were there for the key activities that required monitoring.
Q. Thank you.

Mr. Tinus, is that pretty much your experience?
A. (Tinus) Yeah, Lee did a good job describing the process.
Q. Good. Now, right now we're in kind of a funny position because it's not really construction time. Would you call this pre-construction? Where does this -- you now, right now, the kind of work going on out in the field, where does that fall? Because
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you're not -- it's not certified yet.
A. (Carbonneau) Well, there are no construction activities directly associated with the construction of the Project. There has been some geotechnical investigations that have taken place under separate permits that were submitted and approved. So right now we're still considering this project to be in a permitting phase.
Q. All right. And is there -- are there any monitors on site with the geotechnical boring folks?
A. (Carbonneau) There were monitors for geotechnical borings on the Deerfield site, the Deerfield substation expansion, Transition Station 5 in Bethlehem and Transition Station 1 in Pittsburg. And we expect that if we get approval for the test pits that need to be done at Transition Station 1 and at Deerfield, we will have monitors there as well. That's our
expectation. It's going to depend on how the permit conditions read. But certainly the Deerfield substation has the potential for
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Blanding's turtles, so monitors would be appropriate there, at a minimum, and as well as we expect there to be a requirement to make sure that erosion and sedimentation controls and BMPs are employed.
Q. All right. And who are the monitors -- who hired the monitors and what sorts of background do they have, the ones who were already at the Deerfield substation and in Pittsburg and Bethlehem?
A. (Carbonneau) For Bethlehem and Deerfield, they were Normandeau employees with some experience in monitoring, certainly with the ability to identify snakes and turtles. In Pittsburg, that was done through the contractors. That was done by a different company.
Q. Okay. And I guess I'm wondering, too, about, you know, we had the experience there on Route 116 where there was 10-gallon spill. So that would have been monitors from the Company that was doing the work; is that right?
A. (Carbonneau) I don't think there were
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monitors associated with the geotechnical borings along the underground route.
Q. Okay. And I guess, you know, we've talked about, Mr. Tinus, in your discussion during the tech session, this is back a ways, you had mentioned something called "field documentation reports" and individual violation reports. Are those still the terms used for accountability or --
A. (Tinus) I don't recall those particular terms. But there would be a report and an inspection report that would be written up, as Lee stated. And I don't know where the term "violation report" comes from that you're referring to. You said "violation" something. I don't recall saying that.
Q. Okay. Is there something called -- or something that serves that purpose to keep track of violations?
A. (Tinus) Well, I mean, the DES, if there was some sort of egregious problem out there that rose to that level, then there could be some sort of violation letter issued by DES.

Maybe that's what was the context of that. I
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don't know.
Q. I guess I'm just wondering now what's the accountability, you know, on the ground. So, apparently whatever happened with that 10-gallon spilling, that did not rise to the occasion -- or rise to the level of an egregious problem, so that we had Attorney Bisbee's letter to DES.

What else would have to -- was there something that would have to happen if it were a bigger problem? I mean, does somebody report those kinds of things regularly? And to whom?
A. (Tinus) That's hard to speculate an answer on a speculative question like that. I think the incident you're referring to, though, was looked at very closely by agencies, including DES and DOT and the Forest Service. And they found there was -- there were no violations, and they found that there were no issues there, long-term issues, so...
Q. Yeah. And I guess what I'm thinking is that it's not so much -- to me, it's not a speculative kind of question. It's really,
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you know -- we all know there will be a variety of difficulties happening day by day. So what's the procedure?
A.
(Tinus) Maybe I can give you an example that I recall from one of the projects $I$ was monitoring in the Groton Wind Farm. This was I don't know how many years ago now. They were on a ridgeline they cleared, and they were grubbing, which means removing the stumps and piling the material up. And there was a particular equipment operator who decided that he needed to move the water out of the way, which was bermed up by a large amount of material. And in doing so, some of it released, you know, very turbid water down into a little stream. So, immediately everything stopped on that site. The contractor's environmental monitor, the guy was a bulldog. I mean, he just took charge and rectified the situation. This operator was kicked off the site. So things like that, you know, would be an egregious violation. And that was dealt with very swiftly and appropriately, in my opinion.
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Q. Okay. So when something like that happens, is there a report filed that, like, goes up the chain?
A. (Tinus) Absolutely. There was a report filed with DES. They were notified. They came out and inspected. They knew all about it. It was part of that day's inspection notes. I wrote them up.
Q. Okay. Yeah, that was the kind of -- I was looking for just that kind of a procedure. So that I'm interested...

Now, if that had caused some kind of impact to the water, or whatever happened, if it causes an impact to, say, wetlands or water control, how does that get translated back to sort of the whole project when you're talking about temporary versus permanent impacts and things like that?
A. (Tinus) Well, in that case, what DES asked for, because it was actually a release of sediment, the sediment was carefully removed from that headwater stream literally by shovel and bucket and rakes. And it took about five or six guys to do that. There was
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a number of buckets of sediment pulled out of there. And then DES came and looked at it, and it was performed to their satisfaction. So, you know, once that incident happens, it raises the level of awareness on the site, and it comes up every time at every subsequent meeting: Don't let this happen again. There's a level of seriousness involved with this.
Q. Okay. I would hope so. Exactly.
A. (Tinus) Yeah.
Q. I guess I'm also wondering about how does this -- could it ever be something that would get into sort of increasing mitigation or -say you move from, you know, the minimal to the mitigation part and how that gets handled.
A. (Tinus) Well, I mean, in that case they want direct restoration, and the restoration meant removing the sediment. And it was a short stretch of the stream. It wasn't several buckets. I don't know exactly how much. But it wasn't a huge, huge amount of material.

Typically, $I$ think it's handled on a
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case-by-case basis. I don't think it would rise to the level where you're going to have to up the mitigation. It just doesn't happen. I mean, you have Best Management Practices in place that are to prevent that kind of thing from happening.
Q. Okay. So you really don't expect --
A. (Tinus) Not in my experience. It's never happened.
Q. Never happened. Okay.

I guess I'm interested in what it also means, so what happens if you have something and you've gone along and you're hoping, you're thinking, you're anticipating a temporary impact and something goes wrong and it becomes a permanent impact. What happens in that kind of a case? What would be the bar that would change it from temporary to permanent?
A. (Carbonneau) That's a tough one, too. I guess I would have to take that on a case-by-case basis as well and confer with the agencies and make sure that we're in agreement, if that were to happen.
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Q. All right. Yeah, and so it really would turn out, then, to be something that, something serious like that, you would have to sit with the agency and pull it all together that way.
A. (Carbonneau) That's right.
Q. Yeah. If something serious like that happened, where does the account -- you know, who's sort of the accountability? Where does that -- how far up the chain does that go?
A. (Carbonneau) It goes to the Applicant. Those applications have signatures on them, and those individuals hold those applications for the Company and they're ultimately responsible.
Q. Okay. Yeah. All right.

And what about things like -- I'm thinking about sort of getting ready, you know, if it all goes through, getting ready for construction when you bring in all the people who are going to be cutting down trees and things of that nature. Will that be considered pre-construction and you'll have monitors, or is that one of those little gray areas that's a little, you know, before the
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monitors kick in?
A. (Carbonneau) The tree clearing is part of construction. It's site preparation. And so the Project can't undertake the tree clearing associated with the Project until all of the permits and approvals have been received. So that's probably the first step in some locations, where we have trees that need to be cleared. But the Project can't do that until all of the permits are received.
Q. Now, I'm thinking, too, now, in post-construction. Where do most of the concerns come from? I've heard that, like, it's somebody, a citizen or somebody from the town notices something's wrong and then they start to ask questions. Is that your experience? Or do you feel like there's enough of, $I$ don't know, people going back to check on the Project, you know, what's been done?
A. (Carbonneau) Typically there are post-construction monitoring requirements. And the conditions that New Hampshire DES has included in their project approvals outline
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some of those things. Certainly for the restored wetlands there's a requirement to monitor those for at least two growing seasons and meet certain standards. If those standards aren't met, then additional remediation of some kind is necessary. And in my experience, when a monitor is out looking at the wetlands, they're also looking at any other area that has required some restoration. So the uplands around the wetlands, it's just as important to make sure those have been restored and are stable and aren't creating problems downstream. So there are monitoring requirements associated with the Project already.
Q. Thank you.

All right. I was wondering, also, when Normandeau was contracted to work on this project, were you -- was the charge to look exactly on the right-of-way? I mean, we've heard this a lot. So that when you are making your environmental impact, you're really looking at environmental impact within the right-of-way; is that correct?
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A. (Carbonneau) Well, we were hired to do a couple things.
Q. Yeah.
A. (Carbonneau) One of the things we did was to do all of the natural resource inventory within the Project area, which was provided to us by the Project Team. But there was portions of that project where the decision of exactly where the route was going to be hadn't been finalized yet. And I'm talking about the area from Pittsburg down to the existing transmission line in Dummer. So as part of that, we also did some desktop-level analysis of sensitive resources, you know, natural resources and, you know, archeological and historical resources and other potential constraints or advantages. So we had that role as well. But our field delineations and field work in the existing right-of-way was confined to the right-of-way boundaries unless we could see beyond it from that advantage point.
Q. Right. So I guess that's -- does the SEC require that utility projects or some -- is
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it part of the requirements that they stay within the right-of-way? Or is that something that Northern Pass and the Applicant decided that it was part of their thing?
A. (Carbonneau) Well, my understanding is beyond the right-of-way there's private property. So, you know, Northern Pass and Eversource don't own the land in the right-of-way in most locations. If we were to stray outside of the right-of-way, we would be on private property at that point. So that's the main reason that we were confining our field work to the right-of-way. But we did consult with resources like wetland maps and soil maps and aerial photos that showed what was on either side of the right-of-way as well. That's just part of the due diligence that we do when we're working on a project. We want to know the landscape context of the area we're working in.
Q. Right. But there's nothing from the SEC that says you need to stay within. That's not one of the requirements, I'm assuming.
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I guess, you know, of course from our perspective on the Pemigewasset, we're looking at a whole, great big --
A. (Carbonneau) Watershed.
Q. -- watershed, yeah. So when we look at brooks or whatever that are crossing the right-of-way, we kind of -- you know, we're interested in how far away they are from the river. So that's kind of where our concern is. And one of the things that the PRIAC, the Pemigewasset Group has done is we really are working under DES as a volunteer group, and we were really hoping that they would have a lot more rigor and perhaps sort of waited on the permitting. But that's neither here nor there.

And I guess when I think about a project -- it must be very frustrating. I think about a project, you know, that you're contracted to do and then you're limited to the right-of-way and that we're now asking the SEC and the public to really look at environmental impacts only within this, you know, 200, whatever it is, right-of-way
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limit. Did you find that frustrating?
A. (Carbonneau) I personally don't find that frustrating because $I$ think that the impacts of the Project will be confined to the construction portions that are within the right-of-way. We are not anticipating off-right-of-way impacts associated with the Project. And if the Best Management Practices and avoidance and minimization measures are employed, that's our expectation, that the impacts will be confined to the right-of-way or the site development sites.
Q. Okay. Thank you.

All right. I know that you're not anticipating problems. I guess, Mr. Tinus, this is kind of with your engineering background. You're not anticipating problems with construction. But would it not be Best Management Practices to be fully prepared for whatever could come?
A. (Tinus) I think there'll need to be -there's actually a permit condition that says that the contractors need to have appropriate
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stockpiled materials for, you know, erosion and sediment control, for example. There'll be other requirements from other plans, such as the blasting plan, to have appropriate safety or response equipment and, of course, just general equipment ready should, you know, something unplanned happen.
Q. Okay. I wanted to just ask about the special permits that are now being -- they're now in for test borings. Are they part of the public record? I mean, do they show up in DES's whatever?
A. (Carbonneau) The applications for conducting the test pits that we recently submitted? Yes, they're part of the public record. They should be on the web site as being under review. We've received notification that they are being reviewed at this time.
Q. Right. And are they now under the umbrella of the Application? Right? They would be considered part of the Application?
A. (Carbonneau) No. They are separate applications because the work needs to be conducted prior to the actual construction of
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Northern Pass, which is why we submitted separate permit applications.
Q. Okay.
A. (Carbonneau) The work is necessary to the final design elements.
Q. Okay. And I guess I'd like to just end with a question to each person on the panel and ask you: What would you consider to be the greatest threats to the environment and the species of New Hampshire at this time in the world? What do you see as the biggest challenges we face? Well, start with Mr. Magee. What do you think? Is it climate change? Is it development? Is it loss of habitat? What do you see?
A. (Magee) I guess from the standpoint of plant species, it's probably, I've got to think, about development overall and loss of habitat piecemeal here and there and everywhere and because of everything, yeah.
Q. Okay. Thank you. Ms. Carbonneau?
A. (Carbonneau) Yeah, I think $I$ would agree that development often results in loss of habitat. But I wouldn't put climate change too far
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behind.
A. (Barnum) I agree with Lee and Dennis. The development and just general, bit by bit by bit loss of habitat is probably the greatest threat. But I also believe that climate change will pose a real threat as well.
Q. Thank you. Mr. Tinus?
A. (Tinus) I think climate change is the biggest problem facing humanity right now and our ability to adapt to it or not. See where we end up.
Q. All right. Okay. Well, thank you very much. I'm going to turn you over now to Mr. Stamp, and he's going to talk about rivers and wetlands and...

CROSS-EXAMINATION
BY MR. STAMP:
Q. Good afternoon. I'm going to start up in Plymouth. This concern was expressed a couple weeks ago, and I thought it probably deserves some consideration in this group. And it relates to MTBE, the gasoline additive, just briefly what happened when the new Route 175 bridge going into Plymouth was
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starting up and they were in the abutment excavation phase and uncovered this MTBE contamination issue, and it spread quite a ways. The source was an Exxon station, believe it or not, that used to be on Main Street in Plymouth. Location today is a bank.

The corrective action taken was an attempt to wall off the plume, which at that time appeared to be headed for the Pemi, to the river. And so $I$ don't know whether it was a pile-driven wall. Something was installed to hold that back. And there was a monitoring well drilled to keep track of whether they had it trapped or not. And over time it's apparently been reasonably successful.

But my question is: Are you aware of that issue? I mean, we're going to be trenching down the main street of Plymouth, going right by where the Exxon station used to be. Are you aware of the MTBE issue? Is it on your screen?
A. (Carbonneau) I can speak --
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A. (Tinus) I don't know anything about that.
A. (Carbonneau) Normandeau Associates was asked to do the Phase I site assessment for the entire Project route. So it covers the underground route and the overhead route, and it's also been done on the mitigation sites and the development sites, the transition stations, et cetera. It's kind of a high-level look at all of the data bases that are available that have information about what kinds of industries or releases or toxic sites that are known could be in the Project area. So we prepared that report and provided it to the Applicant and their contractors so that they would have that information and be better prepared for the possibility of encountering some kind of a contamination during their construction activity.
Q. So if there's residual still there, how would you know?
A. (Carbonneau) Well, our work didn't include testing. My understanding is that there are places where there are known to be some
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possibilities. And if any materials are disturbed or removed from the site, my understanding is they would need to be tested, especially if we're going to dispose of it somewhere else. But we did not do actual field testing for any of that.
Q. Is DOT normally the source of that kind of information in New Hampshire, problems in various places that can be dug up?
A. (Carbonneau) There's actually a variety of different data bases. In fact, New Hampshire DES has some online information. But there are other types of old maps -- there's actually companies that specialize in compiling all of these sources of information. And actually, that's not my area of expertise. There's someone else at Normandeau who did that, who would know better exactly what those sources are. And it's possible that New Hampshire DOT is one of them. But I'm not sure. But these companies actually do this across the country, and they know what kinds of information to look for and where they can
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find the best variety of information to use. And they will actually map these locations, provide street addresses in many cases. So we developed many tables of information about where known sites are.
Q. So this, I assume, would be the same answer for above-ground activities.
A. (Carbonneau) Yes, those areas were also included.
Q. Okay. I'm going to move on.

Item No. 2 here is the river right-of-way crossover issues. I'm going to put up a picture. This picture appeared during the construction panel phase also. So the reason it's coming up today is some of the construction panel members deferred some of the issues to the environmental panel. So I'll try to cover that crossover.

This is the crossover in New Hampton to Bridgewater. This is one of ten crossover shorelines with destabilization ranging in severity from okay to this level of issue or problem with destabilization of the bank.

This picture was introduced in the
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process as part of a letter from PRLAC to DES way back in May of 2016. There was a issues and concerns letter talking about -- and the focus here of our activity is actually between the river and that first set of towers or the structures. We will define that as kind of our shoreland. But that whole area between the river and the closest structures to the river.

Now, that letter to DES, interestingly enough, and we were quite concerned about it, drew no comment. And we struggled with that a little bit. We do know that DES forwarded it on to you. And I think it was July of 2016 we did get a response from Normandeau. And it was from -- yeah, it was from you, I believe, Lee. Do you recall that?
A. (Carbonneau) Yes, I think that's right.
Q. Would you acknowledge this is a right-of-way maintenance management issue? And I'd like to direct that both at Ms. Carbonneau and Mr. Tinus.
A. (Carbonneau) Well, this is an existing Eversource right-of-way. It is one that
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Northern Pass would share at some time in the future. I know that some folks from Eversource went out and did some review of these locations. They indicated that in some places, and this is probably one of them, that some evidence of erosion is present along the shoreline. And they made some recommendations about keeping some of the heavy equipment away from the top of the bank there and allowing more woody vegetation to grow up on the edge of the river there. So that would be maintenance-related activities that could potentially increase a little bank stabilization in this location.
Q. Okay. I want to refer to another document that... this was... just want to see the top of it. This was our prefiled testimony going back to November of 2016. And I want to refer you to, I guess it's around Line 125 to Line 135. And this was part of a PRLAC

Motion to Compel question, PRLAC No. 1-26.
"Please provide the guidelines and personnel
that would be responsible for annual
inspection and assessment of right-of-way
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degradation." Post-construction was the focus of this.

And as you can see, the Northern Pass response was, just reading it, "Northern Pass will utilize qualified line workers for the annual visual inspections of transmission lines and associated right-of-ways, as is the case for inspections of all other Eversource lines today," implying they do this basically routinely, this annual inspection. Qualified arborists will make periodic inspections, and it goes on and on. Annual aerial inspections of the right-of-way is also a component of this.

My question is -- and I gave Gretchen the wrong copy. I need that one back. And this is directed to, I think, Lee Carbonneau: Have you seen this annual inspection report from Eversource?
A. (Carbonneau) No, we don't get annual inspection reports. We contract with Eversource for specific right-of-way projects, but annual maintenance is not one of them.
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Q. Have you ever seen anything, Mr. Tinus?
A. (Tinus) No, I have not.
Q. I guess the next question is: Do you know whether they exist, a report on these annual inspections.
A. (Carbonneau) I don't know. It's -- I don't know if they do or not.
Q. So they definitely were not used in your development of permit applications and that kind of work, the results from these annual inspections?
A. (Carbonneau) No. We relied on our own field investigations.

MR. STAMP: Well, PRLAC requested Copies of the PSNH -- or Eversource annual inspection reports for 2015 and 2016. None were provided. I don't know whether we can ask for something like that today as part of this program.

CHAIRMAN HONIGBERG: Well, you've asked these witnesses if they know anything about them; right?

MR. STAMP: Yes.
CHAIRMAN HONIGBERG: And they
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don't.
MR. STAMP: But I'm just trying
to determine whether --
CHAIRMAN HONIGBERG: I guess the
short answer is --
MR. STAMP: -- as part of the
process we can trigger their reports.
CHAIRMAN HONIGBERG: That was during discovery when you asked data requests --

MR. STAMP: Yes.
CHAIRMAN HONIGBERG: -- and they
were either produced or not?
MR. STAMP: They were not.
CHAIRMAN HONIGBERG: And you
moved to compel?
MR. STAMP: We did not.
MS. DRAPER: Yeah, we did.
MR. DRAPER: Yeah, we did.
MS. DRAPER: We did.
CHAIRMAN HONIGBERG: And you
moved to compel and there was an order issued presumably about that?

MR. STAMP: Well, that one
might -- we're a little confused.
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CHAIRMAN HONIGBERG: I think the short answer is this is not the time to ask, the direct answer to your question, I guess.

MR. STAMP: That is a direct answer.

BY MR. STAMP :
Q. Moving along, I wanted to explore with you some of the results of the session with the construction panel. And, you know, this questioning was posed to Mr . Bowes. I'm trying to read it here myself. But he was -we were talking at that time about the picture we just had up of the right-of-way, destabilized right-of-way. And his response was: I'm familiar with this location. I've been to this location, looked at it, size of the river, et cetera, et cetera. And I'm going to paraphrase because we'll spend all day here reading it. But he said this is an area that probably -- again, probably -- a practice that was started 75 years ago, maybe 80 years ago, to clear all the way to the river, which was, I guess, assumed the best way to manage the right-of-way and the
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reference line at that time.
And then he mentions another location, Army Corps of Engineers, where a different approach to vegetative buffer, and there was little or no erosion when the buffer is left. So he goes on to say: So I know I've had this discussion both in public meetings and each session about Northern Pass. It goes on to say... establishing a vegetative buffer at each of these locations. I believe, I think he thought he even committed to doing that. But the point was that $I$ think we got some positive vibes about something being done about this issue in the not-too-distant future.

We also included Mr. Bradstreet in that conversation, and he was a little more, I think was a little more concerned about some of the details that he had to be involved with. But $I$ think if you quickly scan through that, he also said there's probably opportunities to do something in that buffer area of the right-of-way that will be beneficial.
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Mr. Bradstreet brought up certain issues that Northern Pass would confront, some of which would be the angle at which the transmission line comes off the poles closest to the river. Wetlands could become an issue. Aesthetics. And here is where he said, you know, we ought to consider doing something about this, but we're going to have to involve the functional groups, such as this panel today, the environmental panel, and he also included the aesthetics panel.

So, to kind of frame this thing, to summarize it, what we were pushing for with the construction panel was the possibility of towers or structures not coming closer than a 100 feet to the reference line of the river; native vegetation of reasonable height would occupy the shoreland buffer zone between the river and the structures. No trees. We get it. For safety reasons there can't be anything, any trees under the structures. But the key here is no equipment, machinery allowed to operate in the buffer zone. So that's what we would like to get turned off.
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Our take, particularly from Mr. Bowes, was it's not unreasonable. They might want a little aisle around that last structure to maneuver and so forth. But the rest of the way of the river, yup, let's do something there that is going to help the destabilization issue.

Now, given the rough outline $I$ just gave you -- get the structures back farther, vegetate, no equipment -- is this something the environmental group could endorse?
A. (Carbonneau) All other things being equal and not being a constraint, $I$ don't see any reason why that would not be beneficial.
Q. Mr. Tinus?
A. (Tinus) I would agree. I think, given that you had an officer of the Company suggest that it's possible, that's a good sign.
Q. Okay. Yeah, Mr. Bowes, in addition, indicated that we own the land. For the most part there are no wetlands, so those kinds of complications apparently don't exist, so maybe we can move on. This is a very
important improvement to us.
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Now, to move the peanut a little bit further, we're not thinking an improvement in something like Best Management Practices. What we have in mind is somehow incorporating this idea, this proposal into the Water Quality Protection Act as a separate section that would deal with probably rights-of-way, account for certain concerns on the part of Northern Pass. But this would be woven into the protection network of the state.

When I remind you that Mr . Bowes -- and we know this has been going on, from our observations, for 20 years, that there's something about putting it in, into the regulatory framework, that causes things to happen. And this I think has been long denied, and so we're thinking in terms of that kind of a framework. Does that really frighten anybody on the panel?
A. (Carbonneau) I think there could very well be environmental trade-offs with putting that into the regulations or the law. In some cases, you have very important resources that would have a bigger impact. It could be an
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archeological site. It could be a rare, threatened and endangered plant community. There could be something that makes it difficult to get just outside of that 100-foot area without having another impact. I can think that there could be reasons why that may be difficult in many locations. But, you know, I guess that's the issue that most regulations cause to bubble up to the surface for any permitting project. So...
Q. Well, you are aware that most of the rest of the world has to do this, anyway. I mean, Shoreland Water Quality Protection Act, I mean, the first 50 feet of buffer you have to meet point scores and it goes on from there. It's a pretty tough regimen. And I understand that's the public and you're a regulated utility -- or representing a regulated utility. But I guess I'm optimistic that with the right approach and right attitude towards fixing this thing finally -- we've been talking about it too long -- that I think this could work.
A. (Carbonneau) Well, the immediate shoreland of
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50 feet is one thing. A hundred feet would be a different standard that you would apply to a utility perhaps.
Q. But there are also regulations from -- public regulations from 50 to 150. There's a lot going on in that segment, too. It's not a straight trade-off. But --
A. (Carbonneau) Right.
Q. -- public doesn't end at 50. It goes on from there.
A. (Carbonneau) No, I understand that.
Q. And you, probably more than anybody in the room, work with this law all the time.
A. (Carbonneau) Yes.
Q. Going on to the next item. When Normandeau is working on a project of this nature, i.e., a major disturbance of land surfaces, do you ever check to determine if the activity is over a significant high-potential aquifer?

Anything come up that forces you to say we better determine what's underneath what we're doing?
A. (Carbonneau) Identifying aquifers is a requirement of the 401 Water Quality
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Certificate Application, and I believe maybe the Alteration of Terrain Application as well. We had to consult with the DES One-Stop Mapping and make sure we included maps of highly transmissive aquifers in the Application materials.
Q. But it wasn't required for this project.
A. (Carbonneau) Yes, it was. So those maps should be in our Application materials.
Q. That would be the Alteration of Terrain?
A. (Carbonneau) I can't remember if it was the Alteration of Terrain or the 401 Water Quality Certificate Application. WITNESS TINUS: May be in both, Lee, yeah.
A. (Carbonneau) Yeah, I'm thinking maybe both.
Q. Okay. Everything we talk about from here on just happens to be activity over a high-potential aquifer. So we're going to move to Ashland.

And the first sheet $I$ would like to put up is the New Hampshire DES Wetlands Map, Sheet No. 471. Not a very good map. I apologize for that.
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MR. STAMP: But Gretchen, if you could, or Barry, just point out where the well head is on that map.

BY MR. STAMP :
Q. Okay. That is the well head. And as you can see, up from that and to the right a little bit there's a proposed new structure in that circle. So I assume you're aware this is the town's only well. Yes? No?
A. (Tinus) I believe I've read that, yes.
Q. Okay. And are you aware that based on basically its output and the dynamic source that they have tapped in the way of an aquifer up there, this enjoys sanitary protection? And the sanitary protection area assigned to this well head is a 400-foot radius from the well head.

Now, as you can see, Northern Pass right-of-way goes basically right through that well head protection area. And the right-of-way access encroaches on the sanitary protection area, which extends out from about 400 feet.

So I guess the point here is that this
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is an area that's more or less designed to avoid, but -- and that's where I think the construction panel chose to say check in with the environmental panel on how we might deal with avoiding that sensitive area. Have you received any questions about dealing with that problem?
A.
(Tinus) I can comment. I know there's some folks who have been trying to talk to the officials in Ashland. I'm not sure where those discussions lie. This is the kind of thing that they'd like to have an agreement with them. First of all, meet with them. I think there's been some refusal by the town to meet. And I think there's some things going on between various boards or whatnot. But still, I know the Project is very open to meeting with them. And I'm pretty sure this falls under Ken Bowes, who would say, you know, this is the kind of issue that we'd like to forge an agreement with the local entity to work on and work out and make sure that we're all on the same page with this.
Q. So there's no --
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A. (Tinus) But that's as much as I know about it.
Q. I'm sorry. I missed --
A. (Tinus) I just said but that's as much as I know about where this is headed.
Q. So there's no activity today looking at how you might stay out of that sensitive area --
A. (Tinus) Well, my understanding was the structure is actually 600 feet from the well, and the road is less than about 500 feet away. That's what I was told. You know, other than that, you know, we're trying to identify the locations and figure out. But I believe some of the engineers had been trying to reach, you know, the town and talk with them about this.
Q. Well, obviously a lot of heavy equipment, heavy machinery is going to have to -- as this thing moves along, are going to have to pass right through there.
A. (Tinus) Right. And as far as planning purposes, and as far as Best Management Practices, you can be assured that this would be one of the areas that would be fairly
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clearly studied further prior to any construction activities taking place. And obviously, if there's any sort of agreement to any special considerations that need to be made, they would be worked into how they approach the construction activities here.

But this, you know, in terms of what you have going on here, you have an access road and you have, you know, lattice structure going up. Those activities in and of itself should not be very harmful to the aquifer, in my opinion. There's other activities going on all around here, including the presence of the sewerage lagoons not too far away and --
Q. Yeah.
(Court Reporter interrupts.)
A. (Tinus) And perhaps salt from the highway. So I guess what I'm saying, you know, in context, it's not very different from other resource issues that we need to face. I'm not saying it's any less important. But we need to have all the information in front of us and hopefully discussions with the Town to lay out how exactly this area should be, the
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construction should occur in this area.
Q. Is there any geotech drilling likely to take place anywhere in the vicinity of this thing?
A. (Tinus) They'll have to do geotech drilling. That hasn't been done for any of the overhead sections yet. So that will have to be done at some point. So I think that's another issue they need to talk about, how to go about that.
Q. I think that is in that -- you say you're outside of the sanitary protection area. Reasonably sure you'd have trouble if you have to drill in that area. I think that would be considered an issue not to take place --

CHAIRMAN HONIGBERG: Mr. Stamp, just ask him questions, okay. Don't argue with him. Ask questions.

MR. STAMP: We're not arguing.
But thank you.
BY MR. STAMP:
Q. So I guess the two requests that I would have is: Is there a right-of-way traffic route planned that would avoid the SBA? And I
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guess I've heard "not at this point."
And does tower construction activity encroach on SBA? And Mr. Tinus, you're kind of indicating it's outside that 400-foot radius hotspot.
A. (Tinus) Yes, I believe that's what I was told.
Q. I think we need to check on that, but --
A. (Tinus) Yeah.
Q. Okay. Just to show you the layout, which I'm sure you may have -- that's the total, not the sanitary, just the total well head protection area.

MR. STAMP: And if you could point out the well head on that map. Down there.

BY MR. STAMP:
Q. Now, you can see the dots all around that. Those are monitoring wells. They are -- a lot of them are right in your right-of-ways. They are very sensitive. It's a very sensitive area. So it's another reason that people want to keep you out of that special place.
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Okay. Moving on down on the river and to the Ashland sewerage lagoon area --

MR. STAMP: No, I'll give you -I've got some maps.
(Pause in proceedings)
BY MR. STAMP :
Q. This is a page, Ms. Carbonneau, from the Ashland Shoreland Permit Application. And during the top section -- and I'm not going to read it all -- you outline what the program is. It describes a new high-voltage transmission line will be constructed in an existing transmission right-of-way. The Ashland project area includes one shoreland location along the Pemi River. Now, I'm not sure what that means, "one shoreland location along the Pemi River." Can you define that, describe that?
A. (Carbonneau) Yes. As the Project sort of parallels the Pemigewasset River in some locations, we wanted to make sure that it was clear that in the town of Ashland, the locations where the Project was within the Pemigewasset River protected shoreland were
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sort of all in one place and that there wasn't another section elsewhere in Ashland on a separate set of plan sheets further somewhere else where that was also going to occur.

The Shoreland Division asked us to separate our applications by town and by river. So, in some locations we might have two separate segments of the Project entering the shoreland of a river that it parallels within the same town, and we would have said there are two locations. But in this case, these were contiguous.
Q. I understand. Work on the protected shoreland includes installation of four new lattice structures. This is in the sewerage lagoon area. Four new lattice structures, two footings of an additional lattice structure. And there are five temporary work pads that will be established in these work areas and will be restored after construction. In addition -- so, there's a lot going on here in that narrow strip.

In addition, 98,227 square feet of tree
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clearing is planned within the existing right-of-way. And I want to put up some maps to give to everybody an indication...

Now, what you're looking at is alongside I think the northern lagoon. But you can see where the new lattice structures are going in. They're outlined in squares in orange. And you can see where the right-of-way border, basically the western border is the one toward the river. And I assume that's where -- I guess I should ask. Is that where most of the trees are going to come down?
A. (Carbonneau) Yes, the tree clearing -although this isn't the shoreland plan, I believe this is the wetlands permitting plan.
Q. It is the wetlands permitting plan.
A. (Carbonneau) Yeah, the tree clearing is a little bit hard to see, but it is outlined in kind of a dark green. So if you look at the cluster of trees between the sewerage lagoon and the river, you can see there's a dark green line in some locations, and that represents the tree clearing area, yes.
Q. And the majority of the 98,000 square feet
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will be occurring right through that section or all along the right-of-way?
A. (Carbonneau) It's inclusive. It should cover everything within the shoreland.
Q. Within the shoreland. Wow. Okay.

Now, the blue checkered lines there are 100-year floodplain, which appears to us to actually encroach in your right-of-way. So I don't know how -- I'm sure you were aware of that and that you had to deal with it in your permit application proposal. Can you tell us how you dealt with that?
A. (Carbonneau) In the Wetlands Application, we do acknowledge that there are activities that will take place within floodplains in some locations. Now, these are from FEMA maps. They're not always 100 percent accurate. In some cases, they go a little further up the slope than you might otherwise expect. But there is no prohibition against cutting trees down in a floodplain area. And we don't expect that the footings or the towers themselves will unduly influence, you know, the flood storage capacity of the floodplain.
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Q. Are you aware of any effort to move those towers a little farther away from that sensitive river area --
A. (Carbonneau) This is a tough area. I'm sorry.
Q. Sorry?
A. (Carbonneau) This is a tough area. It's constrained. The engineers did what they could do in this location. There is an existing transmission line in this right-of-way already, and they put the towers in where they fit. And they're confident that this design will work.
Q. Now, I think your permit states that within the 250-foot protected area from the referenced 95,000 -- the area 250 feet within a shoreland, 95,000 square feet, that's how much you're moving in on the protected shoreline. Is that the right way to state that?
A. (Carbonneau) $I$ can't really confirm those numbers, off the top of my head.
Q. Well, that's right from your permit application.
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A. (Carbonneau) Are you saying that there's that much area --
Q. That much area --
A. (Carbonneau) -- of the Project area -(Court Reporter interrupts.)
A. (Carbonneau) -- of the right-of-way within the protected shoreland of the Pemigewasset in Ashland? Is that what your --
Q. That's correct.
A. (Carbonneau) That may be so. I don't know the exact number without looking at the Application form. We had 33 of these applications. They all have different numbers.
Q. Okay. I heard someone on the panel somewhere along the way say or describe how much effort had gone in in your planning activities to avoid adverse impact on the environment. And, you know, here we're involved with Ashland's only well; the right-of-way encroachment in the sanitary protection area; possibly drilling in the SBA, but that's not been confirmed; 95,000-square-feet violation of the shoreland water-quality protected
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area; 98,000 square feet of tree removal on the shoreland, on and on.

Could you outline what the major effort was in this area that we're talking about, Ashland, to avoid an impact on the Ashland right-of-way? I can't see where anything happened here that alleviates the concerns that we have.
A. (Carbonneau) Well, first of all, I'll tell you that your statement that having this area within the protected shoreland is a violation of the Protection Act is not true. This right-of-way predates the Shoreland Protection Act, and it's an existing use. It was established, I don't know how many decades ago. But this is where the right-of-way is. And co-locating a new line where there's an existing line is consistent with the current land use.

Now, the major constraints here are related to the engineering design and where those structures can be located within here. We don't have a lot of wetlands to be concerned about. We didn't have rare plants
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to be concerned about. So those kinds of environmental issues were not the biggest concern. The concern was primarily from the engineers in making selections of locations where they felt that these structures could be placed. And we have apparently met the requirements of New Hampshire DES about the Shoreland Applications and the Wetlands Applications with this current design, as evidenced by their approvals.
Q. Well, if there were any place that some alternative should have, could have been considered, this is probably one of the majors. And I think we've heard from the construction panel that an alternative route was not considered, although we've heard people from Bridgewater say there was some discussion about diverting that and running it down River Road and all kinds of benefits associated with that. Were you involved with any of those conversations?
A. (Carbonneau) I'm not aware of those, no.
Q. Mr. Tinus?
A. (Tinus) I'm not aware of that.
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Q. Okay. I guess the only other interesting comment is those infiltration ponds. The infiltration is about 50,000 gallons a day is infiltrating. And, you know, it's going through the filter, if you will, of groundwater, et cetera, and it's headed for the Pemi. We know it's high in nitrate and may have some other issues, but not enough to create any, I guess, red flags. But the discussion continues.

So I think that does it for me, Mr. Chairman. Thank you very much. CROSS-EXAMINATION

BY MR. DRAPER:
Q. Well, hello. I'm Barry Draper, and I'm with this panel. I'm going to continue to look at impacts of wetlands and species within the right-of-way in the Pemigewasset watershed.

I had some questions about did you find any threatened species in the Pemigewasset watershed right-of-way?
A. (Magee) State or federally-listed threatened species, no.
Q. No. Okay. So that would mean that -- I've
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lost my place already. That would mean that you found no signs of wood turtles.
A. (Magee) I was talking about plants. I'm sorry.
Q. Oh, I'm sorry. I was including plants. That's definitely included. But I was thinking all of you. I should have addressed the whole panel is who I'm talking to.
A. (Barnum) In this location, there's suitable habitat for wood turtles, and their presence is assumed.
Q. But there was no evidence of it.
A. (Barnum) We didn't do any searches for them because we're simply assuming, based on the suitability of the habitat, that those species will be present.
Q. They would be present. Great.

And how about the smooth green snake?
A. (Barnum) Similar.
Q. Didn't see but --
A. (Barnum) Didn't search for because we're assuming presence.
Q. Okay. And Jefferson salamanders?
A. (Barnum) $I$ would have to defer to the vernal
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A. (Carbonneau) Yeah, I think Jefferson salamanders, my recollection, were only found in one vernal pool in the AC section of the Project, south of Deerfield.
Q. So, all the way down south. So that's one of my questions is that I really feel that there are these things around. I've lived in this one section for 40-something years, and I've seen these things. An I just was hoping is there going to be like -- will there be monitoring going on even though they weren't found? If the habitat has been proven to be possible that they could be there, there will be monitors searching before?
A. (Barnum) Within suitable habitat for the wood turtle, there will be searches for wood turtles.
Q. And how about green snakes?
A. (Barnum) Green snake was not a species that Fish \& Game requested that we consider.
Q. So, I mean, Fish \& Game does -- do you only use those recommendations? Is that how you search for these?
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A. (Barnum) We based our plans for threatened and endangered species on their requests, yes.
Q. Okay. I guess that's the way it is.

Okay. Well, I've got some -- everybody knows I've got some live things.

MR. DRAPER: Do you have a white piece of paper?
(Pause in proceedings)
BY MR. DRAPER:
Q. All right. We've got some living organisms. They aren't swimming much now, which is actually good for --

MR. DRAPER: No, don't make them swim.

BY MR. DRAPER:
Q. So you can see them better.

MR. DRAPER: Maybe you could move that. Do you want to get closer, Pam, and focus it down? Could we get it --

MS. MONROE: We can do it.
(Discussion off the record)
BY MR. DRAPER:
Q. You as the environmental, I should ask you to
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come up and take a look if you want. But can you identify any of those species?

MS . MONROE : Me?
MR. DRAPER: No, no. I'm sorry.
BY MR. DRAPER:
Q. I was wondering if anybody on the panel -I'm not trying to put you on the spot. I just didn't think -- it is really difficult to tell. Can you see how many species there are there?
A. (Barnum) I don't know. I mean, I don't know what growth stage any of these guys are in. From this position, I can't see any identifying factors from this angle and --
Q. Yeah, $I$ know it's really --
(Court Reporter interrupts.)
A. (Barnum) And I have to admit larval
amphibians are not my specialty, so...
Q. And would you agree that they are really difficult -- larval amphibians, you need to basically key them out; correct?
A. (Barnum) It helps to have a key.
Q. Yeah. And can you see there's salamander
larvae in there? I don't know if you can
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find him.
A. (Barnum) Yup.
Q. Yup. Okay. And I think there's probably a peeper, a wood frog, and a -- what's the other one? Gray tree frog. I think those are the three tadpoles in there. Of course, now you're going to see them. Those are what I -- only because $I$ watch the egg masses in the vernal pool in the wetland that was on the right-of-way. And this was in New Hampton.

So what $I$ was questioning is, if there was -- it was hard for you to see these. Would you, if you were a monitor going out, would you go out and check each one of these vernal pools to see if these were -- I mean, what's one that we're worried about? The Jefferson salamander and the -- is the leopard frog on that list?
A. (Barnum) Northern leopard frog, yes.

Wouldn't be expected to be in a vernal pool. So, vernal pools --
Q. I'm sorry. A wetland. This was not a vernal pool.
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A. (Barnum) So, wetlands and vernal pools would be protected on their status as wetlands and vernal pools, regardless of the species they contain.
Q. Oh, okay. Great.

So what $I$ was just questioning is, if there was a wetland that was not labeled and a machine operator was going through and found some of these, would he stop and say we got to find out what these are?
A. (Carbonneau) I'm not sure a machine operator would actually see these from his perch on the machine. There's a remote possibility that a wetland that was not previously identified as a vernal pool could have some breeding amphibians. They may not be vernal pool species. There's an assumption that wetlands have good aquatic habitat, whether it's for vernal pools species or other potential amphibians or water-dependent wildlife. That has been taken into consideration, and for that reason attempts were made to try to avoid and minimize impacts to all wetlands. I don't think, even
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if larval amphibians of some kind were seen in a wetland, that that would necessarily stop work if the permit already allowed for a crossing of that wetland area.
Q. But I mean, I don't expect everything to halt. But I was wondering if they spotted this, would they go any further to check to see if these were -- you know, if they'd say, oh, those are just bullfrog tadpoles and we're going to let them go or they'd run over them? I don't know. Wouldn't they avoid -wouldn't that be the most important thing to do is to try to avoid the wetland altogether?
A. (Carbonneau) I think it's probably not practicable when the equipment is right there. If the wetland could have been avoided already, it probably would have been avoided through the planning process to have the road go around it, if that was practicable. If it's not, then it would be crossed with timber mats. In most cases, those timber mats have spaces, unless you're actually crushing an egg mass, for example. It wouldn't necessarily preclude amphibians
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from using the portion of the wetland that is not covered by the mat, and it may actually allow some movement within, you know, between the sides of the area that's been covered. Depending on the weight. Is that -- would the weight make a difference, too?
A. (Carbonneau) No, it's the structure of the mat and how it's placed in the wetland.
$Q$.
Okay.
CHAIRMAN HONIGBERG: Mr. Draper, before you continue, how much do you have, do you think?

MR. DRAPER: Very little. I'm
less than a page.
CHAIRMAN HONIGBERG: Okay. Thanks.

MR. DRAPER: Well, I love answers. So maybe we'll get some good answers and go longer.

BY MR. DRAPER:
Q. I will skip that. Now I'd like to focus on the right-of-way crossover and construction on Brook Road.

MR. DRAPER: Could we have that
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photo? Be careful moving those guys. They've been through a lot.

BY MR. DRAPER:
Q. So I've been observing the erosion taking place during rain and snow events on Brook Road. And this photo, Exhibit Pemi 7, Page 3, was taken first January 2016. That's the top one that she's got there. And the second, same location a year later, do you see the erosion there?

MR. DRAPER: Why don't you show the top one first. I mean, that shows the erosion the best.
A. (Carbonneau) I don't know if I'm looking at erosion. I have actually been to this site in the field. It looks to me like there is an intermittent or ephemeral stream channel that comes into the brook at this location. I can't tell you for sure if it was because I didn't cross over and investigate further.

But I'm not sure --
Q. It's tough terrain, yes.
A. (Carbonneau) -- if that's there because it's an access road or if it was there before the
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access road. I'm not sure.
Q. There is natural drainage up above it, and it actually went down the hill over -- I mean, it didn't go into the brook itself. It used to go across the top. And since that is the access road that they use most of the time --

MR. WALKER: Mr. Chairman, with
all due respect to Mr . Draper, he wants answers, but we'd like questions.

CHAIRMAN HONIGBERG: Yeah, you're testifying about something else that used to be there, so --

MR. DRAPER: Well, I thought she asked. No? I don't answer her question?

CHAIRMAN HONIGBERG: It's your turn to ask questions of her.

MR. DRAPER: Okay.
CHAIRMAN HONIGBERG: At another stage they'll get to ask questions of you. It will be most effective and efficient if you ask her questions, let her answer and then ask her another question.

BY MR. DRAPER:
Q. Okay. So we left it that you had seen that,
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and you perceived it as a -- could have been a brook --
A. (Carbonneau) Yes.
Q. -- an ephemeral brook. And that's the answer. I shouldn't go any further with that.

CHAIRMAN HONIGBERG: I can think of any number of questions you might ask off of that, but $I$ don't know what's on your sheet.

MR. DRAPER: Okay. I got you. Thank you very much. That helps me.

BY MR. DRAPER:
Q. So, on April 24th, PRLAC received an in-depth report. And this is probably -- you probably had parts going into this, I think, from Eversource. And the report was compiled between June and September 2016. Is it common practice to observe erosion during time of a drought?
A. (Carbonneau) I think in this case the Eversource folks wanted to address the issue, and that was when they were available to go out and look at the area. I can't speak to, you know, whether or not the time of the
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review was tied into the drought or how appropriate it was. But that's when they went out and took a look.
Q. Okay. So I was just wondering why they -were you part of -- I should have asked you that. Were you any part of that, or was that just --
A. (Carbonneau) That was an Eversource report.

I have looked at the locations in that report subsequent to the report, but $I$ was not involved in drafting it.
Q. Because $I$ was wondering why -- is it usually a common practice to contact, like, location people who have reported it? I felt like PRLAC was not contacted in any way. Is that common practice for that to happen? I don't know.
A. (Carbonneau) I'm not sure I can answer your question. This is an Eversource issue in an existing right-of-way, and it was not -- it's not directly related to the permitting of the Northern Pass Project, at least from our application materials.
Q. So, looking at that picture, what would you
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recommend? What would you do in that situation for a -- to prevent that from being an erosion event?
A. (Carbonneau) When I visited this site in the field, I saw the water that was entering the brook down that channel to be clear. The substrate is rocky. I saw no evidence of sedimentation or erosion happening in that location, which isn't to say it might not happen at some other time. But when I was there, it didn't look like a water quality issue to me.
Q. Okay. And that is interesting because at that site really there are times when it's crystal clear. And I can understand that at that point it probably looked good.

Is it a practice -- let's see. So...
let's just go on. So, rivers and streams flowing under and adjacent to Northern Pass rights-of-way carry biotic and abiotic particles in their flowage. Would you agree?
A. (Carbonneau) Yes, I would agree with that.
Q. Yup. So I counted roughly 40
streams/Northern Pass right-of-way crossings
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from Bridgewater to Franklin, and 26 of those flow directly into the Pemi. Does that sound like a ballpark figure?
A. (Carbonneau) I don't know.
Q. Okay. Well, I walked a bunch of them. And I think that's rough, that's ballpark.

So how are studies done concerning suspended particles in these waters settling out downstream, outside of the boundaries of the right-of-way?
A. (Carbonneau) During construction -- I mean, I can't speak to pre-construction -- erosion and sedimentation are to some extent natural processes as well in normal streams. But during construction, it will be required to monitor the quality of the water coming off of the construction areas. And in fact, New Hampshire DES requires that we prepare a surface water sampling plan so that we can track any potential water quality issues that could move off site.
Q. Do you do any sampling prior to construction so you have a baseline?
A. (Carbonneau) I'm not sure if that's going to
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be part of the plan. It hasn't been developed at this point. It's one of those plans that is required to be submitted in 90 days, and the development of that hasn't started yet. So we may end up consulting with New Hampshire DES to determine the best process for putting that plan together and discuss the elements of it with them.
Q. So would it be like a -- well, that will only be 90 days -- I mean, that's when requirement usually is, is 90 days? There won't be anything done prior to the 90 days?
A. (Carbonneau) We expect that plan is going to take some time to put together, so it will be in progress well before that. Ninety days is when we need to have a finished product ready to give to New Hampshire DES.
Q. Okay. So do you know of losses of crustaceans, fish or vegetation caused by suspended materials settling out and smothering organisms that are important to sustaining a balanced ecosystem?
A. (Carbonneau) I'm not sure I understand your question.
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Q. I'm just -- okay. Do you want me to repeat it or --
A. (Carbonneau) Could you repeat it, yes.
Q. Okay. So do you know of losses of crustaceans, fish or vegetation caused by suspended materials settling out and smothering organisms that are important to sustaining a balanced ecosystem?
A. (Carbonneau) Do $I$ know if that's possible?
Q. Yeah, that could be good.
A. (Carbonneau) Yes, that's possible.
Q. So do you conduct water quality testing at right-of-way river and stream crossings -oh, just asked you that, pre-construction, and you said "No"; correct?
A. (Carbonneau) I said I'm not sure if that will be part of the sampling plan or not, the pre-construction surveys.
Q. Okay. So DES has stated that in their conditions, that there will be no construction in flowing water. What does that definition of "flowing water" mean to you?
A. (Carbonneau) Well, the definition of flowing
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water is water that is basically contained within a channel that's flowing. So, presumably a stream, either a perennial stream or intermittent or ephemeral stream that happens to be flowing at the time.
Q. Would a beaver pond fit in that? Because it's weird, isn't it, because it's flowing at one point.
A. (Carbonneau) There's really no plan to have in-channel construction work happening on the right-of-way, except where there are culvert replacements off right-of-way access roads. That's the bulk of the in-stream work we expect to conduct. In other locations, small streams will be spanned, and larger rivers will be avoided. They won't be crossed. So we are not really anticipating a lot of in-stream work.
Q. But would a beaver pond be considered flowing?
A. (Carbonneau) Probably not if it's the part of the pond that's not flowing at the time.
Q. But wouldn't you agree it is flowing, though?

I mean, it certainly isn't stagnant.
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A. (Carbonneau) It could be.
Q. And that's what $I$ was just questioning. How would you deal with placing structures in a beaver pond?
A. (Carbonneau) Well, we've kind of discussed how work would happen in standing water. And we would look at that more as a standing water issue. The New Hampshire DES condition that talks about flowing water is mostly concerned with flows that are capable of moving sediment and material downstream. In a beaver pond, it's less likely -- it's more likely that the water is at least stationary enough so that your impacts are not going to immediately go downstream and smother trout. I think we previously testified about how we would like to conduct -- or how we would like to see work in standing water conducted, preferentially in the winter on ice, under frozen conditions, to the extent possible. And if not possible, the contractors will have to work to come up with a method that stays within the footprint of the permit. And it may, in shallow water, involve
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stacking timber mats. If it's deeper water than that, they may need some kind of floating support.

Okay.
MR. DRAPER: Well, I didn't even tell you that was my last question, but it was. CHAIRMAN HONIGBERG: Thank you, Mr. Draper.

We're going to need to break for the evening, for the weekend. We'll be back on Monday, starting at 9:00. I believe there's one more intervenor group, it's the Ashland to Deerfield Non-Abutters. And they'll go first.

Yes, ma'am.
MS. TOWNSEND: That'll be me?
CHAIRMAN HONIGBERG: Yes, that's you.
(Court Reporter inquiry)
CHAIRMAN HONIGBERG: Ms.
Townsend.
And then we'll do the
questions from the Subcommittee and then any redirect from Mr. Walker. With that, we will
\{SEC 2015-06\} [Day 19 AFTERNOON SESSION ONLY]\{06-23-17\}
[WITNESSES: MAGEE|VARNEY|CARBONNEAU|BARNUM|TINUS]
(Whereupon the hearing was adjourned at
[WITNESSES: MAGEE|VARNEY|CARBONNEAU|BARNUM|TINUS]

C ERTITEICATE
I, Susan J. Robidas, a Licensed Shorthand Court Reporter and Notary Public of the State of New Hampshire, do hereby certify that the foregoing is a true and accurate transcript of my stenographic notes of these proceedings taken at the place and on the date hereinbefore set forth, to the best of my skill and ability under the conditions present at the time.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action; and further, that $I$ am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in this action.

Susan J. Robidas, LCR/RPR
Licensed Shorthand Court Reporter Registered Professional Reporter N.H. LCR No. 44 (RSA 310-A:173)

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