STATE OF NEW HAMPSHIRE

## SITE EVALUATION COMMITTEE

October 25, 2018-1:44 p.m. 49 Donovan Street Concord, New Hampshire
\{Electronically filed with SEC 11/1/18\}
IN RE: SEC DOCKET NO. 2015-04
Application of Public Service Company of New Hampshire, d/b/a Eversource Energy, for a Certificate of Site and Facility.
(Adjudicative Hearing)

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE:

Patricia Weathersby
(Presiding Officer)
David Shulock, Esq. Elizabeth Muzzey, Dir. Charles Schmidt, Admin. Christopher Way, Dep.Dir. Michael Fitzgerald, Dir. Dept. of Env. Services

ALSO PRESENT FOR THE SEC:
Michael J. Iacopino, Esq., Counsel for SEC Iryna Dore, Esq.
(Brennan, Lenehan, Iacopino \& Hickey)
Pamela G. Monroe, SEC Administrator
(No Appearances Taken)
COURT REPORTER: Susan J. Robidas, LCR No. 44
\{SEC 2015-04\} [Day 14 MORNING ONLY] \{10-25-18\}



PROCEEDINGS
PRESIDING OFFICER WEATHERSBY: Good morning all. Welcome back to the adjudicative hearing for the Seacoast Reliability Project. Before we get to our witness, we're going to have a word from Attorney Dore concerning exhibits.

MS. DORE: Hello and good morning, everyone. So it looks like we're on schedule. And if we're on schedule, tomorrow looks like we may wrap up the adjudicative hearing portion. And after we finish, if we finish tomorrow, we will proceed to discussing exhibits, precisely which exhibits are in and which exhibits are not part of the record. In this regard, the parties should be aware that they should be ready to make the arguments about the exhibits that are or should not be part of the record and should be ready to present those arguments to the Presiding Officer. We also expect the parties to try to stipulate to the exhibits that should be part of the record and that are not in dispute so that they can become part of the record and no arguments will be presented. And
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we anticipate that we will hear the parties' arguments at the end of the adjudicative hearings. Okay?

PRESIDING OFFICER WEATHERSBY: Thank you. And we should remind you that you probably should be working on your briefs. Feel like my mother role came out there. Do your home work. [Laughter]

Okay. So if we could swear the witness in, please.
(WHEREUPON, JASON BAKER was duly sworn and cautioned by the Court Reporter.) DIRECT EXAMINATION

BY MS. DORE:
Q. Good morning, Mr. Baker. My name is Iryna Dore. I will help you to get your prefiled testimony in the record.
A. Good morning.
Q. Please identify your name for the record.
A. Yes. Jason Baker. I'm the owner of Fat Dog Shellfish Company, LLC.
Q. Mr. Baker, did you file prefiled testimony with the Subcommittee in this docket?
A. I did.
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Q. Did you file that as your Exhibit FDS1?
A. That's correct.
Q. And do you have any changes or amendments to that testimony today?
A. I don't have any changes.
Q. And do you swear to and adopt the testimony as your testimony today?
A. I do.

MS. DORE: The witness is ready for cross-examination.

PRESIDING OFFICER WEATHERSBY: Thank you.

Attorney Patch.
CROSS-EXAMINATION
BY MR. PATCH:
Q. Good morning, Mr. Baker.
A. Good morning.
Q. My name is Doug Patch. I'm counsel for the Town of Durham and UNH in this docket. I have a few questions for you.

First of all, in your testimony, and I'm looking at Page 1 -- actually, before we get to that, could you just remind the Committee of your educational background and your work
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experience.
A. Sure. So my educational background is primarily in marine biology. I have an undergraduate degree in biology from Gordon College, and I have a master of environmental management degree from Duke University, focusing on coastal environmental management. Prior to becoming an oyster farmer, I worked for 13 years for the State of Massachusetts doing coastal planning and habitat restoration work. And then before that I had a number of jobs doing wildlife management-type of activities. I have about 20 years of experience in coastal planning and environmental management.
Q. On Page 1 of your testimony, you indicate that oysters are filter feeders and that they draw nourishment exclusively from naturally-occurring plankton in the water column.
A. That is correct.
Q. And you went on to say that any interruption in flow or contamination by non-food particles can result in diminished growth and
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product quality; is that correct?
A. That is correct. So we really depend on food availability in the water column to get good growth out of our oysters. And the food that they're feeding on is tiny plants in the water column called phytoplankton.
Q. And is it generally true that oysters are good for the ecology of the bay?
A. Yeah, they're very good. In cases where there are excess nutrients in the water, which is most estuaries in the Northeast, like Great Bay and Little Bay, they filter those plants out and kind of convert those nutrients into less viable forms that kind of diminish the overall nutrient load to the water body. So in cases -- over-nutrient enrichment is called "nutrification." In nutrified water bodies, you see excess turbidity that inhibits the ability of plants that are on the bottom, like seagrasses, to grow. And so oysters are kind of restoring a balance to the nutrient cycling in the water column.
Q. And I have up here on the screen what's been
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marked as CLF, Conservation Law Foundation, Exhibit 26. And on Page 1 of this document -- is this a document you're familiar with?
A. I'm not familiar with this document.
Q. Well, $I$ want to show you a -- actually, I think it's the second sentence in the Executive Summary, where it says, "The loss of filtering oysters results in diminished ecological benefits for water quality, nitrogen control, and other services that healthy oyster populations provide." Do you agree with that?
A. I do agree with that, yes.
Q. In your testimony, you talked about two kinds of culture methods for oysters, one being the cage culture, and the other, bottom planting or bottom seeding; is that correct?
A. Yeah, that's correct. We employ both of those, primarily caged culture to start. We've been in business for about five years, and that's been our initial focus. But more and more we're finding that we can grow a higher quality oyster by spreading them
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directly on the substrate. So, more and more we're using that type of grow-out method.

PRESIDING OFFICER WEATHERSBY: I'm sorry to interrupt. If you could bring the microphone right close to you and speak right into it so we can all hear you. Thank you. BY MR. PATCH:
Q. And in the bottom planting culture, you said oysters of 1 inch in size are simply scattered on the mud substrate. Is that fair to say?
A. That is correct, yeah.
Q. And you said that oysters cultivated in this way are particularly susceptible to sedimentation; is that correct?
A. Yeah. Oysters grown both ways really can be susceptible to sedimentation. The oysters that are spread on the bottom, typically during the summer months when they're feeding, can kind of keep themselves clear of excess sediment. And then what we see in the winter when they stop feeding, when they kind of enter this dormancy period, is a thin layer of sediment that just kind of
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accumulates on the surface of the oysters. And I addressed this in my prefiled testimony as well. And then once the spring comes around and they start pumping and feeding again, they can actually just clear that sediment.

So there's this cycle that happens when, you know, summer months they're clear of that sediment; winter months, because of storms and excess turbidity, we kind of see a slight accumulation of sediment, and then they're able to clear themselves again in the spring.
Q. And I think in your testimony you referred to that as dormancy; correct?
A. Right. Yup. So the dormancy period begins around now, when the water temperature hits about 50 degrees. The oysters stop filtering, so they're not feeding and they're just respiring and enter this kind of hibernation period until the water temperature reaches 50 degrees again in the spring, usually sometime in early May.
Q. And I think you expressed a concern in your testimony that if a lot of sediment
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accumulates while they're dormant, that increases the risk of mortality; is that fair to say?
A. Yeah, it certainly would increase the risk. I don't have any quantitative data on what that critical threshold is for the amount of sediment accumulation. But certainly it's a concern if there's too much sediment accumulation, that the oysters may not be able to re-emerge in the spring as a result of increased pumping activity.
Q. And do oysters grow naturally in the bay?
A. They do, though their populations over the last few decades are in severe decline.
Q. And the oysters that grow naturally in the bay, would they also be more susceptible to sedimentation than those that are in the cages?
A. I'm not -- well, like I said, I think both the cage-grown oysters and the bottom-planted oysters are susceptible to excess
sedimentation because that sediment can also accumulate in the cages and there's a risk of mortality there. But the same risks that the
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bottom-planted oysters are exposed to would also apply to naturally-occurring oyster populations.
Q. On Page 3 of your testimony, you talked about how harmful bacteria could lie latent in submerged sediments, and once they are disturbed, oysters can take them in during their natural feeding or filtration process; is that correct?
A. Yeah, that's correct. So, fine sediments like those on the substrate in Little Bay are very good at binding to contaminants. And those contaminants can include metals or organic contaminants, and they can also include bacteria, which can just be kind of sitting on the bottom, bound to those particles. And it's pretty well documented in the literature that disturbance of that sediment can disperse bacteria into the water column, like fecal coliform. And fecal coliform is the indicator bacteria we use to determine whether an oyster is safe to eat or not.
Q. And what about pathogens? Is there also a
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risk from pathogens?
A. Yes. So, fecal coliform is kind of the proxy for bacterial pathogens in the water. So, fecal coliform is kind of a group of bacteria that grows in the gut of mammals. So we know if there's a lot of it in the water column, that's associated with, you know, sewerage or other types of contaminants. So, fecal coliform is kind of an indicator for other pathogens being in the water column.
Q. And what about, are you familiar with Dermo and MSX?
A. Yes. Dermo and MSX are diseases that are not a public health risk, but they're a risk. They cause mortality in oysters over time.
Q. Now, you expressed a concern that if a lot of sediment accumulates while they are dormant, that increases -- I'm sorry. We already went over that.

I want to show you what has been marked as CLF Exhibit 24. It's an announcement from the New Hampshire Department of Environmental Services and the Fish \& Game Department about shellfish harvest rules in Little Bay and
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Bellamy River from October of this year through March of 2019. Are you familiar with this?
A. I am. This looks like it is the new winter closure that DES has just implemented for parts of Little Bay. Is that correct?
Q. I believe that's correct. And it indicates that new harvest closures are being imposed due to recent findings of water-quality impacts from the Portsmouth wastewater treatment facility. Is that fair to say?
A. Yeah, that's correct. So, DES has in recent years undertaken some new monitoring efforts to look at viral pathogens associated with wastewater treatment plants. And this is actually something happening all around the country. And they found that in Upper little Bay, which is the portion of Little Bay furthest away from the proposed project, the viral concentrations, the indicator viruses, are too high to remain open during the winter months. And those viruses tend to persist
longer in cooler temperatures. So in Lower
Little Bay, it was determined that it's still
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safe to harvest throughout the year. Some of the growers in Upper Little Bay are moving oysters to Lower Little Bay during the winter months so that they can continue to harvest.
Q. So it's fair to say that one of the implications of that closure is that oyster farmers in Lower Little Bay will not be able to harvest during this period of time.
A. That's correct.
Q. And is one of the options for farmers in the seasonally closed area to move their operation, I think you just said it, but into the upper bay because that's essentially a direction that brings them closer to where pollutants from the -- well, let me ask it this way. I mean, I think you've already said that, that farmers generally would be moving to Upper Little Bay.

And what about the jet plowing area?
Can you explain to the Committee how that relates to where this closure is?
A. Yeah. So, several farmers in Lower Little Bay, which is kind of backwards because it's the northern part of Little Bay --
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Q. I think it's on the map here, you know. And I have it up on the screen. May not be the clearest. But you say Lower Little Bay is to the south -- I'm sorry -- to the north, actually --
A. That's right.
Q. -- and Upper Little Bay is to the south. That's what makes it confusing.
A. Right. So Lower Little Bay is closer to the Portsmouth wastewater discharge. And that's the area that's been closed for the winter. So several farmers, oyster farmers in Lower Little Bay have already moved a number of their -- much of their gear to Upper Little Bay -- and my farm is one example of that -so they can continue to harvest throughout the summer. So it moves them away from the wastewater discharge in Portsmouth, but closer to the proposed jet plow area in Upper Little Bay.
Q. And so this closure essentially, you know, pushes farmers to find another place, and that other place is actually closer to the proposed route of the cable here; correct?
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A. That's correct.
Q. On Page 3 of this document, there's a map which indicates that DES is announcing an expansion of areas open for harvest in Little Bay for part of the next two years; is that correct?
A. That's my understanding, yes.
Q. And from this map, it appears that the restricted area north of Adams Point will be substantially reduced in size, opening new acres of harvest; is that fair to say?
A. That is my understanding from informal
conversations I've had with New Hampshire Fish \& Game. I haven't talked to DES specifically about this. So I would defer to them on the exact nature of that expansion.
Q. That appears to be right where, or at least in close proximity to where the cable project is being planned; is that fair to say?
A. That area is closer, yes.
Q. Now, if the Project is approved and the cable is laid in the bed of Little Bay, what is your understanding of whether there will be some kind of temporary and/or permanent
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| 1 |  | restrictions on the location of any activity, |
| 2 |  | like moorings and oyster farming, in the area |
| 3 |  | that will be taken up with the cable |
| 4 |  | crossing? |
| 5 | A. | I think I would have to defer to DES and Fish |
| 6 |  | \& Game on any restrictions they would put in |
| 7 |  | place on moorings or licensing new oyster |
| 8 |  | growing areas. |
| 9 | Q. | But fair to say you wouldn't be putting those |
| 10 |  | on top of concrete mattresses, would you? |
| 11 | A. | Probably not. |
| 12 | Q. | So is it fair to say that this project will |
| 13 |  | cause further restrictions on oyster farms in |
| 14 |  | an already small available area? |
| 15 | A. | Again, that is really up to the licensing |
| 16 |  | agencies. I'm not sure exactly how they |
| 17 |  | would restrict the availability of new |
| 18 |  | licenses and exactly what bearing this |
| 19 |  | project would have on new licenses. |
| 20 | Q. | Now, is it true that no oyster farming is |
| 21 |  | allowed in Great Bay? |
| 22 | A. | That's correct. |
| 23 | Q. | That's because of an MOU with NOAA for the |
| 24 |  | Great Bay National Estuarine Research |

## Reserve?

A. Yeah, there are a number of research reserves around the country. I don't know exactly how many, but quite a few. Just about every coastal state has one. It's my understanding that aquaculture is prohibited in most of those due to that national research reserve designation.
Q. On Page 5 of your testimony, you suggested ways in which the Project impacts could be mitigated; is that correct?
A. That is correct.
Q. And they included choosing an alternate dredging technology, dredging during the growing season, implementing sediment control protocols. And then you had one that was finding an alternative route; correct?
A. Correct.
Q. I want to show you what's been marked as

Newington Exhibit 7, which is a map that shows alternative routes that Eversource had considered. This is from a presentation they made to, $I$ believe it was the Newington Planning Board, in 2015.
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Now, if they chose either the northern route as it's marked here or the southern route, not the red line through the middle which is the proposed route, if they choose either of those alternatives, would that avoid the impact to oysters and the overall ecosystem in the bay?
A. Yes, it's pretty clear that that would mitigate many, if not all of my concerns.
Q. Thank. I appreciate your answers.

PRESIDING OFFICER WEATHERSBY: Next
examiner will be Attorney Geiger for the Town of Newington.

QUESTIONS BY MS. GEIGER:
Q. Good morning, Mr. Baker. My name is Susan Geiger. I represent the Town of Newington.
A. Good morning.
Q. Mr. Baker, on the first page of your prefiled testimony, you indicated that the owners of your company, Fat Dog Shellfish, anticipate that the proposed jet plow and diver dredging operations associated with this project are likely to adversely impact your operations. Is that your testimony?
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A. That's correct.
Q. Have you discussed your concerns with Eversource?
A. I have, yes.
Q. And what has Eversource responded?
A. We had a meeting about a month ago, maybe six weeks ago, and Eversource has proposed a few mitigation options for me that address -- may address some of the short-term impacts of the Project. And they include things such as providing a refrigerated storage unit so that I can harvest prior to jet plow operations and store oysters for harvest. They include cleaning, helping to clean the cages post-project to clear some of the sediment, and then submitting claims for any subsequent losses.
Q. And have these offers by Eversource met with your approval? Do you agree with them?
A. I would say they are an appreciated but partial approach to addressing some of the short-term concerns, and they come with some significant logistical challenges.
Q. So it sounds to me, and correct me if I'm
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wrong, that you have not reached a final agreement with Eversource on an arrangement that would address the concerns that you have about the Project's impacts to your business.
A. That is correct.
Q. Okay. I believe that you indicated that Eversource has offered to provide you with a claims submission process; is that correct?
A. There was a claim submission process that was mentioned, but it was not clear what that process would be like.
Q. Has Eversource offered to compensate you financially for any lost revenues or inconvenience associated with the Project?
A. No, there's no mention of direct compensation.
Q. So I believe you indicated that the offer that you just described from Eversource partially addresses some of your concerns about short-term impacts. Do you continue to have concerns about this project on your business, the effects of the Project on your business?
A. I do, yes.
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Q. And those concerns are outlined in your testimony; correct?
A. Correct.
Q. Do you have any additional concerns based on your knowledge, experience, you know, with marine biology, and obviously as an oyster farmer, that have not been expressed in your prefiled testimony that you'd like to indicate to the Committee?
A. My feeling is that $I$ have captured kind of the universe of my concerns fairly well in the prefiled testimony.
Q. Okay. I believe, yes, on Page 3 of your prefiled testimony, you've indicated that following a significant rainfall event, the New Hampshire Department of Environmental Services closes Little Bay to harvest until testing shows that fecal coliform bacteria has dropped to safe levels which are set by federal water quality standards. Do you recall that testimony?
A. Yes, I do.
Q. Could you explain or just tell us how many times over the past, say two to three years,
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DES has actually closed the bay to harvesting based on a rainfall event?
A. Sure. I don't have the exact numbers. And it's highly variable from year to year. So if we have a very dry summer, we may not have any rainfall closures. If we have lots of thunderstorms or a more tumultuous weather year, we can have more closures. This year I believe we've had three to four rainfall closures, and those closures have lasted somewhere between 3 days and 10 days, based on sampling results. I believe the last closure we had was in late September, and that was a 10-day closure.
Q. Your testimony goes on after that statement to say that it's your understanding that DES will treat the dredging phase of this project as a post-rainfall event and will be testing the waters to ensure that there's an acceptable level of bacterial contamination; is that correct?
A. Yeah, that's correct. Based on some informal conversations I've had, it's my understanding that DES will be sampling post-jet plow run
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to ensure that fecal coliform levels are within safe ranges. If not, there would be further testing similar to a post-rainfall event that would be necessary in order to reopen the waters to harvesting.
Q. And how would you be notified of the results of DES's testing after the dredging or during the dredging process for this project?
A. So, prior to every harvest I have to get approval from the DES Shellfish Program. And that approval would include their understanding that the water bodies are safe for harvest. So that would be the most immediate way that $I$ would learn about the results. In terms of how else they might communicate those results, I'm not sure.
Q. But is it fair to say that in the event that DES does notify you of unacceptable test results, and notifies you that you do have to close your operation for some period of time, that this would result in some lost revenues to your company; is that correct?
A. Yes, that's correct.
Q. Thank you for your testimony.
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[WITNESS: BAKER]

PRESIDING OFFICER WEATHERSBY: I don't see Mr. Irwin or Ms. Ludtke. Is there anyone here for the Conservation Law Foundation?
[No verbal response]
PRESIDING OFFICER WEATHERSBY: Then we'll move on to Durham Residents, Attorney Brown. I don't see her either. Anyone here for the Durham Residents?

MR. FITCH: Durham Residents have no questions.

PRESIDING OFFICER WEATHERSBY: SO Durham Residents have no questions.

Counsel for the Public, Mr. Miller.
MR. MILLER: Thank you, Madam Chair. QUESTIONS BY MR. MILLER:
Q. My name is Matt Miller. I'm representing Counsel for the Public. Good morning, Mr. Baker.
A. Good morning.
Q. So $I$ just want to ask a couple questions about the additional 9 acres that were licensed after the original 4.5.
A. Right.
Q. So that additional 9 acres is to the west and
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[WITNESS: BAKER]
south of your original farm?
A. Correct.
Q. Are those additional 9 acres in use?
A. They are in use. My primary site is still my original site where I keep most of my gear.

The farm to the south, the 4-1/2-acre
licensed area to the south is being used for overwintering oysters. So during the winter months we move all our gear from shallow water, all of our cages to deep water to get under the reach of the ice basically in the winter. There's a deep water edge that runs along that licensed location that I use during the winter months. That southern site is also being used to host some of those other farmers that were affected by the Lower Little Bay closure related to the wastewater outfall.
Q. So is the new 9 acres closer to the Project than the original farm?
A. Four and a half of those 9 acres are closer, are south of my original farm.
Q. Okay. Thank you. So I want to turn to some of the concerns that you raised in your
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prefiled testimony about the Project and just dig into those a little bit.

So one of your concerns is that you would have to temporarily close the farm due to bacterial contamination; is that right?
A. That is a concern. Not a guaranty, but a concern.
Q. Do you have any sense of the likelihood of that happening?
A. I really don't. It's common for those indicator bacteria that we've been talking about to bind to fine particles. But there's really no way of knowing whether they're present until sampling occurs.
Q. And if that were to occur, what would the effect be on your farm?
A. So there would be -- as we have discussed, there would be an immediate closure once the levels are deemed unsafe. And then DES would have to re-sample in order to document whether fecal coliform levels drop to safe harvest limits. So the closure can last anywhere from three days to indefinite, until those fecal coliform levels drop again.
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Q. So you're also concerned that you would potentially need to suspend sales due to sediment accumulation and also that your oysters could die because of sediment deposition?
A. Yeah. So the suspension of sales, we've had a few occasions, very rare over the last five years, where the water will become very turbid because of a storm event or a rainfall event. Because the oysters are filter-feeding, they're taking in those sediments. So the oysters will really be too gritty to sell, and so we have to wait for the water to clear. And the oysters will continue pumping and will clear that water and expel that grit over time. So if there's a persistent sediment plume, I would expect that the oysters may become gritty as a result of that plume.
Q. So that would result in lost oysters and presumably lost revenue?
A. That wouldn't necessarily result in lost oysters. It wouldn't result in mortality necessarily. But the suspension of sales
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could result in lost revenue, yes.
Q. So there would be a way to clean the gritty oysters?
A. We wouldn't clean them. They would clear themselves once the water column becomes clear again.
Q. Okay. So you also mentioned the possibility of overwintering mortality due to sediment deposition and anoxia?
A. Yeah, that's right. So as I mentioned previously, both cage-grown and bottom-planted oysters will accumulate that sediment over the winter months because the water tends to be more turbid anyway, and they're not pumping. They're not filtering to clear that sediment. So the oysters that are grown in cages, we see those cages start to fill up with sediment over the course of the winter. Typically that's a level of sediment that they can tolerate and recover well from in the spring. The concern is that an excess sediment load could be too much that they're able to recover from. In rare cases, as I outlined in my prefiled
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testimony, that sediment load will be so much inside of the cages, that the mud will become anoxic. And that's toxic to the oysters and will actually kill the oysters. It's very rare under kind of the current sediment loads that we've seen. But the concern is that if we're adding additional sediment, it might get us over a tipping point where oysters can't survive and recover. Same for the bottom-planted oysters. Right now they can recover from the typical winter sediment load. I'm concerned that an additional load may be more than they can recover from.
Q. And you said that this mortality currently occurs in, you said it's rare, in one cage per 100?
A. That's my best estimation. It's a few of my 350 or so cages. We see it in only a few cages each spring.
Q. And if that increased following construction of the Project, how would you know that it was a direct result from that construction?
A. If I saw, you know, a higher percentage, if I saw 20 percent mortality in 20 percent of my
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cages or more, I think it would be safe to attribute that to an excess sediment load if it's a typical winter.
Q. And lastly, you mentioned that you're worried about loss of your crop due to contamination by legacy pollutants.
A. That's correct.
Q. And you stated that while Eversource has tested for contamination in 12 locations in Little Bay, they were unable to target the depth of the jet plow?
A. That's correct. And it's my understanding that since I filed the testimony, Eversource has changed the target depth of the cable lay to address some of those concerns.
Q. Okay. What kinds of pollutants do you suspect are in the bay?
A. We know from the testing that Eversource has done that there are elevated levels of arsenic and copper. And that's my understanding. Estuaries in New England have a history of industrialization, so there's a whole suite of contaminants associated with past industrial practices that could be
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present in the bay.
Q. And if additional pollutants were released, how would you detect them?
A. So under the recommendations of DES, there's a requirement for the testing of that suite of industrial contaminants. So there will be some pre- and post-testing of oyster meats and possibly other shellfish meats that will detect those contaminants and any elevation in those contaminants post-project.
Q. Okay. Thank you.

So I'd like to move on to one of the issues regarding assessment of the impacts from the Project. So, currently, Eversource is planning to install monitoring stations along the edge of the mixing zone. But the boundaries of the mixing zone are changing. And there most likely will not be a monitoring station directly at your farm. Is a monitoring station in the vicinity of your farm acceptable, or is a station at your site necessary?
A. One of the things $I$ recommended in my prefiled testimony was setting up a
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monitoring station. I called it an "oyster farm in miniature" at the southern boundary of my current site so that we could objectively assess the impacts of the proposed project.
Q. So $I$ want to turn back to something that Attorney Patch mentioned about dredging, the preferability of dredging during the growing season.

So, under the Applicant's proposal, dredging in Little Bay would occur in September or October. In terms of effects on your farm, is there -- is either September or October preferable? What time frame would be best for your farm?
A. It's tough to say because September and October are -- that's the transition period when we're going from active pumping to dormancy. So we don't know exactly when that dormancy period will -- it depends on the ambient air temperatures. So if the project occurs while the oysters are pumping, I would say we're more likely to see short-term impacts, where the oysters may be consuming
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those sediments and result in a short-term suspension of sales. If the Project occurs during the dormancy period, I would say there is a greater risk of that excess sediment load causing mortality in the oysters. So I think if the Project is occurring earlier, while the oysters are actively pumping, we reduce our risk of mortality related to the Project, but we have more risk of short-term suspension of sales. And then vice versa during the dormancy period.
Q. So lastly I want to turn back to CLF Exhibit 24. Okay. So this is the announcement from DES and Fish \& Game about the areas that will be closed to harvesting.

So you mentioned that part of your farm had to move in anticipation of this closure?
A. Not part of my farm. My farm is not in the closure area. But there is one other farm, a farmer in Upper Little Bay, who has moved his gear to my farm to remain in the open status.
Q. Okay. Thank you for clarifying.

So this red area right there, that
includes the route of the cable; is that
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right?
A. That's right. Yes.
Q. And that area was already closed to harvesting before this announcement from the DES?
A. Yes. It's my understanding that remains closed.
Q. Okay. Thank you very much for your time, Mr. Baker.

PRESIDING OFFICER WEATHERSBY:
Attorney Needleman or...
QUESTIONS BY MR. DUMVILLE:
Q. Good morning, Mr. Baker. As you know, we've met several times, and I represent the Applicant.

MR. DUMVILLE: Dawn, can we please pull up Applicant's Exhibit 255, please. BY MR. DUMVILLE:
Q. Mr. Baker, what I'm showing you here is a compilation of the outreach that has gone on between Eversource and yourself. And if you take a second to look at it, I think we began outreach -- or the Applicant began outreach with you in July or so of 2015. Does that
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sound about right?
A. It does, yes. I attended a technical session I believe that was hosted or put on by your consultants to provide an overview specifically to oyster farmers on the Project.
Q. I think there was a meeting in September of 2015. I think that's probably what you're referring to. Does that sounds about right?
A. I think so, yes. I don't know the exact date, but...
Q. And you've attended another meeting, I believe, with the Applicant and Fish \& Game probably in around January of 2016. Does that sound about right?
A. I have only -- there may have been more meetings, but $I$ only attended one, and it was at the Fish \& Game offices. And I may be just not remembering the date correctly.
Q. Okay. And this past summer, in July, we had a technical session. And we asked you whether you'd be willing to meet with Eversource to go over some of your concerns.

Do you recall that?
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A. Yes, and we did meet.
Q. Right. We met in August of this past year; correct?
A. Correct.
Q. And following that meeting, Eversource sent you a letter dated October 9th. Do you recall that letter?
A. I do. Yup.
Q. And I believe that's Applicant's Exhibit 256.

We'll come back to that in a minute.
So as we've discussed today, you've raised concerns in your prefiled testimony about the impacts of jet plow on your oysters. Have you conducted any studies or specific assessments to substantiate some of your concerns?
A. No, I have not.
Q. And were you present during the Applicant's testimony from the environmental experts?
A. I don't believe so.
Q. And when you -- prior to harvesting, I think we heard today that you generally rely on DES for conducting sampling for bacteria in the water; is that right?
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A. Absolutely. Yes. Hundred percent.
Q. You don't do any of that yourself.
A. We do not.
Q. And am I correct that you typically do not sample the amount of sediment in the water column?
A. No, we don't do any quantitative water quality testing or monitoring.
Q. Okay. And we discussed a little bit today, also, I believe Attorney Geiger asked you some questions about closures in Little Bay due to bacteria. And you've raised some concerns in your prefiled testimony at Page 4 about closures and your concerns. And I think at the technical session you said that you haven't done any specific analysis of the potential presence of bacteria in the sediment; is that right?
A. That's correct. Yes.
Q. And we also discussed today and at the tech sessions about certain rainfall events. And I believe you said earlier you couldn't recall the exact number of closures in Little Bay.
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MR. DUMVILLE: So, Dawn, could we pull up Exhibit 257, please.

BY MR. DUMVILLE :
Q. This is a response to a data request that we asked you to provide the list of closures of Little Bay over the last few years. And, you know, there are at least 10 or 15 here over the last couple years.
A. Yeah.
Q. Do you recall responding to this list?
A. I do. Yes, that's my -- that is a
communication I forwarded from DES.
Q. And there have been a few others since the end of this list. March of 2018; right? Three to four I think you said?
A. Yes, roughly.
Q. So it's fair to say that the closure of Little Bay, that you're familiar with those closures and have experience dealing with those closures?
A. Absolutely, yes.
Q. And those closures in the bay are generally due to the presence of bacteria; isn't that right?
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A. Yes, almost always.
Q. And at the tech session I asked you, in the past have you lost any oysters due to the presence of bacteria, and I believe your answer was no; is that right?
A. That's right. We don't actually lose oysters. They don't harm the oysters at all. But what I do lose is sales.
Q. Right. And have you had a chance to review the final permit issued by the DES in this?
A. I have, yes.
Q. So you're aware that Wetland Condition 45 requires the Applicant to develop a water-quality monitoring plan?
A. Yes.
Q. And that requires the Applicant to test for turbidity as well as fecal coliform and other bacterias?
A. Right.
Q. Okay. And that plan requires the Applicant to, in real-time, test turbidity. And to the extent there are issues with turbidity, the operations must stop; correct?
A. That's my understanding, yes.
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Q. So in your testimony, you raised concerns about sediment in the water column. And that's the middle of Page 4 of your testimony. And we talked a little bit today about the two different ways that you harvest oysters, right, the cages and the bottom planting?
A. The two ways $I$ grow them, yes.
Q. Sorry. Grow.
A. Yeah.
Q. And I believe in your testimony, at the top of Page 3, you said that for cage growing, the oysters tend to accumulate with sediment because of the increased sediment suspension due to more turbulent weather conditions and ice scour. Does that sound familiar?
A. Yes. Yeah.
Q. And then in the springtime you clean out your cages; right?
A. That's correct.
Q. Okay. And for the bottom planting, I believe you said in response to a data request that over the winter you can experience approximately an eighth of an inch of
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sediment?
A. Yeah, and that is just my best approximation. I always refer to it as a "dusting" of sediment.
Q. Right. And generally in your experience, the sediment covers the oysters in the winter and they re-emerge in the spring; right?
A. Correct. Yup.
Q. So you would agree with me, then, that oysters naturally experience accumulation of sediment and are able to escape; correct?
A. Yes, under normal conditions. That's correct.
Q. In your experience, oysters also process out the sediment eventually; correct?
A. Correct.
Q. And in the past, my understanding is that over the winter period most of your crop loss, if any, is normally due to freezing temperatures coinciding with high winds and negative tides; correct?
A. That is correct.
Q. Not due to sediment; right?
A. Right.
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MR. DUMVILLE: So, Dawn, just quickly, I'd like to pull up Applicant's Exhibit 104, which is the Revised Modeling Sediment Dispersion from Cable Burial in Little Bay, which is dated June 30, 2017.

BY MR. DUMVILLE :
Q. And I want to draw your attention to the figure on Page 50, which shows the bottom deposition thickness due to jet plowing for the combination of all three cable routes, assuming that the sediment remains in place from all three cable lays. And have you seen this before?
A. I believe I have, yes.
Q. And is it fair to say that your oyster farms are generally to the north and west of that little green dot there?
A. Yes. Yeah.
Q. Fair to say that this model does not actually show any sediment covering your oysters?

MR. FITZGERALD: Excuse me. Could you just demonstrate where your oyster farm is on this?

THE WITNESS: Sure. Yeah.
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(Witness indicating)
BY MR. DUMVILLE:
Q. It's the island at the top left?
A. Yeah. So we're generally... it's really kind of under this key here. But the farms are generally in this area here, if I'm reading it correctly.

MR. FITZGERALD: And what is the distance to the --

THE WITNESS: It's about a thousand meters to the proposed cable crossing.

MR. FITZGERALD: Thank you.
BY MR. DUMVILLE:
Q. And if $I$ 'm reading this map correctly, the bright green shows .1 to .5 of a millimeter sediment accumulation over all three cable lays; right?
A. Yes, that's how I read it.
Q. All right. And the color is not actually over your oyster beds; correct?
A. That is correct.
Q. Okay. So assuming the model is accurate, it's fair to say that the sediment
accumulation from this project is not
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expected to cover your oysters; is that fair to say?
A. I'm not sure that's entirely fair. But we know that there will be a sediment plume -and that's captured by the models -- that does reach my farm. So there will be some amount of additional sediment accumulation resulting from that plume.
Q. But the bottom thickness won't increase any further based on this specific map; correct?
A. It may be outside of the bounds of the model, but there will be some additional sediment accumulation on the bottom.
Q. Okay. And to the extent that there is sediment deposition, I believe you've raised concerns about mortality of oysters due to sediment deposition as well as over the winter. And generally your concern, I believe, is that if you don't clean the cages quick enough and the mud goes anoxic, the oysters are in trouble.
A. That's correct.
Q. Okay. And based on the letter that we had sent you --
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MR. DUMVILLE: And Dawn, can we pull up Applicant's 256, please. Those three bullets in the bottom there, can we highlight that, please?

BY MR. DUMVILLE :
Q. And in the second bullet here, my understanding is that Eversource has committed to provide advanced cleaning in the late fall of any of your cages or oysters if it is shown that sediments have been deposited over your oysters; is that fair to say?
A. That is correct, yes.
Q. Okay. And then the time of year issue that we discussed a little bit earlier, my understanding is that you had suggested in your prefiled testimony that the installation should be done May through October; right?
A. Yeah, that's correct. And that's basically the choice between seeing short-term impacts versus long-term mortality impacts.
Q. Okay. And so you're also aware, based on the current schedule and the testimony, that the installation of the Project is anticipated in
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Little Bay from September and October?
A. Right.
Q. Okay. You also discussed a little bit with some of the prior questioners some of the new aquaculture licenses that are -- or the new -- the location of oyster beds due to some of the closure; right?
A. There are new licenses that are not associated with the closure. So there's two things. There have been a few new licenses issued even south -- or one new license issued south of my farm, and then there's the closure issue where gear is being moved from other farms to my location.
Q. Right. And I believe as part of that, is it fair to say that the oyster farmers and New Hampshire Fish \& Game have to work together in order to make that move happen?
A. Yes. Absolutely.
Q. And you're aware that the Applicant and DES and New Hampshire Fish \& Game are all coordinating with the oyster farmers as well; right?
A. DES and New Hampshire Fish \& Game are
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coordinating with the oyster farmers. I'm not aware of the Applicant coordinating with the oyster farmers, other than me.
Q. Okay. So you aren't aware of the communications that the Applicant's had with the other oyster farmers about this project.
A. I'm not.
Q. Okay.
A. Other than the meetings we've discussed.
Q. And it's fair to say that before those moves occur, or before a new license is issued, an oyster farmer must receive a license from Fish \& Game; right?
A. That is correct. Yes.
Q. So it's fair to assume that New Hampshire Fish \& Game, with knowledge of this project, would work with the oyster farmer?
A. Yes. The New Hampshire Fish \& Game issues the license, so they are in constant communication with applicants.
Q. Okay. And I'd just like to discuss one other thing that you mentioned a little while ago about the turbidity plume moving to temporarily occupied space where your oyster \{SEC 2015-04\} [Day 14 MORNING ONLY] \{10-25-18\}
farms are.
A. Yeah.
Q. And you said you reviewed the New Hampshire DES final permit; right?
A. I have, yes.
Q. And are you familiar with the mixing zone requirement in the permit?
A. Not intimately, but I'm aware of it.
Q. Okay. So would it alleviate some of your concerns that the mixing zone shall not include any portion of an aquaculture site that has aquaculture product in the water during and up until 24 hours following jet plowing and hand-jetting activities?
A. I don't. My understanding is that doesn't really relate to my farms or my licensed locations because I'm not within the mixing zone.
Q. Okay. You would agree the DES final permit also requires notification to all aquaculture farmers at least 14 days prior to the cable installation; correct?
A. Yes, I did know that.
Q. And there's the shellfish monitoring program
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that is required as part of the DES permit?
A. Right.
Q. And that includes a requirement that the Applicant submit a plan to DES prior to the installation?
A. Yes.
Q. And that includes sampling pre- and post-installation?
A. Right.
Q. And you have agreed to participate in that sampling; correct?
A. I have, yes.

MR. DUMVILLE: Dawn, can we go back -oh, we're already here actually.

BY MR. DUMVILLE:
Q. So to the extent there is cleaning that is required, the Applicant has offered to help you with that cleaning; right?
A. Yes. Yup.
Q. I believe you said earlier that you're still interested in finalizing plans with the Applicant on that; right?
A. Yeah, I am. Yes. There are some logistical challenges to what's been proposed.
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Q. And those logistical challenges, assuming, can be worked out with Eversource?
A. I'm not sure they can because of the timing of the proposed cleaning that would be needed. It's during the winter months when oftentimes the farms are not accessible due to ice.
Q. Well, the Project is expected to have completed its installation by the end of October; right?
A. Jet plowing? I'm sorry. The diver dredging I think will still be going on into later in the fall; is that correct?
Q. My understanding, and the record can obviously speak for itself at this point, the installation of the cable project will be done by the end of October. So assuming that is the correct timing, does that alleviate any of your concerns with the cleaning of the cages?
A. Yeah, there would be an opportunity to clean cages post-project if everything is truly wrapped up by the end of October.
Q. Okay. And that's something we can work out
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with you as part of our further discussions?
A. Sure.
Q. Okay. And there was some issues raised about to the extent that shellfish stock loss does occur. You're aware that the Applicant and Counsel for the Public have entered into this record here a proposed mitigation and dispute resolution conditions?
A. I was not aware of that.
Q. Okay. Well, we can provide you with a copy of that afterwards. And we're also working on a formal claim process with Counsel for the Public. Would it be helpful for us to send you a copy of that as well?
A. It would, thank you.
Q. Okay. And my understanding generally is that for your harvesting of oysters, you generally rely on DES for the closures -- or for testing of bacteria. So it's fair to say that DES generally does a good job of implementing its rules and regulations in confirming that all oysters are safe to eat?
A. Yes, they do.
Q. Do you have any reason to doubt DES's ability \{SEC 2015-04\} [Day 14 MORNING ONLY] \{10-25-18\}
to monitor and work with the Applicant on water quality for this project?
A. Not water quality related to closures.
Q. And at the technical session, I believe I asked you whether there were any other mitigation measures or issues you would like to see implemented with DES. Are there any?
A. Just those that I've outlined in my prefiled testimony.
Q. Okay. And have you raised any of those concerns specifically with DES?
A. I've had some informal conversations with DES about these concerns, yes.
Q. So fair to say DES is aware of your concerns?
A. Yes.
Q. Thank you very much, Mr. Baker.

PRESIDING OFFICER WEATHERSBY: Thank you, Mr. Dumville.

Questions from the Committee? Mr.
Fitzgerald.
QUESTIONS BY SEC MEMBERS AND COUNSEL:
BY MR. FITZGERALD:
Q. Good morning.
A. Good morning.
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Q. Thank you for your testimony.

Your prefiled testimony had a statement that indicated that there was no precedent for this type of project in a sensitive area, such as Little Bay. What is that based on? We've had a lot of testimony that jet plowing is very common in many other estuaries that have been designated as national significance and so on. What's the basis for your comment that there's no precedent for this? Did you look at installations?
A. Yeah, I haven't done a formal review, but I'm not aware of any jet plow projects that have occurred in such close proximity to an oyster farm. But that's just based on my general understanding of the issue.
Q. Okay. You also indicated that the Applicant had not discussed compensation with you. But I believe Mr. Dumville just explained the claims process and so on. I assume that that would resolve that concern for you if there's a claims process that Counsel for the Public and the Applicant agreed to?
A. It helps. It doesn't necessarily resolve
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concerns from a business perspective, because if I have an interruption in supply, that will result in me losing all of my customers. So, other than the financial losses, it will be a major setback for my business in kind of regaining those customers that I've accumulated over the last five years.
Q. Okay. So you had a lot of testimony regarding sedimentation. And I don't know if you were here Tuesday, but we had some discussion and testimony that the sedimentation for this project would be on the order possibly of 1500 tons, and obviously limited in the area that the modeling shows, as opposed to more than 9,000 tons per year from natural
sedimentation processes. So would you -- and
I guess that gets at natural would also involve storms --
A. Right.
Q. -- and so on. So would you expect this project, with its rather narrow and limited scope, and based on the map that we just put up here and so on, to be more significant or
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greater potential harm than large storms from a sedimentation standpoint?
A. Yeah, so I think the danger of comparing this project to an annual sediment load is, you know, we're talking about dispersing X -number of tons of sediment into the water column over a number of weeks or days versus stretching that out over the course of a year. So in terms of, you know, comparing this amount of sediment being dispersed into the water column to a big storm, it's not really for me to be able to say how they compare. I'm sure there's someone more qualified than me. But $I$ know there will be dispersal of many tons of sediment into the water column over a very short period of time.
Q. Are you aware of plans for a trial run?
A. Yes.
Q. If the trial run is conducted and the sediment modeling impacts are confirmed, would that help alleviate your concerns for the major project?
A. It would help to alleviate concerns. One of
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the things we talked about in our meeting in July was concerns I also have about the diver dredging and kind of a longer term, more consistent load that's being dispersed into the water column. So the jet plow is only one aspect of the Project that will be dispersing sediment into the water column. So what the modeling doesn't really address is what the impacts of that plume that is being modeled, assuming that model is correct, will be on an oyster form. So, just kind of numbers and duration of the plume, we haven't seen that type of plume before, I don't think, from a concentrated sediment dispersal event. So there's just a lot of uncertainty in terms of how the oysters will respond from kind of a oyster quality perspective over the short term and how they will respond to being confined to our gear over the long term.
Q. So it's your opinion that the diver hand-jetting operation will create more sediment than the jet plow dredging?
A. No, not that it will create more, but it will
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be a more sustained period of turbidity. And how that turbidity could affect the oysters is an unknown, but it's a concern that I have.
Q. What do you mean when you say "more sustained"? I mean, it's a relatively short length on both -- well, you would only be affected by that which occurs on the western end; correct?
A. I'm not sure that's correct. I think that plume -- I think the diver dredging occurs over the course of weeks. And a steady plume of sediment could make the entire bay more turbid.
Q. Okay. How do you actually -- what's the operation? How do you clean the beds?
A. So in the cage culture -- the oysters that are planted on the bottom, we don't touch at all until we harvest them. So there's no cleaning involved there once they're spread on the bottom at about 1 inch in size.

The cage-grown oysters are moved to deeper water in the winter for the winter months. And as we're moving them in the
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spring from the deeper water to shallower water, we're cleaning the mud out of the cages with utility pumps, with gas-powered pumps.
Q. So, like flushing water over them?
A. Exactly.
Q. Is that -- okay. And you have to conduct that routinely after storm events?
A. Once a year.
Q. Oh, just once a year?
A. Yeah, once a year. Yeah. So that sediment just accumulates over the winter months because there's more natural sediment occurring in the water column and because the oysters are dormant. So once we clean them out in the spring, the oysters are pumping again, the water column is less turbid. So that mud doesn't accumulate until we move them to deeper water again the following fall.
Q. Okay. I believe you testified that there was -- that related to certain events that you had -- I think you expressed it as 1 in 100 or, you know, roughly 1 percent --
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A. Right.
Q. -- mortality, was that related to bacteria or sedimentation?
A. That's the natural sediment load during the winter months.
Q. Natural sediment load?
A. Yes.
Q. Okay. Do you maintain any records that would help to establish a baseline, so that if you experienced significantly greater sedimentation and it went up to 10 percent or something, I mean do you have records that would establish a baseline?
A. Unfortunately, $I$ don't have those records. It's all just recollection and informal observations.
Q. Okay. Thank you very much.

PRESIDING OFFICER WEATHERSBY: Mr.
Schmidt.
QUESTIONS BY MR. SCHMIDT:
Q. Good morning. Couple of questions.

The additional 9 acres that you expanded your farm, it there a potential that you could move your crop into that area and get
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it out, completely out of the zone of influence?
A. So those areas are actually closer to the zone of influence. One of those areas is closer to the zone of influence, and one of the areas is equidistant from the cable crossing.
Q. Okay. Thank you.

Let's see. We talked about assessment of impacts, and I wanted to just make sure I was clear on something. Have you discussed setting up the additional testing location with Eversource?
A. It was mentioned, but not part of the proposed mitigation activities.
Q. Okay. And you talked about the sediment buildup over the winter just being approximately an eighth of an inch, realizing you haven't measured it. Do you have any sense of what a maximum -- what an oyster could survive, like how deep? We know they can get beyond the eighth of an inch.
A. Yeah. Unfortunately, no. A lot of that depends on how quickly the oysters start
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pumping, how large they are. Presumably a larger oyster could survive a greater sediment load. And as far as I know, there's nothing in the literature that sets sediment accumulation thresholds because each farm and sediment type and grain size are just so different, it'd be very difficult to narrow that down.

MR. FITZGERALD: Can I follow-up on that for a second?

MR. SCHMIDT: Absolutely.
QUESTIONS BY MR. FITZGERALD:
Q. You said that you routinely get a dusting, an eighth of an inch or whatever.
A. Right.
Q. When larger accumulations occur and there is a significant impact, what's the -- is that just because there's too much sediment, or is it because the sediment, you know, becomes "anoxic" I think it was referred to?
A. Yup, there are two things that could happen. The first is there's so much sediment built up, that the oysters that are breathing, that are aspiring, actually suck all of the oxygen
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out of that sediment, and it causes a buildup of sulfer that's toxic to the oysters. So if I see a cage, for example, that has too much sediment in it, $I$ can smell that sulfer or rotten egg smell, and I know I'm going to find lots of dead oysters.

The other thing that could happen is that it limits the access of the oysters to the water column, which is their food source. So over time the oysters could actually starve if they don't have access to the phytoplankton in the water column.
Q. And when you have that 1 in 100 event or whatever, it seems strange that 99 would be okay and one would be affected. Do you see something different? Do you see larger amounts of sediment in that cage, or it's just --
A. Not necessarily. The difference we see is the discoloration of the sediment. It will go from brown, which is oxygenated sediment, to black, which is anoxic sediment. So we know right away. We can smell the difference. But what it tells me, that it's
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one out of a hundred and that we're not seeing it in the neighboring cages is that we're right on the threshold. We're right on kind of the tipping point of where those cages can go anoxic.
Q. Okay. Thank you.
A. Thanks.

QUESTIONS BY MR. SCHMIDT (CONT'D):
Q. One final thing. Going back to the potential for relocation. I'm not even sure if this is an option. But how long would it take you to move all of your cages?
A. It takes me several months to move all of my gear from shallow water to deep water in the fall if I were to remove everything. I have about 350 cages. Typically we like to do that at low tide so that we know exactly where we're dropping things. And the weather this time of year is just so spotty with high winds. So, for example, we haven't been able to move anything over the last three days because we've had winds in excess of 30 miles per hour. So that gets back to my concern over kind of the follow-up cleaning of the
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cages, which will take weeks, if not longer. And the weather this time of year is just so unpredictable and so much harsher than the summer months, that there's some major logistical changes to both moving and cleaning cages.
Q. Okay. So if you -- you indicated at 50 degrees is when they go into dormancy, roughly?
A. Correct.
Q. Is that when you begin to move your cages?
A. We actually begin to move them earlier because we -- the window closes rapidly once the water gets down to 50 degrees. That typically happens right at the end of the October. And I try to start moving cages late September, early October, because it takes so long.
Q. So do you ever -- when's the latest that you've moved cages, just out of curiosity?
A. January, just because $I$ get so far behind. I like to have everything moved by the end of the calendar year because typically January and February are the icy months. Last year,
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you may recall, we had frigid temperatures right around Christmas that kind of caught us off guard and resulted in some mortality. But I like to have most of my gear moved by Thanksgiving.
Q. Okay. All right. Thank you very much.

MR. SCHMIDT: That's all I have.
PRESIDING OFFICER WEATHERSBY: Other
questions? Director Muzzey.
QUESTIONS BY DIR. MUZZEY:
Q. Good morning.
A. Good morning.
Q. Just some follow-up questions regarding those logistical challenges that you mentioned.

So you begin moving your cages to their winter location late September through the end of the year-ish, depending on weather.
A. Right.
Q. At that time, do you typically clean the cages as well?
A. Typically we don't really need to clean the cages at that time because the oysters are just kind of entering that dormancy period. So until they hit that mark, they're cleaning \{SEC 2015-04\} [Day 14 MORNING ONLY] \{10-25-18\}
the cages on their own. So I typically pop them up onto a boat and I just move them without cleaning them.
Q. And when you move them, that's within your 4-1/2-acre active area?
A. That's correct. Well, it's within those three licensed locations, and each of those are 4-1/2 acres.
Q. So if this project does receive a certificate and plans on doing the jet plowing September and October-ish, is there -- will that change where you move things or when or how?
A. It won't. It won't change where I move things because I just have a very limited amount of deep water space that I can use. So I use pretty much every inch of that to host my cages for the winter.
Q. Is that closer to the project area or --
A. It's not. It's an east-west move, not a north-south move.
Q. Okay. Do you have any concerns about cleaning the cages, potentially cleaning the cages in the fall, whether that would in any way endanger the oysters if it's not
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something you typically do?
A. Yes. So the way I envision it is there's two ways we can clean those cages. One way would be to lift all the cages up out of the deep water once they're there and clean them, which is problematic because, as we've discussed, bad weather and high winds, it's very hard to drop cages in the right place in bad weather.
Q. And you'd been doing it twice then it sounds like.
A. Yes. Yup. If we wait until after the Project period, we'd be moving the cages twice.

The other way I envision we can clean them is to actually put divers in the water and use underwater pumps to kind of flush the oysters out. That would be unprecedented. I'm not sure what impact -- I suspect that that would be fine for the oysters, but I'm not sure what impact they would have on oysters, just kind of mechanical stress on the oysters during the dormancy period when they're more sensitive. The major issue that
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I see with that, again, is weather, is putting divers in the water when the water is really cold and the weather is bad.
Q. How deep are the cages suspended?
A. During the winter months, we try to get 5 feet of water over the cages at mean low tide. So, low tide, they're 5 feet deep; at high tide, they're 15 to 20 feet deep.
Q. Do you see any other logistical challenges to the solutions that the Applicant presented in its more recent letter to you?
A. The challenges with the cold storage option relates, one, to the shelf life of the oysters. I can really only store oysters for about a week or less before I sell them. The other challenge is that those cold storage units actually need to be inspected and permitted by the Division of Health and Human Services. So it's not just a matter of bringing in a portable refrigeration unit. It's one that has to be there in time to be inspected and approved by the state before I can store oysters there.
Q. Do you have any idea how long that process
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typically takes?
A. It probably wouldn't take too long. Maybe four to six weeks, I would guess.
Q. So there is some planning involved.
A. There is some planning involved, yes.
Q. Okay. And just let me check my notes. I thought I had one other question.

There was discussion about turbidity levels and that those will be actively monitored during the jet plow, both trial and the actual laying of cable, and that if certain turbidity levels were exceeded, changes would be made to the process.
A. Right.
Q. Do you know if the criteria for those turbidity levels are based on what you have found to be appropriate for oysters, or is there other criteria that's being used that would be helpful to your oyster concerns?
A. Right. So those are -- those turbidity standards are national water quality standards that aren't based around how they impact oysters necessarily. So those are points in time when those samples are being
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taken and don't really address long-term accumulation or exposure to sediments. So it really is more about duration, currents and how long that plume is sitting over our farm that will drive how impacted both the meat quality of our oysters are and kind of longer-term mortality issues.
Q. Which in turn relate to your concerns for your customer base and that type of thing.
A. Correct.
Q. Okay. Thank you.

DIR. MUZZEY: That's all I have. PRESIDING OFFICER WEATHERSBY: Any

Committee members have additional questions? Mr. Schulock.

QUESTIONS BY MR. SCHULOCK:
Q. I know in your prefiled direct testimony you talked a little bit about the cost that this could impose on you. But if you could, could you describe to me as what you see as the best-case scenario going forward, if the Project is approved, for your business, what it would involve and how much of a cost that would impose on you, and what you view as the
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worst-case scenario that could possibly happen to you and your business and the financial cost of that. Your best estimate at this point.
A. Yeah. I think the best-case scenario is that we have a very short-term closure during the Project period. And so the cost will be, you know, minimal, a few weeks of sales, you know, resulting in $\$ 10-$ or $\$ 15,000$ of losses during the suspended sales period.

Putting a dollar figure on the worst-case scenario, I mean the worst-case scenario is that $I$ lose a large percentage of my crop. Not only my crop, but my customer base. I have about a million and a quarter to a million and a half oysters on the farm right now, and I would have to do some longer-term math to give you a dollar figure of what those are valued at.

Actually, in my response -- I can't remember if it was my prefiled testimony or a response to a data request -- the USDA has dollar values for their crop insurance program that they assign to oysters in each
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year class. So those could be used to calculate a value on the crop, and then, you know, we'd have to add loss of longer-term revenue on top of that.
Q. So as I remember from your prefiled direct, you did do some of those calculations for the loss of the crop.
A. Right.
Q. But I didn't see -- I don't remember a calculation for the loss of business following that.
A. Right.
Q. Okay. And you don't have to estimate that for us here now.
A. It would be hard to estimate that right now.
Q. And then your cost estimates that you've given, do those include the cost to you and your business of taking reasonable protective measures?
A. No. I have not made those calculations either. You know, one of my concerns about mitigation options is that it's going to be very hard for someone else to actually perform the mitigation measures of cleaning
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the cages, because I have a boat that has a crane that's set up for lifting cages of my size, and it's not just a matter of going out and hiring a consultant who can do that cleaning. It's going to be me that does that cleaning. So, me and the crew -- well, my crew over the course of a couple months. So those costs could be calculated, but I haven't done them yet.
Q. Thank you.

QUESTIONS BY PRESIDING OFFICER WEATHERSBY:
Q. One of my questions was when you clean the cages or when you move the cages, this is all done by you and some folks that work for you?
A. That's correct.
Q. Are there people available -- so if we wanted to give you help, say to move them quicker or in a shorter duration of time, or cleaning, are there people with the expertise available that could come and assist?
A. It's very hard to find people that know how to do this because it's such a niche practice. There aren't too many people with experience in oyster farming or cage culture
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that are actually available to come out and assist. So my feeling is that if we go the picking up the cages and cleaning them route, it's going to fall to me because I have the equipment and the experience of doing it. If it's divers that we're putting in the water, then there are probably more options.
Q. And just getting back to the cost impacts to your business. It sounds like there's some likelihood of some mortality, but it seems to me that sort of big or more likely risk is the suspension of the harvesting. Is that -do you agree with that?
A. I think the risks to both are significant. We know that there will be some suspension of sales because there will be a sampling period associated with the cable crossing. That's my understanding based on informal
conversations I've had with DES. So we know there will be at least be a few days of closure to confirm that the Project is not exceeding fecal coliform standards or resulting in the exceedence of fecal coliform standards.
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Q. So when there's a suspension of harvesting and a suspension of your sales, whether it's due to bacteria or processing the sediment, getting the "grittiness" out as you described it, the pumping --
A. Yup.
Q. -- it's a suspension. I mean, the oysters are still alive.
A. Correct.
Q. You can still harvest them eventually.
A. Right.
Q. It's just a delay. And so you spoke about that you may lose some customers because you can't deliver the product on time.
A. Right.
Q. But since you can eventually sell these still, they're still alive, are there other impacts in having a delay?
A. No, it's more -- it's losing sales for that week. So, you know, just like a company that's manufacturing a product, $I$ can't necessarily sell an oyster just because I have it. I have to meet demand that's there. So if I lose a week of sales, even though I
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still have that inventory, that week of sales is lost.
Q. So the next week you can't sell twice --
A. No.
Q. -- as many to make up for it.
A. That's correct.
Q. Because there's only so much demand from, presumably, restaurants.
A. Right. I can encourage my friends to go to those restaurants, but I can't guarantee that I'll be able to sell more the following week. Typically what $I$ see after a rainfall closure is a lag in sales. I don't necessarily lose the customer. But what happens is, is that customer will have to scamble to stock up on other oysters that will then be there until they're gone. So just because we're reopening and I go back to my customer and I say, hey, we're open again, I have this inventory, they may say, well, we're still clearing out what we bought during your closure period, so catch up with us next week, or we'll do a reduced amount with you this week.
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Q. Okay. Thank you.

PRESIDING OFFICER WEATHERSBY: Mr. Way.

QUESTIONS BY MR. WAY:
Q. Good morning, Mr. Baker. And I apologize for not being here earlier. I was interested in hearing your testimony. I've read your prefiled. Just a couple questions. And I apologize if you brought this up during the discussions this morning.
A. Sure.
Q. In your prefiled, because $I$ was interested in looking at the value of your crops and I was looking at the NAP table, I noticed that there was a little bit of discrepancy in the value per oyster, dollar value per oyster, between '15 and '16 and then '16 and '17. So I think '15 it was like 390,000 , and then the value in '16 was 260,000. Because that's real money to you.
A. Right.
Q. And can I assume '17 is . 13 per oyster because you're in the mid-season of reporting?
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A. Those oysters are of a lower value because they're small. Simply because they're smaller. So that's the newest year class and the smaller oysters. So that's how that value is assigned. Does that answer your question?
Q. I think so. And so when I go from. 65 to . 52 as the value, how does that -- how do they calculate that difference?
A. It's just the size of the oyster.
Q. Just the size?
A. Their assumption is that a larger oyster is more valuable, which is not always correct. But they assign values based purely on size.
Q. Okay. And these are what you would use. So when you responded to Mr . Schulock and you said the worst-case scenario is a large percentage of my crop and crop value, you'd be going to these values here; would you not?
A. That's the best way I can see to assess value. And it seems to be pretty well accepted. So, yes.
Q. I imagine you probably talked about this, but tell me a little bit. I think I know who
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your customer, your typical customer is, but I don't want to assume that. What is your customer footprint? Is it mostly local restaurants? Are you doing any, like, for example, national sales, overseas sales?
A. Yeah, so this year I changed my business
model a little bit. I was selling
exclusively through distributors in 2017.
This year I sold everything direct. So I had about 15 restaurants and small seafood retailers as a customer base. And the geographic range was from Boston to Portland, Maine.
Q. And I imagine there's no contract there.

It's as needed?
A. That's right.
Q. That's probably not typical to do in your business, I would imagine.
A. No. It's a very informal kind of a process.

It's a text message saying this is your typical delivery day and what can I get you and hope that they've been busy enough to order a bunch of oysters.
Q. And your business model, in terms of planning \{SEC 2015-04\} [Day 14 MORNING ONLY] \{10-25-18\}
for the future, does this project impact that business model? Let's say, for example, you decided next year we're going to go into this market. Does this impact that or not impact?
A. Only if it comes to limiting my inventory of oysters. The different markets are all about the inventory you have and the quality of your oysters. So if there are short-term changes in the quality of my oysters, that probably will not change the markets I'm able to reach. The response across the board would be pretty uniform.
Q. And given the nature of your customer, if you lose a customer for whatever reason, how competitive is the market? How easy is it to get that customer back?
A. It has changed dramatically over the last five years. When I first started selling oysters in probably 2014, as long as I had them, I could move them. But there are so many new entries into the oyster culture world, that has changed very dramatically over the last two years. So the markets are becoming much more competitive. And if a new
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oyster moves into a wholesaler or restaurant, the likelihood that you can recapture that market is severely diminished.

So, to give you an example, I think I was the third oyster aquaculture license in Great Bay, and now there are 15 different companies or individuals who are growing oysters in Great Bay, and probably 25
licenses because many hold multiple licenses.
Q. Are you, as a homeowner on Great Bay, are you able to grow your own oysters?
A. I am not a homeowner on Great Bay.
Q. No, I know you're not. But like a regular homeowner, are they allowed to grow their own oyster?
A. Only if they're captured by -- there's some program sponsored by the Nature Conservancy, for example, that's kind of a dockside grow-out, and then those oysters are used for restoration purposes. But you must have a license from Fish \& Game to culture oysters before you can put anything into the water. And then before you are able to harvest anything, you have to have another license
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[WITNESS: BAKER]
from the Division of Health and Human Services. So the short answer is, no, you can't just grow dockside oysters for your own consumption.
Q. Thank you very much.

MR. WAY: Mr. Fitzgerald.
MR. FITZGERALD: Can I follow-up on
that?
QUESTIONS BY MR. FITZGERALD:
Q. The chart that Mr. Way referred to, I didn't quite understand it. Obviously a very, very significant difference from 2016 from 2017. You were, you know, three years prior, 65, 65, 52, which is fine, but then down to 13 --
A. Yeah.
Q. -- although your quantity was significantly higher. What happened in 2017? I'm not sure if I missed that or --
A. Well, let's see. So the quantity in -you're talking about the explanation for the differences in the quantity of each year class?
Q. Well, not necessarily the quantity, but the value, the NAP value that was assigned.
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A. $O h$, right.
Q. 2017 went down to 13 cents. That's, you know, a huge drop.
A. It's because those oysters are small, and they expect many of them not to ever reach market size. So they're assessing value based on size and the likelihood that it will get to market some day. And so those 2017, those are the tiny seed oysters. So they're not assessing them a very high value.
Q. Is that value a national value number that's --
A. That is, yup. That's a standard of the National Crop Insurance Program.
Q. I'm still having a hard time understanding. Just NAP decided, based on some assessment, that oysters nationally were going to be smaller in 2017? How do they --
A. Oh, I'm sorry. I understand your question now. So these numbers are not the total crop numbers for each of those years. They are the oysters that are within that year class. So, these, the numbers for 2017 -- I see now why this is confusing -- are the oysters that
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were born in 2017. So the total inventory of what I have on my farm is the sum of each of these year classes.
Q. Okay. Okay. So the 2017 are just younger.
A. They're just smaller oyster, yes.
Q. Okay. And at some point in the future they will become larger and more valuable.
A. That's the idea, yes. So at any given time, we typically have four overlapping year class on the farm. It takes about three to four years to go from a seed oyster to a market-size oyster. So we have each of these year classes on our farm right now --
Q. Okay. That's very helpful.
A. -- in addition to 2018 s now.

MR. WAY: Can I follow on that?
QUESTIONS BY MR. WAY (CONT'D):
Q. So just to make sure that $I$ understand what you're saying, once again, back to Mr.

Schulock's question about worst-case scenario, we're talking about the last number, the $\$ 1$ million number --
A. Yeah.
Q. -- in terms of you said "a percentage of my
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crop." I'm assuming it would be evenly distributed over those four overlapping years, however you do it.
A. You mean the losses?
Q. Yes.
A. I would expect that smaller oysters are more susceptible to losses from sedimentation. They're more sensitive. They're packed more tightly. They're in containment devices that have a smaller mesh size and tend to accumulate sediment more officially.
Q. So the larger percentage would be of the smaller oyster population.
A. That's what $I$ would suspect, yes.
Q. All right. Thank you.

QUESTIONS BY MR. FITZGERALD:
Q. And what was it that drove you to change your business model from working with distributors to direct to restaurants?
A. The biggest driver $I$ think was the risk of having only one or two customers. So, typically, if you're selling to a distributor, that distributor has its own set of customers, and they don't want to buy from
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you and compete with you at the same time. So, typically, growers that are selling to a distributor are only selling to one or two. If that distributor decides that they like another oyster better or there's a shiny, new oyster on the market, they can easily cut you out, and then you're at a loss. So I decided to, for better or worse, take matters into my own hands and distribute on my own.
Q. Was that just on a perceived concern, or were you actually seeing something that drove that change?
A. Yeah, I was seeing lots of new oysters coming on to the market. And my distributor, because he was starting to buy those new oysters, was not promoting mine as heavily as he had been. And so I kind I saw the long-term writing on the wall and made the change.
Q. And what is it that dictates -- what is a "shiny new oyster"? What are the factors -I mean, are oysters grown by one company --
A. They can be very different based on how you grow them. You know, so the cage-grown
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[WITNESS: BAKER]
oysters look very different from the bottom-seeded oysters.

But just to give you my story, like I said, when I started, I was the third licensed grower in New Hampshire. And so we had all this market in New Hampshire that doesn't have a New Hampshire oyster. So when I first got started, that market was wide open. And everyone wants a local oyster. So it's very easy to move product. Now I'm competing with 15 other farms that are kind of starting to come online over the last few years. So, you know, people like a high-quality oyster for sure. That's very important. And you can definitely lose customers if you're not producing a good oyster. But an oyster from a new region with a new name, you know, is very popular for a while until there's the next new oyster that comes along that's interesting and local.
Q. And what dictates the quality of an oyster? I mean, is it a characteristic taste or --
A. Yeah, there's quite a few things. The taste is certainly one; the fullness of the meat,
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what we call the quality of the meat, you know, making sure there's something there to eat. The thickness of the shell is a big driver for those that are shucking it. They don't want to shuck a shell that just crumbles into pieces and the oyster is not presentable. So it's kind of the look, you know. The meat quality and the taste is kind of the thing that comes last. But it has to look appealing to customers and the shuckers, the chefs and the shuckers.
Q. Thank you.

PRESIDING OFFICER WEATHERSBY: One last question $I$ think.

QUESTIONS BY PRESIDING OFFICER WEATHERSBY:
Q. Mr. Baker, does your company have crop insurance?
A. Yes, we do. So it's not -- technically, it's the Non-insured Crop Disaster Assistance Program. So it doesn't rise to the level of traditional crop insurance payouts you would see for corn or soy beans or things like that. So it's actually just kind of a failsafe type of a crop insurance program.
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So before you can even apply to cover your losses, you have to demonstrate that you've lost as a result of a single event at least 50 percent of the value of your crop, of your farm. So the bar is very high. And, you know, it's probably likely that if you're there, you're kind of done anyway. So I've never qualified to even apply for the -- or to receive crop insurance because I haven't had a disaster of that magnitude.
Q. So it's unlikely that it would cover any losses as a result of this project.
A. Oh, it definitely wouldn't. It has to be a weather-related event that causes the loss or some other natural disaster.

PRESIDING OFFICER WEATHERSBY: Does anybody else on the Committee have any final questions? Attorney Dore?

Okay. Well, thank you for your testimony.

WITNESS BAKER: All right. Thank you.
PRESIDING OFFICER WEATHERSBY: We appreciate it. You're excused.

We're going to take a break and be
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back at five minutes past eleven, at which time we'll hear from Mr. Lawrence, I believe. Yes, Mr. Lawrence. So we'll reconvene in 15 minutes. Thank you.
(Recess was taken at 10:51 a.m.
and the hearing resumed at 11:10 a.m.)
PRESIDING OFFICER WEATHERSBY: We're
ready to resume.
MR. ASLIN: Thank you, Madam Chair.
(WHEREUPON, MICHAEL LAWRENCE was duly
sworn and cautioned by the Court Reporter.)

DIRECT EXAMINATION
BY MR. ASLIN:
Q. Good morning, Mr. Lawrence.
A. Good morning.
Q. If you could please state your full name for the record and tell us where you're employed.
A. I'm Michael Lawrence. I'm employed at Michael Lawrence \& Associates.
Q. Okay. Thank you.

And do you have in front of you your prefiled testimony which has been marked as Counsel for the Public Exhibit 4 and was
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filed on July 31st, 2017?
A. Yes.
Q. And as an attachment to that was your aesthetic analysis review report, which is marked as CFP Exhibit 4-A. Do you have that as well?
A. Yes, I do.
Q. And do you have any corrections or changes to that testimony that you'd like to make today?
A. Yes.
Q. Could you tell us what the change is and point us to the location in the testimony that you're changing.
A. Yes.

On Page 1, Line 8 and 9, I said I am a member of the American Society of Landscape Architects. At the time that I filed that, I was not a member. My membership had lapsed. And it is now back in. I'm now in good standing again.
Q. Okay. Thank you. And when did you come back into good standing?
A. April 2nd of this year.
Q. Okay. Thank you.
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Any other changes or corrections?
A. No.
Q. And just for the record, that was Page 1 of your prefiled testimony, which is Counsel for the Public Exhibit 4; is that right?
A. I'm not sure $I$ understand the question.
Q. I'll just make a statement. That was Counsel for the Public Exhibit 4 that you were amending.
A. Okay.
Q. Okay. So with that change or correction to your testimony, do you swear to and adopt that testimony today as your -- what you would say today if you were asked those same questions?
A. Yes.
Q. Okay. Thank you.

MR. ASLIN: Mr. Lawrence is available for cross.

PRESIDING OFFICER WEATHERSBY: Okay. Thank you. First examiner will be Attorney Patch.
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BY MR. PATCH:
Q. Good morning, Mr. Lawrence.
A. Good morning.
Q. My name is Doug Patch. I represent the Town of Durham and the University of New Hampshire.

Are you familiar with the stipulations that Public Counsel and Eversource have filed with the Committee?
A. I'm not sure that $I$ do know.
Q. Okay. I'm going to show you a couple of provisions and ask you a few questions about them.
A. Okay.
Q. The first one is what's been marked as Exhibit 184. It's the August 15th stipulation. And there are, I believe, two paragraphs in this one that pertain to your area of expertise. And I have them on the screen, Paragraphs 11 and 12. Do those look familiar to you? Have you looked at those?
A. Let me take a minute and read them.
Q. Sure.
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| (Witness reviews document.) |  |
| :---: | :---: |
|  | I'm familiar with those two statements, yes. |
| Q. | And did they change anything in your |
|  | testimony? |
| A. | No. |
| 2. | I'm going to show you Exhibit 194, which I |
|  | believe has a Paragraph 12 that supercedes |
|  | the Paragraph 12 that I just showed you. It |
|  | was an amendment to that Paragraph 12, and |
|  | it's a little bit longer than the other one |
|  | was. I don't know if you looked at that or |
|  | if you want to take a minute to look at it. |
| A. | Okay. |
|  | (Witness reviews document.) |
| A. | I'm not familiar exactly with that, but my |
|  | understanding was that that was going to be |
|  | described like that. |
| Q. | So that one does seem to change your |
|  | testimony, if I understand correctly, in |
|  | terms of the 13 locations at least; is that |
|  | fair to say? |
| A. | Yes. |
| Q. | And then the other one I want to show you is |
|  | Exhibit 193, which is also dated |

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September 17th. And there are two paragraphs in there that I believe pertain to your area of expertise, 32 and 33. Could you take a look at those and let us know if you're familiar with those.
A. Yes.
(Witness reviews document.)
A. I've read them.
Q. Okay. And other than the change that you talked about with the prior stipulation, the change to the 13 locations, do these in any way change your testimony?
A. Only that I think this resolves the issue that I have -- that I had in my testimony.
Q. All of the issues?
A. Yes, I believe so.
Q. Okay. Well, I'd like to walk through that a little bit with you. But I want to start by asking you about Paragraph 33. It refers to "planting plans." What do you anticipate seeing in those, and what will the residents anticipate -- should they anticipate seeing in those planting plans?
A. I think planting helps to screen the corridor
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and the new structures in the corridor from the right-of-ways, from where the roads pass through the right-of-ways, or where there's pedestrian crossings under the right-of-ways.
Q. In your prefiled testimony, and I'm looking at CFP 4, Page 2, you concluded that at certain locations at road crossings and across portions of the UNH campus, the Project will be highly visible. That was what you had in your testimony; correct?
A. Correct.
Q. And so with these planting plans, won't the Project still be highly visible at least for some period of time?
A. Yes.
Q. Approximately how long would you guess it would still be highly visible?
A. I think it may always be highly visible.
Q. And that's different than what's there now.
A. Yes.
Q. And when you say "highly visible," you mean compared to what's there now.
A. Correct.
Q. And you cited the combination of
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significantly taller structures. You said double or triple the height of existing structures and substantial tree removal to the full width of the ROW and said it would dramatically change the visual character and decrease the aesthetic quality of those locations; correct?
A. Correct.
Q. And so this stipulation won't change that, will it?
A. Well, $I$ think it will offer some mitigation to that.
Q. But over a period of time, presumably, and will never totally mitigate it.
A. That's correct.
Q. Part of your assessment, Exhibit 4, electronic Page 10 -- actually, I think I may have the wrong electronic page. But maybe you can help me. Part of your assessment included a review of the impacts on the Little Bay shoreline; is that fair to say?
A. Yes.
Q. Have you seen Mr. Raphael's supplemental testimony that was filed in July of this
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year?
A. Yes.
Q. And I want to show you a section of that. I believe it's electronic Page 24 of Exhibit 142. This was attached to his July 2018 testimony. And on this page there's a picture of Little Bay. And in the lower right-hand corner, it's a little bit hard to read, but there's a narrative that contains the following statement. It says, "The purpose of this exhibit is to demonstrate that the existing development and specific structures along and near to the shoreline create a visual pattern that will not be undermined or altered by the visibility of a short section of concrete matting as proposed in this section." Did I read that correctly?
A. I believe so.
Q. Are you familiar with the amount of concrete matting that's planned for Little Bay?
A. I've read the dimensions of it and, $I$ can't recall exactly what those dimensions are right at this minute.
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Q. Would you agree that the existing development and specific structures along and near that shoreline create a visual pattern that will not be undermined by the concrete matting?
A. Yes.
Q. Do you agree with that statement?
A. I do.
Q. You do? Okay. Have you ever looked at concrete mats before?
A. No, I haven't.
Q. And what did you do in this, as part of your work on this particular project, to review concrete mats and visual impacts?
A. Really looked at the photo simulations that David Raphael prepared.
Q. So that's all that you did was to look at those photo simulations?
A. Right.
Q. Now, the photo simulations that he provides are basically pictures of Little Bay that appear to be taken from the boat. And I think, as he said, it's about halfway across the bay. Does that sound right to you?
A. That sounds right.
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Q. And on this particular page in the -- again, it's kind of small printing. But in the lower right-hand corner there is a narrative that says that existing elements provide a visual pattern which can readily accommodate the proposed mats and their limited visibility. And he then says that the actual area of visible mats will be limited to an expanse of approximately 24 to 28 feet wide and 34 feet long.

Now, based on your prior answer, do I assume that you agree with that statement as well?
A. Yes.
Q. And he said the mats will be, quote, unquote, an unobtrusive element. Do you agree with that?
A. Yes.
Q. And it's based on this photograph taken from essentially more than -- I think the total width of the bay at that point is about, I think, over a mile. So this photograph presumably was taken from about 2600 feet away from the Durham shoreline; correct?
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A. Yes.
Q. And so based on that photograph, you think it's quote, unquote, and unobtrusive element; is that fair to say?
A. Yes.
Q. But there are no other simulations that you're aware of, and you didn't look at it from any other angles other than what he provided here; is that fair to say?
A. Yes. And I think my understanding of what he described as kind of the weathering of this over time, that it would end up being similar in color, similar in texture to the exposed rock around it.
Q. Okay. So you took that at face value, essentially.
A. I did.
Q. I'm going to show you what's been marked as Exhibit 186, and I believe it's electronic Page 6, which $I$ was already on. And at the bottom of that, and this is very fine print, it says that it represents the proposed concrete mattresses without any color tinting. Is that correct?
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A. Yes.
Q. And then if you look further down, I think the next page, it says with color tinting; correct?
A. Yes.
Q. So what's your understanding of what color tinting is used or was used in those photo simulations?
A. Well, I'm familiar with color tinting. It's kind of a pigment added to the concrete to darken it, or you can color it various shades of orange and reds and grays. So I'm familiar with that.
Q. Okay. And what's your understanding of what color would be used here?
A. I would assume it's a dark gray.
Q. Okay. Is there anything -- and if you're familiar with tinting of concrete objects, then how is that tinting done? Do you know? Is it paint? Is it some other chemical? How is that done?
A. There are a couple different ways. The ideal way for this concrete would be for the pigment to be mixed in while the concrete is
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being rotated in the truck or mixed so that it's the entire batch of concrete.
Q. And are you aware of any side effects to using that, particularly if it's used in water? Any chemicals that could be released into the water or anything of that? Is that something you looked at?
A. I haven't looked at it.
Q. I want to show you Counsel for the Public Exhibit 17, which are, as $I$ understand it, photographs of Little Bay at low tide, and ask you if you have been on Little Bay at low tide. Have you looked at Little Bay from, say, the shoreline on either shore?
A. I have.
Q. And so does this look consistent with what you saw when you looked there?
A. Yes.
Q. And there's a few photographs in here. I'm just going to kind of scroll through. For example, that one, obviously at low tide there's a fair amount of tidal flat exposed; correct?
A. Yes.
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Q. And what is your understanding in terms of what somebody who is standing on the shore would see if the concrete mattresses are put in as described by the Applicant?
A. My understanding is they would see more of a flat surface than this pitted or sort of interrupted surface.
Q. And so at least until -- whether they're tinted or not obviously would have some bearing $I$ guess on what they would see. Although they would still see the mattresses, regardless of the color; correct?
A. Yes.
Q. Now, in exhibit -- I want to ask you to also look at Durham Residents Exhibit 8,
electronic Pages 3, 4 and 6. I'll scroll through them. These are photographs of the Durham and Newington sides of Little Bay at low tide. And obviously in this particular one that I have up on the screen, somebody has attempted to put into the picture a simulation of what the concrete mattresses would look like. I mean, do you have any comments on that? Is that consistent with
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what you would think they would look like or not?
A. Well, this appears to be a symbol to demonstrate dimension. And I think it would not be -- it would not stand out in reality the way this is depicted.
Q. But they would still be visible in the tidal flats.
A. Yes. Yes.
Q. And again, a couple more pictures of concrete mattresses, for one thing. This is a picture that they included of concrete mattresses. Is that consistent with what your understanding is of what concrete mattresses look like?
A. No. I imagined a much finer texture from what I -- the description that I read. I thought it was a much finer texture object, if you will.
Q. What do you mean by "finer texture"?
A. Well, this was hard to understand the scale of this, but this almost looks like rectangular box blocks. And I was imagining more like a woven, finer texture.
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Q. And that was from a narrative description, but not from any pictures you saw?
A. That's correct.
Q. So you formed an opinion based on something you read, not any pictures you saw.
A. Yes.
Q. I want to show you -- I want to go back to Exhibit 142, which was Mr. Raphael's supplemental testimony, and on electronic Page 21. On this page, he said that the visual assessment done by the Applicant concluded that the overall visual sensitivity to change for Little Bay was moderate, and because it was moderate with regard to culture and scenic values, it was not analyzed further. Do you recall that?
A. Yes.
Q. Did you agree with that?
A. No, I didn't agree with that.
Q. Why not?
A. Well, it seemed like a very important place. And it seemed like to eliminate it, based on what my understanding was -- was publication material -- was a little premature and that
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it required careful study.
Q. Now, Mr. Raphael's assessment concluded with -- and this is on, I believe, electronic Page 23. He concludes that concrete mattresses will be a very minor feature of the landscape and will only minimally affect the viewer's experience of the water, the bay and the views to the shoreline. Do you agree with that statement?
A. I do agree with that statement.
Q. What about views from the shoreline? That's a different situation, isn't it?
A. Yes.
Q. And so do you think it's a very minor feature of the landscape when you're looking at low tide from the shoreline?
A. I think it depends on the perspective. And I'm sure right there at the shoreline, right where the mat enters the water, it will change the character of that particular spot.
Q. On Page 4 of your testimony, you said that Mr. Raphael produced a detailed visual assessment in which he used an overly complicated methodology that
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under-represented scenic resources and minimized visual impacts. That's what you said in your testimony; correct?
A. Yes.
Q. Has anything in the stipulations changed that view?
A. No.
Q. You said that he failed to identify key observation points where the Project would be prominently visible. Did you say that in your testimony?
A. I did.
Q. Has anything in the stipulations changed that?
A. No.
Q. Thank you.
A. You're welcome.

PRESIDING OFFICER WEATHERSBY:
Attorney Boepple.
MS. BOEPPLE: Thank you, Madam Chair. QUESTIONS BY MS. BOEPPLE:
Q. Good morning.
A. Good morning.
Q. Mr. Lawrence, my name is Elizabeth Boepple,
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and I represent the Town of Newington.
Fortunately, Attorney Patch covered some of my questions, so I think I'll take a little less time than $I$ estimated.
A. Okay.
Q. So do $I$ understand, generally speaking, that your testimony represents that you reviewed the Applicant's aesthetic witness's visual impact assessment for completeness of its identification of scenic resources?
A. Yes.
Q. And you also reviewed it for the overall aesthetic impact that the Project would have; is that correct?
A. Yes.
Q. Thank you. And in your prefiled testimony, which was Counsel for the Public's Exhibit 4, you stated that you included those 13 additional locations that were not included in the LandWorks visual impact assessment; correct?
A. Correct.
Q. Excuse me. And could I assume that you also read Mr. Raphael's supplemental prefiled
testimony where he critiqued your pointing out those additional 13 locations?
A. Yes, I did.
Q. Okay. Thank you. And as Attorney Patch was asking you just a few minutes ago, the Applicant has agreed to certain conditions that presumably would address your concerns related to those 13 locations; is that correct?
A. Yes.
Q. Okay. So do I understand that those measures would be planting plans to mitigate the effects on those locations?
A. Yes.
Q. Okay. So we have up on the screen a portion of your report. And this is Counsel for the Public's Exhibit 4-A. And I'm showing you the first two pages that show Fox Point Road crossing in Newington; is that correct?
A. Yes.
Q. And the photo on the left, can you tell us what that represents?
A. Yes. That's on the far eastern end of Fox Point Road where there's a cul-de-sac and
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looks like a bike path going into the woods. So in looking at that, $I$ was imagining -- I never saw anybody biking, but $I$ was imagining that people must be biking in this direction and that Fox Point Road had kind of a slower travel speed on it, and therefore people were traveling a little more slowly and they were enjoying being outdoors.
Q. And in that enjoyment, you envisioned the impact it would have on the increased pole heights and the widening of the right-of-way; is that correct?
A. That's correct.
Q. Now, the next page in this same exhibit shows a diagram and indicates areas where there would be some clearing. Do you see where it says "existing 60 to 70-foot oaks."
A. Yes.
Q. And you had a specific concern about that; is that correct?
A. Yes.
Q. And what was that concern?
A. That the character of the crossing today is, with the combination of the lower poles and
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that foliage extending into the right-of-way, is not a great interruption in the passage of people on Fox Point Road, and that once that's removed, that's going to open that up and it's going to split the -- the definition of the word "fragmentation." It's going to fragment the landscape side to side in that area.
Q. So I understand that as a visual impact concern. How would a planting plan provide adequate mitigation for that kind of change?
A. Well, it probably is never going to completely ameliorate the loss, but it's at least an attempt to help people keep their attention focused on something on the ground and kind of compete, at least compete with all of the other things that are going on in the new proposal.
Q. So it's a distraction method; is that fair to say?
A. I think it's fair to say it's mitigation. But, again, I think there's going to be a loss there that probably can't be completely healed.
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Q. Similar question. Is there a way with the planting plan to screen an 84-foot-tall pole?
A. No.
Q. And what about -- I'm going to show you another picture that's part of your Fox Point Road review. You see the corridor here?
A. Yes.
Q. And what kind of a planting plan would screen the kind of impact that this large project would have on this?
A. Again, the idea being to block the view down the corridor is the -- would be the strategy.
Q. But as you look in this photograph, would it be fair to say that there's something about the character of this that is part of the Newington landscape?
A. Yes.
Q. And so would mitigation to block that actually be protecting one of the resources that are important to Newington?
A. I think given the scale of the Project, this is not -- you know, we're not able to actually maintain that character at that point. There's going to be some loss of
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character. And the mitigation plan is really to say we're going to try to stem the loss.
Q. So as part of the problem, would it be fair to say that there's a character that is going to be impacted?
A. Yes.
Q. Okay. The Applicant's aesthetics and historic witnesses both made statements in their prefiled testimony. Did you review both of their testimonies?
A. I think just the landscape piece --
Q. Okay.
A. -- the aesthetic piece.
Q. Okay. I will just focus on his testimony then.

So, for example, in Mr. Raphael's
supplemental testimony, which is Applicant's Exhibit 142, I believe, on Page 7 -- let me get there -- Lines 8 through 11, not the highlighted section, but the next paragraph, Line 14, where he states, "In my professional opinion, $I$ do not think that additional planting plans are necessary to avoid adverse effects on road crossings because for the
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most part the road crossings are pre-existing." And then he goes on and talks about the views are not scenic resources, et cetera. Do you see that?
A. Yes.
Q. Okay. Do you agree, in your professional opinion, that a transmission line has the same visual impact as a distribution line?
A. No, I disagree.
Q. And what's the difference?
A. The scale. And again, the fact that that distribution line over the course of time, lots of things have grown up in that
right-of-way. So that right-of-way corridor is not just a sharp edge, but it's much more soft, much more organic, I guess you'd say much easier on the eyes.
Q. So I would also like to draw your attention to Newington's Exhibit 1-6. Are you familiar with Newington's exhibits? Did you review any of those?
A. I did not.
Q. Okay. So I'd like to just orient you a
little bit. This is a portion of Newington's
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Master Plan. And this is their section of their Master Plan that is Recommendations. And you see the highlighted area. Could you read that for us, please.
A. Hmm-hmm. Under Roads, "The scenic road ordinance regulates activities affecting trees and stone walls in the vicinity of town-owned roads. The historic character of Newington's rural roads should be respected. Work near these roadways should be carefully monitored, and this section of the ordinance should be strictly enforced."
Q. So would you say that that's a pretty strong statement about Newington's concern about impacts on its rural roads and suburban areas?
A. Yes.
Q. And in your professional opinion, would you say that what is being proposed, in terms of mitigation measures of planting plans and screenings, will adequately address these kinds of concerns?
A. All I can say is it's moving in the right direction. I guess that's my answer.
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Q. Does it go far enough?
A. I think that there's going to be a net loss, you know, in this project in some of those spots.
Q. The Applicant's aesthetics expert also talked about specific roads in Newington. One of them was Nimble Hill Road. Are you familiar with Nimble Hill Road?
A. Yes.
Q. And on Page 4, let's see, of Mr. Raphael's prefiled testimony, can you see the highlighted section there --
A. Yes.
Q. -- where he says, "Nimble Hill Road has some pleasant scenery and historic buildings, but it is not a unique road and does not possess long, distant views or outstanding scenery that draw attention and stand out as a high-value scenic resource." Do you see that?
A. I do.
Q. Do you agree that the scenic resource must be of a high value to consider whether a project will have an unreasonable adverse effect on
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it?
MR. NEEDLEMAN: Objection. That mischaracterizes the testimony.

MS. BOEPPLE: I'm just reading his testimony further on in Mr. Raphael's, both in his prefiled testimony, as well as in his addendum to his visual impact assessment. He does characterize Nimble Hill Road as basically just another road. And I don't think that's a mischaracterization. And I can find the specific area of that if you'd like.

PRESIDING OFFICER WEATHERSBY: Attorney Needleman.

MR. NEEDLEMAN: Well, first of all, I think if you're going to characterize how Mr. Raphael characterized Nimble Hill Road, you should quote the testimony. Second of all, that was unrelated to my objection because you inserted the phrase in relation to "unreasonable adverse effect," which is not in the testimony.

PRESIDING OFFICER WEATHERSBY: SO I think the question was more hypothetical: Does it have to be of high value, and not necessarily referring to Mr . Raphael's saying that. So I
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think I'm going to overrule the objection. You may answer that question. MS. BOEPPLE: Thank you.
A. Could you ask it one more time?

BY MR. BOEPPLE:
Q. Yes. In your opinion, would a scenic resource need to be of a high value in order for -- I've got to find my question. Does it have to be of a high value in order for a project to have an unreasonable adverse effect?
A. No.
Q. Could it be just a scenic resource that might be of value to the town?
A. Yes.
Q. And based on your knowledge of Nimble Hill

Road, would you agree that that is an
important resource to the town?
A. I would agree.
Q. Okay. Applicant's Exhibit 193, which you looked at before with Attorney Patch, talks about specific mitigation for aesthetics specific to the 13 locations, including Fox Point Road crossing; correct?
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A. Yes.
Q. And there's reference here to planting plans for each location; correct?
A. Yes.
Q. Further on within this condition where $I$ have it highlighted, it says that the Applicant further agrees to provide planting plans to you, Michael Lawrence, for review and comment prior to finalizing the planting plans for each location; correct?
A. Yes.
Q. What is your understanding with respect to your authority when it comes to the review of these plans?
A. I actually am a little unclear as to exactly what my authority is. My understanding is they're going to submit them to me and I'm going to comment, but I'm not quite sure what happens after that.
Q. For example, if the plan did not provide adequate screening, you could comment, but that wouldn't force the Applicant to do anything; is that correct?
A. As I say, I don't -- I'm not sure. So I
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guess maybe I have a hard time answering.
Q. Based on the language as you read it today, where they'll submit it for your review and comment, would that indicate to you that you're given some additional authority?
A. It would -- it would indicate that I don't have any authority.
Q. Okay. And so do you see any language as you read the conditions that are being proposed that would address future problems? So, for example, if a planting plan was approved and you did review it, somehow it met some kind of standards that's not been identified within these conditions, but nevertheless it goes forward, assuming a certificate is granted, did you see anything in the conditions that would provide for failure of some of those plantings?
A. I did not.
Q. And did you see anything that would address not only the failure of the plantings -- so plants die, right -- or that they didn't provide adequate screening, that some other measures would be implemented? Do you see
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anything in the conditions as they're presented that would address that?
A. No.
Q. Thank you.

I'm going to ask you to take a look at another section of Newington's Master Plan which you probably also have not seen. But it's been submitted as Newington 1-4. And this is the section captioned "Utility Easements." And I'd like to ask you to read this section that's highlighted, the first paragraph, please.
A. Hmm-hmm. "The proposed installation of an electric transmission line between the Gundalow Landing neighborhood, through the Frink Farm heritage site, the Hannah Lane neighborhood, and continuing through the Fox Point Road neighborhood towards the Spaulding Turnpike, would interject a significant visual blight upon Newington's small residential district. Such a transmission line development with utility towers at heights from 65 to 90 feet or higher would have considerable negative view impacts from
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many homes and upon the viewshed of the Town's historic district."
Q. In your discussions and in your review of the proposed conditions and addressing the issues with the 13 locations and proposed planting plans, do you see anything in those proposed conditions that would address this concern of the Town's?
A. Well, certainly through the Frink Farm, the fact that the line is being buried certainly addresses that. And certainly at Fox Point Road, as I said, there's going to be a loss of some of that character. So that's my answer.
Q. Okay. Thank you. Why don't we read the next paragraph, please.
A. Okay. "It has been the Town's policy to require land developers to place their electric utility service improvements in the residential district underground. This policy should extend also to electric transmission line improvements. It is strongly recommended that electric transmission line improvements, if they must
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[WITNESS: LAWRENCE]
pass through Newington from east to west, that the transmission line follow the approximate route used by the PNGTS gas transmission line that skirts the northwestern boundary of the Pease Development Authority. Such utility infrastructure improvements should be kept at the very periphery of the residential district, should be placed underground, and under no circumstances should such improvements be permitted to be constructed above ground within existing easements that bisect the heart of the residential district."
Q. So would you, from that reading, based on your professional experience, interpret or see that perhaps the Town has anticipated that there might be some project that would come into Newington that would have a negative impact on its visual and scenic resources?
A. Yes.
Q. And would you say that they've tried to come up with a solution to that?
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A. Yes.
Q. So in your professional opinion, given the limitations of what can be accomplished through landscape planting and screening, would you agree that perhaps burying the line throughout Newington could adequately address the negative effects that this project would have?
A. Yes.
Q. Thank you.
A. You're welcome.

PRESIDING OFFICER WEATHERSBY: Anyone here for the Conservation Law Foundation to ask questions?
[No verbal response]
PRESIDING OFFICER WEATHERSBY: Hearing none, we'll move to -- is Attorney Brown here or Mr. Fitch?

MR. FITCH: Couple questions.
PRESIDING OFFICER WEATHERSBY: Okay.
MR. FITCH: Thank you.
QUESTIONS BY MR. FITCH:
Q. Mr. Lawrence, my name is Matthew Fitch. I'm part of the Durham Residents Intervenor
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Group. And I just have a handful of questions I want to ask you today.

In looking at your assessment report here on Page 21, this is specifically in reference to the Durham Point crossing in Durham, you have a statement here that says that the 100-foot-wide clearing will expose the new poles and wires along this section of the Project from Durham Point Road.

On Page 23 of the same report you reference that the 100 -foot cleared zone offering views of multiple poles receding in the landscape against the sky will dramatically alter the existing view looking northwest at Durham Point Road.

So, would you consider, referencing the eastern portion, which was on Page 21, where the 100-foot-wide clearing will expose new poles and wires along this section of the Project, would you consider this also a dramatic change as you described the situation looking northwest?
A. Yes.
Q. And in your opinion, would you also quantify
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that or describe that as a "material change" to this area from the existing condition?
A. I would.
Q. Would you consider 85- to 90-foot transmission poles a visual complement to the rural area in existing condition as this area stands currently?
A. Complement?
Q. A positive visual complement.
A. No.
Q. From a visual standpoint, would it matter if the existing distribution line serviced any of the homes in the area, or in service at all?
A. No.
Q. Upon cross-examination, Mr. Raphael made a statement to the effect that, and I'm paraphrasing here, that people rarely complain about projects like this after they're constructed. Do you agree with that assessment?
A. That's a challenging one. I think people notice. I don't know how much they complain.

I think it depends on who you are and maybe
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how often you go by it and your proximity to it, what you remember from what it used to be like. I think there are a lot of different things. So I would think some people would complain. You know, I think it impacts different people a little bit differently. Are you familiar with any mechanism someone would have in New Hampshire or elsewhere to formally complain or officially express dissatisfaction with the visual look of the Project after construction?
A. I'm not aware of anything like that.
Q. Are you familiar with any mechanism someone would have for recourse of any sort in that situation as well if they were to express dissatisfaction?
A. No.
Q. If a town prohibits the installation of transmission towers via their zoning ordinances, could one of the reasons they do that be due, in your professional opinion, to the impact on the visual aspect of the area?
A. Yes.
Q. As I understand from the Application and the
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[WITNESS: LAWRENCE]
plans the Applicant has supplied, the existing distribution lines from Durham Point Road east to the bay will be removed upon construction of this project. Would that -would those old distribution towers being removed and being replaced by the transmission line or transmission towers solely, would that change your opinion or assessment of the visual impact of that area?
A. No.
Q. Thank you very much for your time.

MR. FITCH: That's all I have. Thank you.

PRESIDING OFFICER WEATHERSBY: Thank you, Mr. Fitch.

Why don't we hear from Durham
Historic Association, Ms. Mackie.
For planning purposes, we'll
probably hear from Ms. Mackie and Ms. Frink and then break for lunch.

QUESTIONS BY MS. MACKIE:
Q. Hello again. Janet Mackie from the Durham Historic Association. I have a few questions.
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As I understand it, you were retained by the Counsel for the Public to evaluate Mr. Lawrence's report. And in doing that -I'm sorry -- Mr. Raphael's report. And in doing that, you used the LandWorks report and the environmental maps and engineering plans as a guide. But you didn't go back to square one and compile a list of scenic resources; is that correct?
A. That's correct.
Q. Okay. Now, Mr. Raphael included the Newington Historic District as a scenic resource. That was evaluated in his report. He did not include the Durham Historic District as a scenic resource. If you were doing this kind of report, would you have included that as a national listed historic district?
A. Yes.
Q. Also, in Durham, other historic districts listed on the National Register include the Wiswall Falls Historic District, Smith Chapel and Wiswall Falls mill site. Would you have include those as well?
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A. Yes.
Q. They were not included in Mr. Raphael's report. Also --

MR. NEEDLEMAN: Objection. That's testimony, and I don't believe that's accurate.

PRESIDING OFFICER WEATHERSBY: SO there wasn't a question there to object to, but it was testimony. So please --

MS. MACKIE: I'll rephrase the question. Thank you.

BY MS. MACKIE:
Q. If you were doing the assessment from square one and you were including national historic sites, National Register listed buildings state register listed buildings and sites, would you have included those?
A. Yes.
Q. Thank you.

Another area that we're interested in, which is owned by the public, whether it's conservation land owned by the state, conservation land owned by the town or land owned by the university, we have -- none of these things were included in Mr. Raphael's
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report. So I'm asking you if you would include them in your report.

MR. NEEDLEMAN: Same objection.
MS. MACKIE: Well, I'll just ask it as a straight question.

PRESIDING OFFICER WEATHERSBY: Ask it as a straight question and probably not what Mr. Raphael included.

BY MS. MACKIE :
Q. If you had started from square one in doing a visual assessment of this project, would you have included public trails within and beneath the easement --
A. Yes.
Q. -- in public lands?
A. Yes.
Q. This is a trail map showing -- the pink is East Foss Farm. This area right here and here being visible from the trails, would that be considered an important item that should be assessed as a scenic resource?
A. Yes.
Q. What about this one?
A. I think if it's a public trail and it
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interfaces with the transmission line, then it should be studied and recommendations for mitigation.
Q. Do you think that the scale on this map being about three quarters of an inch equals 500 feet means that those trails are within view of the easement?
A. Probably somebody that's familiar with the trails could answer that. And of course, had it been studied, then someone could give a definite answer to that. But I don't know. It could be all in the woods.
Q. Do you know that it's in a field?
A. I don't know.
Q. Thank you.

This is a different section of town.
This is the easement. If you had done this report, would you have included the trails marked in red?
A. If they're public trails, I would have, yes. MS. DORE: And what is the exhibit number?

MS. MACKIE: I'm sorry?
MS. DORE: What are we looking at?
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What is the exhibit number of this document? MS. MACKIE: Oh, the first I showed is DHA Exhibit No. 10. And the second one, which is between Sandy Brook Drive and Durham Point Road, is DHA Exhibit No. 9.

BY MS. MACKIE :
This is a drawing from Mr. Raphael's exhibit of the viewshed. And the trails that we just looked at are in these locations right here and right here. Are you aware that this is a section of Durham that has no public water, no public sewer, no fire hydrants? The zoning prohibits construction of utility facilities. It's a very rural area.

MR. NEEDLEMAN: Madam Chair,
objection. My understanding was that this party's role was limited to historic resources. I don't understand how this is relevant to that.

MS. MACKIE: Well, it is relevant because it includes three historic districts and a scenic historic road.

PRESIDING OFFICER WEATHERSBY: The objection's overruled.

MS. MACKIE: Thank you.
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BY MS. MACKIE :
Q. My question has to do with the rural scenic character of this particular section of the easement and how you would evaluate, you know, that context in combination with the installation of transmission lines in the right-of-way.
A. Well, $I$ think this goes to an earlier question, which was if there's access to the public, then someone who's doing an aesthetic analysis would be -- would want to include that. If there's no access to the public in there, I would still want to go back and take a look and get a sense of it. And I had driven back in there and looked around, but it seemed like the places that were most important is where the public interfaced with the corridor.
Q. I think maybe I'll ask another way.

Is the impact of a high-voltage transmission line more of an impact in a rural area or historic district area than it would be, for example, in a developed area?
A. That's a good question. I think that it
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impacts both areas, depending who's there and how they're using it.
Q. Okay. Your testimony takes a look at and evaluates road crossings.
A. Yes.
Q. And you just agreed that public trails should also be evaluated. I'm wondering in the evaluation of the effectiveness of mitigation from tree planting, were you aware that the clearance below the lowest cable on these transmission lines varies from 18 to 24 feet in height?
A. Yes.
Q. And does that inform your opinion as to whether mitigation would be effective --
A. Yes.
Q. -- in blocking the views?
A. Yes.
Q. So do I understand you to say that a tree which must be kept with a maximum of 18 to 24 feet high would not be affected?
A. No. I think that planting trees is effective. It's going to change the character of the area. And it can -- it
[WITNESS: LAWRENCE]
certainly -- probably reality is that it can't completely mitigate the impact of the transmission line, but it can help.
Q. Well, I'm thinking of the road crossings, for example, like Mill Road, for example, where you see a long line of utility poles. If you have an 18-foot-high tree against a 100-foot-high pole into the distance, how can that help?
A. Well, $I$ think as long as the trees are planted close to the crossing, I mean, you can almost create almost an umbrella, almost a tunnel, if you will, for people to go through. Again, it has to be done sensitively if it's a wooded environment. And you want to -- you know, you don't want to change the character to kind of a manicured, formalized landscape. But I think you have to accept some compromise in saying this is -- if this is a reality, if this is going to happen, how can we best ameliorate it, and then discuss the strategies and agree that, hey, this is a reasonable way of doing it.
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Q. So if I understand what you're saying, you're saying it depends how close the poles are to the crossing, the road crossing, as to where they should be planted or could be planted?
A. Well, probably the distance of the planting itself. The closer it is to the person who's viewing, the better.
Q. So if I understand you, then a pole that's within 50 feet of the road that's 100 feet high would be more difficult to hide --
A. Very much so --
Q. -- for example.
A. -- yes.
Q. Now, as far as the public trails within the easement, or across the easement -- and we have one trail, this one here, that actually follows the easement, right here. Now, this is within what we call the "quarry sensitive site." It's full of old granite quarries. If you have a trail within the easement, is there any way that that can be mitigated, the view of the poles?
A. Again, yes. I mean, you could do a tunnel of trees. You could plant them, I'm thinking of
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a low-growing tree, but with kind of like a canopy over it could help.
Q. So what you do is you would be giving up the view of the surrounding area in order to prevent a view of the poles.
A. Exactly.
Q. I see. Thank you.
A. You're welcome.

PRESIDING OFFICER WEATHERSBY: Ms. Frink, questions?

QUESTIONS BY MS. FRINK:
Q. Good morning, Mr. Lawrence. My name is Helen Frink, and I represent the Darius Frink Farm. And I have questions about your work as it pertains to the Town of Newington.
A. Good morning.
Q. Did you include the Frink Farm among your list of scenic resources?
A. It was on the list of scenic resources that David Raphael provided; so, yes, I certainly looked at it.
Q. And what was your assessment of the visual impact to the farm?
A. Well, when I started, the proposal was to
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have an overhead transmission line through the meadow, and that disturbed me. And when the proposal was changed to have that line undergrounded, I breathed a sigh of relief and felt it was a huge improvement.
Q. I see. In your report, you wrote that you took photos in the corridor and that you measured the heights of represented trees and existing poles. Did you do this in

Newington's historic and residential area, too?
A. I know we did it in the meadow adjacent to the farm, and we did it further west in the transmission line corridor heading west.
Q. I'm a little confused by what you mean about
"the meadow." I'm thinking that what you really mean is that it was part of the hay field on the farm.
A. The hay field on the farm, yes.
Q. Okay. And I'd like to show you some images of the existing line and the trees surrounding it, if I may.
A. Okay.
Q. And just for clarification, this is the
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existing line and the right-of-way between the Frink property and looking toward the west toward the Pickering property, actual photos.

If the power poles that you see here for the existing line are 35 to 40 feet tall, how tall would you guess that the trees are?
A. In the neighborhood of, I think they were right in the neighborhood of 50 feet.
Q. And again, this is a view showing the right-of-way clearing that I think you also noted in your report?
A. Yes.
Q. In your work, did you receive any images or actual photographs of what the transition structures would look like? I think you already knew that there would be a transition structure located right where you see this pole that's closest to the front of the image.
A. Yes, I looked at the proposed poles.
Q. And did you see any actual photos or images of what these transition towers would look like?
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A. You know, $I$ can't remember seeing any actual photos. I certainly saw the engineering elevations that showed them to scale.
Q. So I think you looked at the engineering drawings or the diagrams, basically.
A. They were -- there was a set of engineering drawings that described the specific poles and the height and the type, and then there was kind of a key description giving a number. Then there was another sheet in the engineering set that detailed each pole.
Q. And this is a photograph supplied to the property owners of the Frink Farm showing the 75-foot-tall transition tower monopole. How does this compare in height to the poles that we just looked at in the right-of-way as it exists now?
A. It's at least twice as high and maybe higher.
Q. And in your report, you suggested some plantings as a form of mitigation; is that correct?
A. Yes.
Q. And how could this 75-foot-tall monopole be screened by vegetation?
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A. It's going to take a long time.
Q. Any estimate of whether it would be screened during the 30- to 40-year lifetime of this project?
A. It won't probably ever be completely screened.
Q. So it will continue to be visible, for example, from Nimble Hill, from the farm fields, and to passersby on the Nimble Hill and Old Post Roads.
A. Yes.
Q. Thank you very much.
A. You're welcome.

MS. FRINK: No further questions, Madam Chair.

PRESIDING OFFICER WEATHERSBY: Thank you, Ms. Frink.

Let's break for lunch and be back at 1:30 when the Applicant will have questions.
(Lunch recess taken at 12:27 p.m. and concludes the Morning Session. The hearing continues under separate cover in the transcript noted as Day 14 Afternoon Session.)
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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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\& \text { 69:8 } \\
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