# In The Matter Of: <br> Coastal Resources Management Council 

Perry Raso
Vol. 2
November 13, 2020
Subcommittee Hearing

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STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS COASTAL RESOURCES MANAGEMENT COUNCIL SUBCOMMITTEE HEARING

IN RE:
CRMC File No. 2017-12-086
In the matter of Perry Raso
$\star \star \star \star \star \star \star \star \star \star \star \star \star \star \star \star *$
Date: November 13, 2020
Time: 1:00 p.m.
Place: Via Zoom
Rhode Island
MEMBERS PRESENT
Jennifer Cervenka, Chair
Raymond C. Coia, Vice Chair
Donald T. Gomez
Patricia Reynolds
Anthony DeSisto, Esquire, Legal Counsel
STAFF PRESENT
Jeff Willis, Executive Director
Lisa Turner, Secretary
Ryan Moore, Moderator
James Boyd, Deputy Director
David Beutel, Former Aquaculture Director
APPEARANCES
Elizabeth Noonan, Esq................For the Applicant
Leslie Parker, Esq.....................For the Applicant
Christian Capizzo, Esq................For the Objectors (Hunt, Latham, Cooney and Quigley)

Dean Wagner, Esq.......................For the Objectors (Andrew Wilkes and 454 Beach Road, LLC.)

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FRIDAY, NOVEMBER 13, 2020
[COMMENCING AT 1:20 P.M]
CHAIRWOMAN CERVENKA: I'm calling this meeting
to order. It's Friday, November 13, 2020. It is
1:15 p.m. This is the second of three scheduled meetings of a subcommittee of the Rhode Island Coastal Resources Management Council. We are convened to hear a contested case in CRMC File No. 2017-12-086 in the matter of Perry Raso to establish a 3-acre oyster and bay scallop farm using floating and suspended gear in Potter Pond, South Kingstown, Rhode Island.

We have our subcommittee members that are all here today. I will do a roll call. When $I$ call your name out, if you could please unmute and indicate that you're here. Starting with Vice Chair Raymond Coia.

VICE CHAIRMAN COIA: Raymond Coia present.
CHAIRWOMAN CERVENKA: Patricia Reynolds.
MS. REYNOLDS: Patricia Reynolds present.
CHAIRWOMAN CERVENKA: Don Gomez?
MR. GOMEZ: Don Gomez, present.
CHAIRWOMAN CERVENKA: Vin Murray.
MR. MURRAY: Vin Murray present.
CHAIRWOMAN CERVENKA: Again, Vin Murray is our
South Kingstown representative, and myself, Jennifer

Cervenka, Chair.
From CRMC staff, we have our executive director, Jeff Willis. Our Deputy Director Jim Boyd, Tony DeSisto, our chief legal counsel, Dave Beutel, who is here all day, all afternoon yesterday, will be joining us, but from three to five. So he will not start with us today. We also have Lisa Turner, our recording secretary, Ryan Moore, our CRMC moderator, thank you, and we have Lisa Reis who is our court reporter. I think I have everyone. Ben Goetsch is our current aquaculture coordinator, and he is on this call but he's not on the video. He's available for any questions, process questions, regulation questions that may come up.

Yesterday we covered the staff report. We covered the applicant's case with respect to two witnesses. I believe there's three additional witnesses that the applicant would like to present, and so we'll go through that today. If we have time, and I hope we will be able to read the objectors' counsel presentation for these cases, and that will be followed by public comment that's going do start necessary Tuesday.

Again, there probably will be overflow of these matters between today and next Tuesday with the possibility, the likelihood, that we'll have to schedule
a fourth meeting because the subcommittee itself will have to have a workshop following the public comment so that we can come up with our recommendation to the full Council.

The meeting before the full Council, Mr. Willis, correct me, is that January 27th? I thought it got scheduled.

MR. WILLIS: Correct, Madam Chair. We tentatively set it up for the second meeting of January. CHAIRWOMAN CERVENKA: Thank you. Any other administrative matters, Mr. Willis, that I may have missed?

MR. WILLIS: Not necessarily. Just we did post on our website both in the calendar section for under each day of the subcommittee hearings as well as our home page why we have moved the public comment section to the Tuesday hearing date. We wanted to let everybody know as soon as possible what we are doing there, and $I$ want to thank staff for staying late last night and emailing everybody that we had on our email contact list for public comment to let them know the same.

CHAIRWOMAN CERVENKA: Okay. Thank you, Mr. Willis.

Mr. Moore, do you have a current number of people
who have signed up for the public comment portion?
MR. MOORE: I had 13 sign up yesterday. I'm not sure how many Lisa had already in her list, but 13 were added yesterday.

CHAIRWOMAN CERVENKA: Okay. Thank you. Ms. Turner?

MS. TURNER: Madam Chair, I have 50 people so far that have signed up to speak, and separate from Mr. Morris' list. There's 50 people so far --

MR. MOORE: We collaborated our list.
MS. TURNER: -- which I assume will grow over the weekend.

CHAIRWOMAN CERVENKA: Okay. And we are accepting public comment to sign up for public comment today in addition to yesterday, correct?

MS. TURNER: That is up to you, Madam Chair.
CHAIRWOMAN CERVENKA: Okay. Mr. Willis, what have we decided on that?

MR. WILLIS: Yes. Anybody who wants to provide public comment, they can do so during this hearing in the chat box, and then we take their contact information, their name and email, so that we can add it to the list in the order received.

CHAIRWOMAN CERVENKA: Okay. So if anyone wants
to provide public comment they should register today. We're not taking any of that over the weekend, correct?

MR. WILLIS: Right, that is correct. We should have the information by the close of today's hearing.

CHAIRWOMAN CERVENKA: Okay. Great. Thank you.
I'm going to turn it back over to Ms. Noonan who is going to present her third witness, I believe.

MS. NOONAN: Thank you, Madam Chair. I am in fact presenting my third witness. We have three witnesses today, so it will be Drs. Carrie Byron, Dr. Michael Rice, and Dr. Robert Rheault. So I'd like to start with Carrie Byron first.

Carrie, are you up there?
DR. BYRON: I am here.
DR. CARRIE BYRON,
Being duly sworn testifies as follows:
COURT REPORTER: Please state your name for the record.

THE WITNESS: My name is Carrie Byron.
DIRECT EXAMINATION BY MS. NOONAN
Q. Good afternoon, Doctor. How are you?
A. I'm well, thank you.
Q. Good. Dr. Byron, could you please tell this subcommittee of CRMC where you presently are employed?
A. I am presently employed at the University of New England.
Q. And what's your position there?
A. I am a faculty member there.

MS. NOONAN: Okay. And what I'd like to do it introduce Exhibit 3, Mr. Moore, if we could put that up on the screen, please.
[EXHIBIT DISPLAYED]
Q. Dr. Moore (sic), can you describe for the committee your professional -- strike that -- your educational background?
A. Sorry, you said "Moore."
Q. Sorry. Mr. Moore is going to put up your CV hopefully. And then as we go through that, I would like to ask if you can give the committee your educational background, please.
A. Yes, I would be happy to. I hold a doctorate degree trained in environmental science and marine science. I'm currently employed at UNE where I run a research lab on ecology in -- ocean in application to aquaculture.
Q. And where did you obtain -- prior to your Ph.D what other degrees do you hold?
A. I hold both a master's degree in environmental studies and a bachelor's degree.
Q. Okay. Did there come a period where you were at the

University of Rhode Island?
A. I did my doctorate work at the University of Rhode Island, yes.
Q. Can you describe to the committee what your doctorate work was?
A. Yes. My thesis was working with farmers in Rhode Island in stake holder engagement. And with them, I designed a food web model of our coastal systems in Rhode Island including Narragansett Bay and the salt ponds in order to calculate a carrying capacity for aquaculture in these waters. So this model was informed by the people who work and live in this place and know these ecosystems quite well. I was also informed by peer reviewed published data and by ongoing surveys, environmental surveys, and other data collected.

All of that information brought together to describe that in a model and then can use that model to ask questions, such as how much aquaculture can we have in this environment, in this space, without impacting the ecology in the environment.
Q. And in addition to your dissertation, have you engaged in other publications that are listed on Exhibit 3?
A. Yes. I'm well published in this area of carrying capacity for aquaculture and much of my work in
particular, my dissertation work that was done in Rhode Island is recognized globally around the world, some of my most highly cited work.

MS. NOONAN: I'm going to ask this committee to qualify Dr. Byron as an environmental scientist as she is a professor of marine science.

CHAIRWOMAN CERVENKA: Tony?
MR. DESISTO: It's going to take a motion which is an order, by the way.

CHAIRWOMAN CERVENKA: Same as last time. Can I get a motion to qualify Ms. Byron as an environmental scientist, Ms. Noonan?

MS. NOONAN: With a specialty as a professor in marine science.

MR. COIA: Madam Chair, Ray Coia to be recognized?

CHAIRWOMAN CERVENKA: Yes, Mr. Coia.
VICE CHAIR COIA: Madam Chair, based upon the CV that's presented to us on screen and the representation, I would move to accept her as an expert in the fields as indicated.

CHAIRWOMAN CERVENKA: Thank you, Mr. Coia. Is there a second to Mr. Coia's motion?

MR. GOMEZ: Don Gomez, second to Mr. Coia's
motion.
CHAIRWOMAN CERVENKA: Thank you, Mr. Gomez.
Any discussion? Okay, I'm going to do a roll call. Ray Coia?

VICE CHAIR COIA: Ray Coia votes aye.
CHAIRWOMAN CERVENKA: Patricia Reynolds?
MS. REYNOLDS: Reynolds votes aye.
CHAIRWOMAN CERVENKA: Ron Gomez?
MR. GOMEZ: Ron Gomez aye.
CHAIRWOMAN CERVENKA: Vin Murray?
MR. MURRAY: Vin Murray aye.
CHAIRWOMAN CERVENKA: Jennifer Cervenka aye.
Motion to qualify carries. Thank you.
MS. NOONAN: Thank you.
Q. Dr. Byron, do you know the applicant Perry Raso?
A. I do.
Q. And how long have you known him?
A. About 12 years.
Q. And how did you get to know Mr. Raso?
A. I first met him while doing my dissertation work at URI as just described.
Q. And are you familiar with the application that Mr. Raso has submitted to CRMC for this project?
A. Yes.
Q. And were you watching the proceedings yesterday afternoon of this subcommittee proceeding?
A. Every minute of them.
Q. Great. Thank you. What other materials did you review in preparation for your testimony today?
A. As an academic I always turn to peer review literature first, but $I$ also received the CRMC staff report dated in June and the opposition package to CRMC I believe dated last week.
Q. Okay. In that staff report which we've identified as being admitted as Exhibit 17, there's a section where Mr. Beutel makes a reference to a 5 percent rule with a citation after it. Are you familiar with this 5 percent rule?
A. I am.
Q. Can you tell us about that, please.
A. This 5 percent rule was developed in parallel to my dissertation work that $I$ just described. If anything, it motivated my dissertation work. The 5 percent rule came -- well, it came out of discussions among multiple users of these systems in Rhode Island. And the goal, as I understand it, was to come to an agreement on how much aquaculture could be developed in these systems including the salt ponds. And the way that it was agreed on 5
percent would be the rule, is that that 5 percent was based on a calculation intended to reflect the ecological carrying capacity of the system.

However, the information on hand at the time that calculation was made was limited, and prior to my work using the more comprehensive food web model, that calculation was made based on a study done in New Zealand where that ecosystem in New Zealand is much different than the ecosystem in Rhode Island salt ponds but it took some calculation from that New Zealand ecosystem and applied them to oyster culture in Rhode Island.

One of the witnesses that you'll hear from after me was the one who actually made that calculation, Dr. Rheault. Feel free to ask him more about it.
Q. We shall.
A. He's the one who drafted that calculation and suggested five percent as an ecological carrying capacity for aquaculture, and the other stakeholders at that table at that time in that discussion agreed that that should become a rule or a maximum allowable amount of aquaculture in both in Narragansett Bay and the salt ponds.

To be clear, the 5 percent is describing a surface area coverage of the total surface area of any particular
water body.
Q. Let's just back up a little bit. When you talked about carrying capacity, can you explain that and what carrying capacity is and what it means in the context of that culture?
A. I would be happy to. Carrying capacity is a term used in ecological science to describe the maximum of population, level population that any ecosystem can support. So if you were to exceed the carrying capacity, you would expect that that population would crash, would diminish. The ecosystem would change in some way. It's describing how many resources are available to support a certain level of population of an organism.

This definition that ecologists use has been adapted to specifically for aquaculture. And there's actually a couple different ways in which we can describe carrying capacity for aquaculture. These definitions are now widely accepted in the legislature, and I'm happy to run through that.
Q. Sure, if you can describe the different types of carrying capacity, please.
A. Absolutely. So the first type of carrying capacity is physical carrying capacity which simply is the amount of space available to aquaculture. This definition does not
consider biology, ecosystems or even humans of the system and is therefore irrelevant for conversation today.

Another type of carrying capacity is production carrying capacity, and this is the level of maximum production possible at the farm site irrespective of where this farm is located or ecology supporting that farm.

Operating at production carrying capacity would impact the ecosystem and also not what is in question here today.

The next type of carrying capacity is ecological carrying capacity which you herd me refer to already. This is the level of farm development above which would have unacceptable ecological impacts. This in particular is my area of expertise and is highly relevant to the testimony and conversation regarding Mr. Raso's proposal.

And then the fourth type of carrying capacity is social carrying capacity which is the level -development above which would cause unacceptable social impacts. There are many different ways to describe, define and quantify social carrying capacity, and it's highly dependent on the interests and the values of the humans of that place or that system.
Q. Okay. In terms of Potter Pond in Rhode Island, that is
one of the salt ponds that you have been discussing initially in your dissertation, right?
A. Correct. Potter Pond is included as one of the salt ponds in southern Rhode Island.
Q. Do you know what the ecological carrying capacity of Potter Pond is?
A. According to my food web model, it would be 46 percent of surface area of the salt pond, a magnitude higher than our 5 percent rule in other words.
Q. Okay. I think you talked about this a little bit. I don't know if there's anything else to add about your involvement with the creation of the 5 percent standard.
A. I'll just reiterate that that 5 percent rule was calculated and agreed on prior to the completion of a more comprehensive food web model that calculated this much higher ecological carrying capacity.
Q. How would you describe or define your food web, a food web model?
A. That's a great question. So the food web model describes basically who's eating who and how much in the ecosystem so it's capturing transfer of energy. Humans are part of this ecosystem and humans are included in terms of fishing or other extractive exercise -- activities such as harvesting of shellfish. And so the model looks at
data for all the major species present in the ecosystem, and looks at how much of them is there, and there are known rates of production and consumption and respiration, all of our sort of bodily actions that keep us moving and alive, right, from plants up to top predators. You can describe how they are using the energy that they are consuming from their prey and what that means in terms of what is available for that next link in the food chain, that next predator above them. So that model captures all of those transfers of energies between species. And what that allows us to do is it really gives us a tool. It gives us a description of the ecosystem and how it's operating, and it provides us a tool by which we can then ask questions, different scenarios, things that are -- what's really interesting is you can ask these questions right on an ecosystem scale instead of having to rely simply on experiments done in small tanks, for example. It's really hard to do ecosystem wide experiments. So by using modeling we can do that in a quantitative way.
Q. Going back to the 5 percent standard that's set forth now in the CRMC regulations, do you have any understanding of what the initial rationale was for it?
A. Yes. The initial intent of calculating that 5 percent
rule was an ecological carrying capacity as I said earlier.
Q. Okay. Based upon your review of Mr. Raso's application and your education and experience, what will be the effect of the ecological carrying capacity of Potter Pond from this proposal?
A. Mr. Raso's proposal will not impact the ecological carrying capacity. The scale at which he's proposing to develop is quite small in comparison to what the pond is able to support.

In other words, the addition of this proposal to the pond, the addition of another 3 acres of -- farming will still be well below the carrying capacity for this pond.
Q. That was the number that you indicated in your dissertation was 46 percent based upon your modeling, correct?
A. Correct. Not only my dissertation, but that work has been published and peer reviewed and it is highly cited.
Q. In the staff report from CRMC which is Exhibit 17, it indicated that if the application is proved, Potter Pond would be at 3 percent of allowable aquaculture activity. Do you have any reason to disagree with this conclusion?
A. I have no reason to disagree.
Q. Okay. Do you have an opinion as to whether or not that 5
percent standard is appropriate?
A. That 5 percent standard from an ecological perspective is highly conservative.
Q. Would the addition of this farm, again, affect the ecology of Potter Pond?
A. The addition of this farm will not harm the ecology of Potter Pond.
Q. Okay. Dr. Byron, are you familiar with the CRMC category $B$ assent requirements?
A. Yes.
Q. And based on your experience, your testimony, your experience, your review of the materials, do you have an opinion as to whether the addition of this farm will or will not create significant deterioration in the quality of the water of Potter Pond?
A. I do not expect that this farm will have an impact on the water quality of this pond. It certainly will not harm the water quality of this pond. If anything, it may act to improve the water quality and clarity of this pond.
Q. If you were watching yesterday, as you were, our focus was -- a lot of it was on Segar Cove. Do you have an opinion as to whether the addition of this farm would create a significant deterioration in the quality of the water of Segar Cove?
A. No. My answer is the same. Segar Cove and Potter Pond are connected. There's water flushing between those areas of the pond. My work describes the whole pond. It does not look at particular bays. I don't expect that there would be any harm to Segar Cove in particular.
Q. Okay. Do you have an opinion as to whether the proposed aquaculture farm will or will not result in significant impacts on the abundance and diversity of plant and animal life?
A. That's exactly what the model was designed to look at, the abundance of organisms. The carrying capacity calculated, again, which is an ordered -- higher than this 5 percent rule, suggests that organism abundance and diversity will not be harmed at the level of farming that Mr. Raso is proposing.
Q. Do you have an opinion, again based on your experience and familiarity with the application and the area, as to whether the proposed farm will or will not result in significant impacts to water circulation including flushing, turbidity and sedimentation?
A. Yes. Again, the small scale development $I$ do not see how this farm will impact flushing or sedimentation.
Q. And do you have an opinion as to whether under the alteration or activity -- whether the alteration or
activity by the farm will or will not result in significant impacts on erosion and/or definition processes along the shore and in the tidal waters of Potter Pond?
A. At this small scale development $I$ don't understand how the farm could impact soil erosion or deposition.
Q. Okay. Finally, based on your review of the application and your expertise, what if any impact will this farm have on Potter Pond?
A. Looking at other farms in this region, it's possible to see localized positive benefits, actually, such as enhanced water clarity, nutrient cycling, provide structure and habitat by diversity. I do not anticipate any pond-wide impacts or harm to the ecosystem of Potter Pond with this proposal. Mr. Raso's proposal is well below the 5 percent rule and below calculated ecological carrying capacity for this pond.

MS. NOONAN: Madam Chair, if I might just have a moment?

CHAIRWOMAN CERVENKA: Yes.
[PAUSE]
MS. NOONAN: I have no further questions for
Dr. Byron.
CHAIRWOMAN CERVENKA: Do the subcommittee
members have any questions for Dr. Byron? Mr. Gomez? MR. GOMEZ: Yes. I think somewhere in all you said you've answered my question, but it's a bad day for me when $I$ can't learn something so I have a question relative to the -- is there any difference in impact if the farm has a mixture of scallops and oysters, or do they pretty much work together the same? This farm is proposed to have a scallop farm and then have oysters, and we're getting more and more of that. Their interaction seems to me to be fine, but I'm not -- it's not my professional expertise. If you had a comment, I would be very interested.

THE WITNESS: It's a great question. I don't expect any of my answers to change based on whether this would have been all oysters or half oysters, half scallops. They are all filter feeders. They all taking plankton particles out of the water and improving that water quality. So I don't see any -- I mean, if anything, you're introducing or you're reducing the polyculture. It's always -- polyculture is always better for the environment, multiple species.

MR. GOMEZ: Same with the land. It does seem to impact, in this case, the social carrying capacity and that the scallops -- bottom, where the oysters would be
in bags near the surface. Thank you for your answer. THE WITNESS: You're welcome.

CHAIRWOMAN CERVENKA: Any other questions from the subcommittee members?

MS. REYNOLDS: Madam Chair, I have a question. CHAIRWOMAN CERVENKA: I think we lost your video, Ms. Reynolds.

MS. REYNOLDS: I'm not sure what that's about, but I'm having some issues today.

I wanted ask Dr. Byron, when you talk about there's no negative effect helping in the environment. This is sort of localized to the farm itself. Do you factor in the fact that there's going to be additional boating on the pond, additional discharge from the engine and air pollution to a net positive effect, or are you just looking at exactly what happens in the pond itself without the human impact that's part of it?

THE WITNESS: Boat, motor oil, gasoline, that is not part of the model. Anthropogenic pollution was not part of the food web model so that's not considered in any of these calculations.

MS. REYNOLDS: Okay, thank you.
THE WITNESS: You're welcome.
CHAIRWOMAN CERVENKA: Mr. Murray, go ahead.

MR. MURRAY: Thank you. You mentioned social carrying capacity, and $I$ guess just in passing that would seem to me to be a much more difficult carrying capacity to quantify versus the more science-based carrying capacity of the shellfish and ecosystem. And a lot of the conversation yesterday, maybe it was geared towards social carrying capacity versus ecological carrying capacity.

THE WITNESS: Is there a question?
MR. MURRAY: Well, you're not testifying to social carrying capacity, correct?

THE WITNESS: No, I'm not testifying as to social carrying capacity, but I'm happy to share a few thoughts on that if you want.

MR. MURRAY: Sure. You brought it up as one of the -- among carrying capacity features that social is a particular aspect of it.

THE WITNESS: It is.
MR. MURRAY: And that was it. If you want to elaborate, then please do.

THE WITNESS: Well, I --
MR. WAGNER: I object to this witness giving any testimony about social carrying cost. Despite the fact that we all want to hear about it, this witness is
not qualified to give that. So I ask with respect to the Board, I ask she be limited to her testimony about her expertise.

MS. NOONAN: Actually, I would disagree that she is not qualified to speak about it. I think she is qualified to speak about it. What she testified, and she testified about the four types of them, so she is aware of them. We focused her testimony on ecological, but she is certainly familiar and able to testify.

MR. WAGNER: No foundation for any testimony about social carrying cost.

MS. NOONAN: That wasn't your first objection, Mr. Wagner.

MR. DESISTO: I was about to ask that question, Madam Chair.

Is the question based on foundation?
MR. WAGNER: Yes.
MR. DESISTO: That's a different objection, but it's one that is cured by laying the foundation.

MR. WAGNER: If she can lay the foundation.
MR. DESISTO: If she can, but Beth hasn't had a chance to do that yet, so --

MR. WAGNER: I thought the testimony was over.
MR. DESISTO: Well, here is the way I look at
T. There's a panel, and one of the members of the panel asked a question. And I think that that panel member should be allowed to have an answer to that question. If the objection is a foundation, then I say let Ms. Noonan lay that foundation so the member, who is going to be making a vote on this, can be satisfied for what he did. I'm going to make this statement and make a recommendation to the Board. Because this is an administrative panel, $I$ don't want it to be that information that Mr. Murray is seeking is limited because we're going on legal technicalities. It's different than a question from legal counsel. This is actually a member of the panel who is going to have to vote on this who has a question based upon testimony that Ms. Byron has already gave. I think he's entitled to an answer. So if the objection is no foundation, that's easily cured and we can move along with this, but $I$ do think Mr. Murray should get an answer to the question that he interposed.

MS. NOONAN: Would you like me to go or just have her answer the question?

MR. DESISTO: Do you mind laying the foundation?

MS. NOONAN: No problem at all.
Q. Mr. Byron, Mr. Murray who is a member of this panel asked you a question about social capacity. You heard that question, correct?
A. I did.
Q. You previously in your testimony defined that term when you testified, right?
A. I did define social capacity, yes.
Q. Based on your experience and background, have you worked with the issues of social capacity?
A. I have, actually. I also published in the area of social carrying capacity. I worked very closely with social scientists, and together, and an ecologist and social scientist, have published multiple times on the topic of social carrying capacity.

MS. NOONAN: I tender the witness, and I think she's ready to answer the question, if you remember what it is.

THE WITNESS: I believe Mr. Murray was curious to hear me share some of my thoughts about social carrying capacity and how they relate to Mr. Raso's proposal and testimony. Am I correct?

MR. MURRAY: Yes.
MS. NOONAN: I think he's saying yes. I see the head nodding. Mute is on. Go ahead, Dr. Byron.

Thank you.
THE WITNESS: I agree with Mr. Murray's statement. When we have a situation such as this, there's multiple users of an area of these salt ponds. They all have different interests and need different parts of that system for different uses. One way to resolve that would be to examine the social carrying capacity.

I'd like to mention some of the work done by Dr. Tracy Dalton at URI who attempted to capture quantitatively a measure of social carrying capacity for Rhode Island waters. Her method was to present photographs to a variety of different users, stakeholders of these systems. In the photographs they showed different amounts and configurations of buoys and aquaculture gear in the water. And she asked respondents to rate on a Likert scale, on a scale of 1 to 5, for example, how accepting they were of these different aquaculture configurations and levels of development.

What she found from her work was, I think much to her surprise and my surprise, that there was actually higher level of acceptance for aquaculture than we were expecting to find. Again, for multiple different users.

So that's just an example of one way to capture a
measure of carrying capacity in one area of social carrying capacity. It really -- you could take a market analysis and look at the economies. You could really examine it from multiple different disciplines and perspectives in the social sciences.

If I may just expound a little bit more and perhaps present a very contrasting situation, maybe explain the situation here.

If we were to examine social carrying capacity in the northeast of U.S., and then we would compare that to somewhere in the other half of this world, say China, there's very different human values that play there. China is very interested in food security and food production. We're very privileged on the East Coast of the U.S. to have a -- water shed and with different values there. It's not just about food production. It's also about recreation and other things. So I'd expect that the social carrying capacity would be much different in these two different geographies based on human values and human needs alone. All of this is to say it is very complicated, and it very much depends on your question at hand and how you want to address it.

But I'll end by going back to the 5 percent rule that's on the -- was intended when it was first
calculated to be was intended to be an ecological carrying capacity. Whether over time that has shifted to a social carrying capacity $I$ think is a matter of debate.

MR. MURRAY: Thank you.
MS. NOONAN: Thank you, Dr. Byron.
CHAIRWOMAN CERVENKA: Dr. Byron, I have a couple questions for you. Continuing on the social carrying capacity, I'm just trying to relate it, if it relates to the criteria that you look at for Category B assents.

You talked about the ecological impact and that's definitely covered. One other criteria is to demonstrate that measures have been taken to minimize adverse scenic impact. Is scenic impact part of that social carrying capacity? Is that what you're talking about in part?

THE WITNESS: It could be, yes. That certainly
is the angle that Tracy Dalton took, was that fusion.
CHAIRWOMAN CERVENKA: It's subjective depending on the area that you're looking at?

THE WITNESS: Right, the people and the place, yes.

CHAIRWOMAN CERVENKA: Okay. Question for you on ecological impact. I know that your opinion relates to the impact on the pond as a whole, so Potter Pond.

Counsel talked a little bit about the cove, Segar Cove, and you said you considered them kind of one in the same. There's flushing between the two. Is the ecology in the ecosystem the same throughout the pond including the cove? Does the cove have a separate ecological system? How do you view that?

THE WITNESS: I would not be comfortable trying to chop up Potter Pond which is already a small water body into smaller sections to try to describe the ecology. I really think we need to look at a basin wide scale here, and not in this conversation.

CHAIRWOMAN CERVENKA: Thank you. Those are all the questions that I have. I think we, unless we have others from subcommittee members, I will turn it over to counsel for the objectors maybe starting with you, Mr. Capizzo?

MR. CAPIZZO: Thank you, Madam Chair.
CROSS-EXAMINATION BY MR. CAPIZZO
Q. So Dr. Byron, basically that was a very good presentation today, but basically you are saying that ecologically this is not going to impact the pond, right? It's going to work --
A. It's going to work. There will be no harm to the ecology of the pond.
Q. I just want to make sure $I$ understand this 5 percent rule. I believe you testified that that goes to the carrying capacity in each pond which goes to the maximum amount of shellfish aquaculture that can occur in a given water body without unacceptable ecological impact to that body of water; is that right?
A. Yes.
Q. Okay. So that 5 percent rule only applies to ecological impact. I think you said it was debatable as to whether that applies to the social impact; is that correct?
A. Right. The intention of calculating that 5 percent rule was to capture the ecological carrying capacity.
Q. Not the social?
A. Not the social.
Q. When we're talking about social impact, I just want to make clear, those who use the cove for recreation, correct?
A. Recreationist would be one user of the pond. There's multiple users.
Q. Okay. What are most of the users for Segar Cove?

MS. NOONAN: I'm going to object. I don't know how far we want to go down on individuals. And she also indicated that it's Potter Pond not just Segar Cove. She looks at it on a basin wide analysis.
Q. I'll rephrase the question. What types of recreational activities take place on Potter Pond, if you know?
A. I'm sorry. That's outside my -- that's not why I'm here to testify today. It's outside my expertise.
Q. But you were testifying about the social carrying capacity, and we went down that road. You just testified about the social impact would be impacted by recreational activity. Correct?

MS. NOONAN: Wait. Can I stop one moment? Her testimony went to ecological carrying capacity. She did respond to a question from Mr. Murray on social carrying capacity, which I think was proper to respond to a committee member's question, and she has that expertise. I don't want to go down that path. She is not a sociologist by training, I believe. Correct me, Dr. Byron.

MR. DESISTO: Madam Chair, actually on this I think Mr. Capizzo's question is appropriate. The witness might not be able to answer, but he has a specific question, and $I$ think it should be answered here. CHAIRWOMAN CERVENKA: Yes. I think we went down the road, so to speak, so, you know, to the extent that Dr. Byron can answer it, I think it's okay.
A. Mr. Capizzo, can you please repeat your question?
Q. Sure. What types of recreation impacts social capacity on Potter Pond if you know?
A. What types of recreation specifically impacts social --
Q. Social carrying capacity.
A. Social carrying capacity?
Q. Right.
A. And you want that answer specific to Potter Pond or more in general?
Q. If you're familiar with Potter Pond and you can testify to that, great. If not, then just give me what recreational impact -- what types of recreation have an impact on social carrying capacity.
A. Again, to answer what is impacting social carrying capacity really depends on what your matrix are and what perspective you want to take with that but --
Q. You testified that --
A. -- I can --

MS. NOONAN: Can she finish her answer, Christian?
A. I can speculate as to types that could potentially. They would not be specific to Potter Pond, and so I think anybody who is on a water body, regardless of whether it's recreation or not, is a user of that water body and therefore included in a consideration or could be
included in a consideration for social carrying capacity. I do not recreate on Potter Pond and cannot tell you exactly what types of recreation occur on Potter Pond.
Q. Okay. Would you agree with the statement that social carrying capacity really determines how much aquaculture we can put in a location?
A. I think that's one factor to determine, to help determine, how much aquaculture can be in an area. And to my knowledge that is not how the regulations and rules are written in the State of Rhode Island.
Q. Would you agree with this statement that it's far less than ecological or the production carrying capacity, that's social carrying capacity as it relates to location?
A. Mr. Capizzo, that's a great question. That is one that $I$ am very interested in exploring in academic setting, and it is highly dependent and relevant on the geography. It's my thesis in the northeast of U.S. that, yes, often social carrying capacity is the most limiting below ecological carrying capacity which would not be the case in a place like China like $I$ just described.

MR. CAPIZZO: Can I have one moment, Madam Chair?

CHAIRWOMAN CERVENKA: Yes.

MR. CAPIZZO: Thank you.
[PAUSE]
MR. CAPIZZO: I don't have any other questions. Thank you, Dr. Byron.

THE WITNESS: You're welcome.
CHAIRWOMAN CERVENKA: Thank you, Mr. Capizzo. Mr. Wagner?

MR. WAGNER: Good afternoon, Dr. Byron. I just have maybe three or four questions.

CROSS-EXAMINATION BY MR. WAGNER
Q. You testified that you reviewed an opposition package in order to prepare for your testimony, right?
A. I did.
Q. Did that include the 147 letters opposing the project?
A. I did not read 147 letters.
Q. Did you read some of the opposition letters?
A. I'm aware of some of the letters of opposition.
Q. What was the opposition package you referred to? I'm just trying to determine what that was that you reviewed.
A. I'm sorry. I'm really at a loss at how else to describe it. May I ask Beth Noonan help me to help describe the opposition package that --

MS. NOONAN: I'll talk to you later. Go ahead.
Q. All right. I just have one question about the social
carrying capacity. Doesn't the social carrying capacity depend on whether we're talking about bottom culture or floating gear? Doesn't that make a big difference?
A. If one of the things being considered in social carrying capacity is the view shed, then what is visible and what is not visible would make a difference. So I'm assuming that's where you're trying to go with this question of submerge versus floating gear.
Q. Well, also some aquaculture doesn't obstruct other users at all, right?
A. It depends on the technique. You're right.

MR. WAGNER: I have no other questions. Thank you.

MS. NOONAN: May I go back?
CHAIRWOMAN CERVENKA: Yes, on redirect.
MS. NOONAN: Thank you.
REDIRECT EXAMINATION BY MS. NOONAN
Q. Dr. Byron, just a few questions. Ms. Reynolds had asked you about whether or not things like air pollution, gasoline, and oil from recreational vehicles, motor oil, were factored into your model. Can you just explain why they were not?
A. The different type of model and the food web model was very focused on the species, the animals, the algae,
other organisms, living organisms in the pond. It was really intended to capture, like I said, the energy flows and predator relationships. One model does not do everything. That wouldn't require a different tool to look at pollution and those impacts. And for the purpose of this study, I should just maybe back up.

For any study, you do the best that you can to match the tool for the question. And so in this case we determined that the food web model was the best tool for this question. Not a pollution model.
Q. As to the questions that we got into about the social carrying capacity, in your experience with it, do you believe or do you have an understanding of whether or not the science behind social carrying capacity is settled?
A. It's very much not settled. If anything, it's of the four types of carrying capacity for aquaculture I defined, the social carrying capacity is probably least well understood, most flexible, and incorporates the most diversity and disciplines and perspectives. So it's really -- there's no one method or one answer here. It's highly subjective to the question at hand, geography, and the values of the humans of that system.
Q. Those questions that Mr. Wagner asked you about the materials you reviewed, is it fair to say that those were
documents from Mr. Capizzo on behalf of his clients?
Does that refresh your recollection?
A. Yes, that was part of the package.
Q. And finally, again in terms of numbers that we've been talking about, the 5 percent rule, that in your opinion $I$ think you told us is well below the 46 percent ecological carrying capacity that you had calculated; is that correct?
A. Correct.

MS. NOONAN: Nothing further, Madam Chair. CHAIRWOMAN CERVENKA: Thank you. Okay. I
think we're going to move on then to your fourth witness. And after we finish the fourth witness with everyone's questions and your redirect, then I'd like to take a break.

MS. NOONAN: Sure. Dr. Byron, thank you very much.

If you would pull up Dr. Rice now, and I'm going to tender him over to Leslie Parker.

MS. PARKER: Mr. Moore, while you're pulling up Dr. Rice, if you could also pull up Exhibit 2. I know there are multiple copies, so it would be the Michael Rice CV.

Dr. Rice, can you turn your video on? Are you
there?
THE WITNESS: I'm here.
MS. PARKER: We can go ahead and swear in the witness.

MICHAEL RICE, Being duly sworn testifies as follows:

Court reporter: Please state your name for the record.

THE WITNESS: Michael Rice.
MS. PARKER: Mr. Moore, we can share that screen again when you're ready. Thank you.

DIRECT EXAMINATION BY MS. PARKER
Q. Dr. Rice, how are you today?
A. Quite well.
Q. Dr. Rice, could you give us an overview of your educational background?
A. Okay, yes. I hold degrees from University of San Francisco, a bachelor's in biology, and a master's and Ph.D degrees from the University of California.
Q. And Dr. Rice, Applicant's Exhibit 2 is on the screen. Is that a copy of your CV?
[EXHIBIT DISPLAYED]
A. Yes, this is. And in summary it covers my areas of teaching, research, extension and professional
engagement. Some of the key areas that would be relevant for these hearings is I teach the shellfish aquaculture courses at the University of Rhode Island for undergraduates. I've had various graduate students supervising -- major professor and on the committees. These include Perry Rasa himself, Dr. Byron on her committee, and a major professor Dr. Rheault who will be following.

I've conducted research, some of the most relevant research to these proceedings. Dr. Byron mentioned studies in tanks. Some of the carrying capacity estimates based by tank studies were done by my students, again, papers that I have co-authored. And those show some results that are similar to Dr. Byron's modeling studies.

The second is in aquaculture extension, both locally and internationally. I've received national awards from the Republic of the Philippians and Indonesia for my work there and here in Rhode Island. Also [Zoom interruption] -- to this is that $I$ was on the drafting team for the current aquaculture legislation that set forth CRMC as the lead agency for aquaculture permitting under Chapter 2010.

These people were the major authors, former
representative Eileen Norton and legislative counsel Attorney Amy Casega and myself. So we were the major people, major reasons of the current [Zoom interruption] of the laws. So this is sort of the overview
Q. Thank you, Dr. Rice. Could you give us -- what is your current position?
A. My current position is Professor of Fisheries and Aquaculture at the University of Rhode Island.

MS. PARKER: And Madam Chair, I would ask that Dr. Rice be qualified as an expert on aquaculture as a Professor of Fisheries and Aquaculture.

CHAIRWOMAN CERVENKA: Be qualified as a professor of fisheries and aquaculture or an expert in -MS. PARKER: Aquaculture.

CHAIRWOMAN CERVENKA: Okay. So I'll take up a motion to so qualify Dr. Rice. Any subcommittee member -- Mr. Gomez?

MR. GOMEZ: Madam Chair, I will make the motion to qualify Dr. Rice as an expert witness.

CHAIRWOMAN CERVENKA: In aquaculture?
MR. GOMEZ: I'm sorry, in aquaculture, yes.
MS. REYNOLDS: I'll second that.
MR. DESISTO: Madam Chair, before the vote it may be appropriate to see if any of the lawyers object to

Dr. Rice being qualified as an expert in aquaculture.
MR. WAGNER: No objection here.
MR. CAPIZZO: No objection.
CHAIRWOMAN CERVENKA: Thank you. Back to
Mr. Gomez's motion. Is there a second?
MS. REYNOLDS: Reynolds will second that.
CHAIRWOMAN CERVENKA: Thank you, Ms. Reynolds.
Any discussion?
[NO RESPONSE]
CHAIRWOMAN CERVENKA: I'll do a roll call. Ray
Coia?
VICE CHAIR COIA: Ray Coia votes aye.
CHAIRWOMAN CERVENKA: Patricia Reynolds?
MS. REYNOLDS: Reynolds votes aye.
CHAIRWOMAN CERVENKA: Don Gomez?
MR. GOMEZ: Don Gomez aye.
CHAIRWOMAN CERVENKA: Vin Murray?
MR. MURRAY: Vin Murray aye.
CHAIRWOMAN CERVENKA: And myself Jennifer
Cervenka aye. The motion to qualify carries.
MS. PARKER: Madam Chair, I would ask that
Dr. Rice's CV, Exhibit 2, be entered as full.
CHAIRWOMAN CERVENKA: Yes, that can be admitted
in full unless there's objection.

MR. CAPIZZO: No objection.
MR. WAGNER: No objection.
CHAIRWOMAN CERVENKA: Okay.
[EXHIBIT \#2 MARKED FULL]
Q. Dr. Rice, you were retained by Perry Rasso as an expert in this matter; is that correct?
A. That is correct.
Q. Do you know Mr. Raso?
A. Yes, I do. I've known him for a good long while going back to the early 2000s. He first began studying shellfish aquaculture in the introductory aquaculture class here at the University of Rhode Island.
Q. And Dr. Rice, do you serve on the Marine Fisheries Council?
A. I do. I am a member of the Fisheries Council. According to Section 20-3-1, which specifies the membership of the Marine Fisheries Council, is that there are two positions that are reserved for members of the scientific and marine sciences to help guide the Council.
Q. And did you consider Mr. Raso's application as part of that Council?
A. Yes, we did, and it was very unusual that we did it as a full Council. Our normal procedures of the Marine Fisheries Council is that the subcommittee on shellfish
considers all of the aquaculture applications unless it gets contentious, and any member of the subcommittee can petition that it goes to the full Council. So the only reason I got to see it as a Fisheries Council member was because of the contentious nature and it being raised to the full Council.
Q. Did you have any idea at that time that you would be providing testimony for Mr. Raso on the application?
A. No, I did not. In fact, I was rather surprised that it even came to the Marine Fisheries Council, and I'm sort of surprised that we're here again and that this sort of thing has come up in the past about every ten years or so, but it's now back on cycle.
Q. Did Mr. Raso discuss his application with you before the Marine Fisheries Council meeting?
A. No. In fact, he never discussed this up until this period for this hearing for the main Coastal Council.
Q. Other than your discussions at the Marine Fisheries Council before you were engaged as an expert, did you have any other knowledge of this application?
A. No. Quite frankly, I didn't know that it even existed before it came to the Marine Fisheries Council.
Q. Did your involvement at the Marine Fisheries Council impact your testimony here today in any way?
A. No. My role on the Marine Fisheries Council is largely scientific. I am not sort of representing recreational commercial fisheries. It's largely the fisheries resources that I'm speaking to, and that will not affect any testimony on these proceedings.

Dr. Rice, are you familiar with the South Kingstown Conservation Commission?
A. Yes, I am. I am very familiar with the South Kingstown Conservation Commission. I served for a total of 18 years on the South Kingstown Conservation Commission and 10 years chairing that commission. Largely, as authorized under General Laws of Rhode Island, Section 45-35-1, which is the authorizing legislation for the conservation councils, they are largely advisory to the town boards and the like. Much of the credibility of the Conservation Commission rests in sort of the quality and reputation that they built up.

I'm very proud that during my tenure on the Conservation Commission in South Kingstown there were three major initiatives adopted by the town. One was septic system ordinances particularly in the pond areas to protect the water quality. Number 2, a major tree ordinance; and Number 3 , the setting up and discussion of the aquaculture in South Kingstown waters of which

Dr. Rheault, who will follow me, had one of the -- had the first one in these local waters. So during my time on the Commission these major issues came up.
Q. And in your experience does the Conservation Commission give notice to an aquaculture applicant of its meeting on the current application?
A. Yes. This is very much the standard procedures at least when I was there. This would be in keeping with sort of good practices, but quite frankly, it would be the type of thing that would be required by the Administrative Procedures Act.
Q. And do you know whether Mr. Raso received any notice from the South Kingstown Conservation Commission on the consideration of his application?
A. I would believe that would be hearsay because I do not know directly, but myself, Perry Raso answered that question yesterday.
Q. Okay. Did you hear Mr. Raso's answer yesterday?
A. Yes, I did, and his answer was that he was not noticed.
Q. Is the lack of notice to an applicant regarding the South Kingstown Conservation Commissions consideration of their application standard procedure?
A. That is not standard procedure as far as I know. It may be now, but certainly was not when I was chair of the

Commission.
Q. Dr. Rice, are you familiar with Mr. Raso's application?
A. Yes, I am. I have read his application and I have read the supplements in terms of the initial applied for lease area and the modified ones as well.
Q. Are you familiar with the location of the proposed aquaculture farm?
A. I am very familiar, yes.
Q. Have you visited the location where the proposed aquaculture farm will be?
A. Yes, I have. We took out the little skiff. I didn't get the big boat.
Q. Have you been present for the -- were you present for the testimony yesterday?
A. Yes, I was, very much like Dr. Byron, from beginning to end.
Q. Have you been present today for Dr. Byron's testimony?
A. I wouldn't miss it. Dr. Byron is a star.
Q. Did you have an opportunity to review the staff report that is Exhibit 17 to the applicant?
A. Yes, I have, the staff report primarily authored by Mr. Beutel.
Q. Did you review any other materials in preparation for your testimony today?
A. Yes. There was several things. I got on the Rhode Island General Assembly website to check out the various authorizing statutes that might possibly come up in my testimony, and I reviewed the letters of objections. I reviewed the packet of the ESS Group, and some of the potential court cases that might come up in terms of discussion.
Q. And Dr. Rice, are you familiar with the history of aquaculture in Rhode Island?
A. Yes, I am. On the CRMC website the aquaculture coordinator maintains a website, and on that website in the 2006 annual report I published a detailed history of shellfish aquaculture going back to prior to the 1844 initial aquaculture or oyster act and reviewing sort of the history of aquaculture within Rhode Island. So that has a lot of major review of court cases and legislation.
Q. Based on your familiarity with the history of aquaculture in Rhode Island, how has Rhode Island balanced public access to the water in aquaculture?
A. Okay. So, let's see. The responsibilities of the CRMC have been set forth in Chapter 2010 and set as the lead agency. In fact, the office of the aquaculture coordinator, Mr. Beutel and now Mr. Goetsch, is in fact one of the statutory state positions within the state
government and is set forth with responsibility in terms of that report to take and balance the needs of the people of the State of Rhode Island in relationship to their coastal resources. This is very much in keeping with the supreme court case that I mentioned, Martin v. Lessier Bordell, Supreme Court, -- courts in 1842. And this is in terms of the state has responsibility to the public trust. The procedures and setup for aquaculture in Chapter 2010 follow this, and the procedure set up by the coastal marine, coastal council including this Zoom hearing, is all part of this balancing act and begins with the preliminary determination that was put in as part of the legislation, the legislation that enabled this. So this is completely considering and balancing the needs of the public and aquaculture.
Q. Dr. Rice, are you familiar with CRMC Category B requirements?
A. Yes.
Q. And based on your experience and the review of materials in this case, do you have an opinion as to whether or not Mr. Raso has demonstrated a need for the proposed oyster and scallop farm?
A. Yes, he has. In conformity to sort of agreed upon use, which we've talked about this so-called 5 percent, this
is sort of an agreed upon sort of agreement, and that came about during Dr. Byron's Ph.D dissertation time in which there was a great deal of controversy and the fishing community and members that were of the public that were agreeing with this found that at the time to be quite reasonable. Now it could come up for renegotiation, reconsideration or something of that sort. But that's where we are right now.
Q. Dr. Rice, based on your experience and review of the materials, do you have an opinion as to whether shellfish aquaculture, the shellfish aquaculture proposed by Mr. Raso, will have an effect on erosion or will have an effect upon erosion on the shore?
A. Yes, I do. I have an opinion on that. Given the location and the like, there should be no major effect on changing of currents or anything of the sort that might increase scouring, erosion, turbidity. There's no -sort of nothing is going on in the intertidal zone that would change anything. There's no reason to believe that there would be any erosion or turbidity increase.

In fact, the fact that these shellfish, both scallops and oysters, are filter feeders and they are removing Phytoplankton from the water, the converse is probably more close to the truth that it is more likely
to improve the water quality.
Q. Dr. Rice, based on your experience and review of the materials, do you have an opinion as to whether the aquaculture farm will result in significant impacts on plant and animal diversity and abundance?
A. Okay. This largely goes to the testimony of Dr. Byron. Her work on ecology systems modeling is recognized globally as gold standard in this area, and her conclusions were no.

My tank studies, which she mentioned, were basically set up so that the amount of oysters in the tanks in terms of the biomass were modeling what the biomassive oysters were at the turn of the 20 th Century. And at that level, which is something like 500 times the level that they are now in Rhode Island waters, were not at carrying capacity yet. So Mr. Raso's little 3 acres is not going to affect things very much.
Q. Previously we discussed the balance between aquaculture and public access, right?
A. Yes.
Q. Are you familiar with the arguments that are set forth by the objectors in their filings?
A. Yes, I am. I believe that most of the objections could be dealt with largely by design aspects. A lot of the
sort of citing discussions from yesterday could be taken into account, and I believe that most of the objections could be dealt with.
Q. So do you have an opinion based on your experience and review of the materials as to whether the proposed farm would result in significant conflicts with water dependent uses and activities such as recreational boating, fish, swimming and navigation?

MR. WAGNER: Objection.
A. Was there an objection?

MR. WAGNER: I think it's beyond the scope of his expertise and there's no foundation for him to give an opinion on that.

MS. PARKER: I would disagree. He testified about the balance, his experience with the balance of public access to the water and aquaculture. And he testified that he was one of the drafters of the legislation and is familiar with the history in Rhode Island of balancing public access to the water and aquaculture.

MR. DESISTO: Madam Chair, from what I heard and based on Dr. Rice's testimony, I think he's able to answer the question without further foundational questions.

CHAIRWOMAN CERVENKA: I agree with that. MR. DESISTO: Proceed.
A. Leslie, I forgot the question.
Q. No problem. Dr. Rice, do you have an opinion based on your experience and review of the materials and review of the site as to whether the proposed farm would result in significant conflicts with water dependent uses and activities such as recreational activities, including boating, fishing, swimming and navigation?

MR. WAGNER: Objection for the record.
A. Well, it has to do with sort of the semantics of the word "significant." I take it that this use of the word significant would be a large, humongous sort of outlandish, and my answer to that is absolutely not.

The applicant Perry Raso has gone to great pains to be as accommodating as he possibly can, and this is sort of the evidence by starting off with one configuration of the firm trying to work with some objectors changing it and coming up with the various polygons, and as being as accommodating as possible. I believe this body, sort of given all of the data presented here, could essentially come up with a solution to satisfy most of people and interests in the pond.
Q. Dr. Rice, based on your review of the application, the
site, and your expertise, do you believe this application provides the balance of aquaculture and public access sought by CRMC as set forth in that legislation? MR. WAGNER: Objection for the record.
A. I do.

MS. PARKER: I have no further questions.
CHAIRWOMAN CERVENKA: Any questions from subcommittee members for Dr. Rice?
[NO RESPONSE]
CHAIRWOMAN CERVENKA: I don't have any. I don't think anyone else has questions so we'll turn it over to Mr. Capizzo.

MR. CAPIZZO: Madam Chair, may I have a moment to get my notes? I'll defer to Mr. Wagner and you can come back to me.

CHAIRWOMAN CERVENKA: Mr. Wagner, would you like to go?

MR. WAGNER: I might have a couple of questions.

CROSS-EXAMINATION BY MR. WAGNER
Q. Doctor, you testified that in your opinion Mr. Raso satisfies the first requirement of a Category B assent, the requirement that he demonstrated need for the proposal based upon satisfying the 5 percent rule; is

## that correct?

A. Well, the 5 percent rule is sort of a guideline that has been adopted by CRMC for these water bodies and his application is not exceeding that. So expanding his operations to include scallops, scallops need deeper water. The site is deeper than where his current sites are and more appropriate for the scallops. So if he wants to expand operations, this makes perfect sense to me in terms of a need.
Q. Does satisfying the 5 percent rule demonstrate a need for the proposal? We agree that he satisfies the 5 percent rule. I'm trying to understand how your opinion could be that he demonstrates need for the proposal based upon satisfying the 5 percent rule.

MS. PARKER: I'm going to object. He gave his opinion and the basis for it. I think it's asked and answered.
A. Yes. I mean, he needs an area. He needs an area for deeper water to basically further his business interests. I mean, that's about as simple as it gets.
Q. A need for deeper water has nothing to do with the 5 percent rule, right?
A. No, and it has nothing to do with the 5 percent rule. The 5 percent rule is a guideline in terms of total water
surface area in the water. What you're asking and what the assent -- sort of the assent is, you know, goes to sort of need for it. I mean, it isn't capricious and arbitrary. He has a business need to basically expand his species under cultivation and that requires deeper waters.
Q. Well, how do you know he has a business need to expand? How is that related to the 5 percent rule? I just don't understand. Maybe I'm misunderstanding your testimony.

MS. PARKER: Objection again. I think that was three questions in one, so if we can ask one question at a time.

CHAIRWOMAN CERVENKA: As I understand it, the question is whether or not this expert believes that the need criterion of a Category $B$ assent is satisfied by the 5 percent rule. He's asking how you tie those two together. I think that's a fair question. Maybe they are not tied together.
A. They are not tied together. The 5 percent, the 5 percent rule is basically a guideline that was set forth and adopted by CRMC some 11 or 12 years ago as a means to provide some sort of criterion or yardstick to measure aquaculture expansion up to. Basically in terms of need, that's a different issue.

MR. DESISTO: Well, Madam Chair, if I may, it seems to me Mr. Wagner's real question, and I'm not putting words in his mouth, is whether or not there's been a demonstration that the need is on an economic basis and that is separate from the 5 percent rule.

Is that correct, Mr. Wagner?
MR. WAGNER: Yes, that was part of my question.
MR. DESISTO: Okay. So the question has been segmented out. I do think that's an appropriate question to ask on cross-examination, Madam Chair.

CHAIRWOMAN CERVENKA: Yeah, I'm fine with the line of questions. I think -- I don't know if they are understanding one another, but I'm fine with the line of questions.
A. Yeah, I guess I'm not following. You know, because -Q. I'm sorry, Doctor. Maybe I am misunderstanding your testimony.

In your opinion, Mr. Raso has satisfied the first requirement of a Category $B$ assent which is to demonstrate need for the proposal, proposed activity or alteration. I thought you testified he satisfied that because he satisfied the 5 percent rule. I thought that was your testimony. If it wasn't your testimony, I apologize.

What I'd like to ask you then is, I think you testified that he did satisfy that first criterion. Could you tell me every basis you have for that opinion that he satisfied the first criterion?
A. Yes, certainly. I mean, it's about as simple as can be. You're right on the first level, the area that he's applying for, and if granted, were far below the 5 percent.
Q. Are there any other reasons that you think he satisfied the criteria of need, Doctor?
A. No.
Q. Thank you. I think you also testified that Mr. Raso has been as accommodating as possible; is that correct?
A. That would be my opinion on reading these things.
Q. Wouldn't reducing the size of the lease area be an accommodation that he has not agreed to do?
A. That would be -- that would be -- that would be true. He's basically going for 3 acres, and -- I mean, that could be discussed with him, but we are here on the 3 acres.
Q. And 3 acres is the maximum amount he could apply for; isn't that right?
A. Correct.
Q. Now, you sat on the Marine Fisheries Council, right?
A. Yes, still do.
Q. You voted for the project?
A. Yes, I did.
Q. And the vote was 3 to 3 tied?
A. Yes.
Q. Right?
A. Yes, correct.
Q. Recommendation was not to recommend approval, or it was a tie so there was no --
A. There was no recommendation.

MR. WAGNER: I think that's all I have. Thank you, Doctor.

THE WITNESS: Thank you.
CHAIRWOMAN CERVENKA: Back to Mr. Capizzo.
MR. CAPIZZO: Thank you, Madam Chair.
CROSS-EXAMINATION BY MR. CAPIZZO
Q. Dr. Rice, you heard the questions that I asked Dr. Byron about the 5 percent rule in earlier testimony?
A. Yes.
Q. So I just want to make sure I understand it correctly, that that 5 percent rule is for the carrying capacity in each pond, that the maximum amount of shellfish aquaculture can occur in a given water body without unacceptable ecological impact of that body of water; is

## that correct?

A. Yes, that was the original intent. You'll be hearing from Dr. Rheault following me. He was the one that did the calculation. You can ask him directly, but it was based on some earlier work that was done by a mussel aquaculturist in New Zealand, and the waters in New Zealand are different than our coastal ponds.

Dr. Byron's work, as we have heard, and I have read her papers extensively, show that in actuality the ecological carrying capacity for aquaculture is much higher in Rhode Island waters. In fact, approaching what the actual aquaculture production was at the turn of the 20th Century around 1910, we are far below that level now.
Q. So the 5 percent rule only applies to the carrying capacity, not the social carrying capacity, correct?
A. That is correct, and --
Q. That's the only question. Thank you.

MS. PARKER: Let him -- Mr. Capizzo, please let him finish his answer.
A. That is correct. This was a first level estimate of ecological carrying capacity when we were going into this. Subsequently, the science has shown that the ecological carrying capacity is actually much higher. We
could actually have something like 500 times as much oysters being produced in our coastal waters and still not reach ecological carrying capacity. So what this has become is largely a set of guidelines by CRMC for permitting purposes, just a sort of guidelines.

So you are correct. I mean, it was -- that was how it was determined.
Q. Would you agree with the statement that social carrying capacity really determines how much aquaculture we can put in a location?
A. I unqualifiedly say yes, that is absolutely true. I also agree with Dr. Byron's assessment that that is a very tough thing to determine, and that is the reason why we have the CRMC process.
Q. Okay. So you testified about this CRMC process, and I think you cited a statute. It was 2010-5. Are you familiar with that statute?
A. Let's see, 2010-5, yes. Well, that's part of the chapter. That's Chapter 2010, yes.
Q. Of Rhode Island General Laws?
A. Yes.
Q. You testified that you were surprised as your role on the Rhode Island Marine Fisheries Council as a voting member that you were present for the hearing on this matter; is
that correct?
A. Yes, I was, yes. It came to the full council, yes.
Q. You said that was unusual because it usually doesn't happen like that, but because this was contentious it came to the full council?
A. Yes, that's what I said.

MR. CAPIZZO: Okay. Mr. Moore, can you give me the ability to share my screen?

MR. MOORE: You should be able to.
MR. CAPIZZO: All right. Give me one sec.
Q. Dr. Rice, you reviewed submittals for this application including the Rhode Island Marine Fisheries letter that was sent to Mr. Beutel?
A. Yes.

MR. CAPIZZO: Okay. Let's start with this. Give me one second, Madam Chair. I'm sorry.
[PAUSE]
CHAIRWOMAN CERVENKA: That's fine. Is this an admitted exhibit already?

MR. CAPIZZO: It is not. I'm using it for ID only for the purposes of cross-examination. Madam Chair and Dr. Byron, can you see --
Q. Excuse me. Dr. Rice, can you see what's on the screen?
[EXHIBIT DISPLAYED]
A. Yes, I can see, yeah. I can see 20-10-5A, B, C.
Q. Okay. Is this the same statute, Rhode Island General

Laws that you are referring to, Title 20 Fish and Wildlife for the record, Chapter 20-10, aquaculture?
A. Yes.
Q. I want to draw your attention for the record to Section 20-20-5.
A. Yes.
Q. What does that say, procedures for approval?
A. Procedures for approval.
Q. Can you read me what Section B says?
A. "No application shall be approved by the CRMC or permit granted prior to consideration of the recommendation by the director and the Marine Fisheries Council."
Q. Is your statement this only went to the full Council of the Rhode Island Marine Fisheries Council because it was contentious or it was required by statute?
A. This is required by statute; however, the practices of the Marine Fisheries Council is that it is handled by the subcommittee. A shellfish subcommittee normally. The subcommittee votes on it, and it largely becomes reported to the full council and directed to the Director Coit. So it surprised me largely because the subcommittee voted to send it to the full council. That is a little bit
more unusual. More often than not aquaculture leases are handled strictly within the subcommittee.

MR. CAPIZZO: Madam Chair, I ask this be moved as a full exhibit, just the Rhode Island General Law Section 20-10-5.

CHAIRWOMAN CERVENKA: Any objections?
MS. PARKER: My only objection is authentication. It looks like it's just from the website and sometimes that can be dated.

MR. DESISTO: Mr. Capizzo, do we actually need to put a statute as an exhibit? I'm assuming that at some point if you file a memorandum, you're just going to cite to it, right?

MR. CAPIZZO: Correct, and I ask the Committee take judicial notice of it.

MR. DESISTO: That's fine.
MR. CAPIZZO: Thank you.
Q. For the record and on the screen, this was admitted -you were present for yesterday's testimony, correct?
A. Yes.
Q. It's Exhibit 14 for the record. A request has been made. Actually this is a full exhibit. I believe it was entered by Ms. Noonan. You read this letter, Doctor?
A. Yes.
Q. All right. This is from, if I scroll down, the Chair of the Rhode Island Marine Fisheries Council; is that right?
A. Yes, yes.
Q. For the record, who is that?
A. For the record, this is Robert Ballou. He is with DEM, and he is the Chair of the Council on behalf of the Janet Coit.
Q. Okay. And drawing your attention to the first paragraph after, "Dear Mr. Beutel," this letter is dated April 27, 2018, for the record, from Bob Ballou to Dave Beutel, Aquaculture Coordinator.

How does that read? Pursuant to Rhode Island General Laws --
A. 20-10-5.
Q. The above referenced application was brought before the Rhode Island Marine Fisheries on March 14th for consideration; is that correct?
A. That is correct.
Q. Did I hear you testify that you believe that your review of the application that Mr. Raso has addressed or can address the significant adverse effect to get this right, regulations, he's demonstrated that the alteration activity will not result in significant conflicts on water dependent uses. That's your opinion?
A. Yes.
Q. I believe you testified that most of those objections relating to the water dependent activities can be addressed by adjusting the farm?
A. Yes.
Q. It's your opinion that you don't believe a compression of the water sheath will impact or have a significant impact on the rights of the public with the location of this aquaculture farm?
A. Yes.
Q. Okay. You base that solely on your review of the application?
A. Yes.
Q. And you heard Mr. Raso's testimony that you can't drop a boat through this, correct, this aquaculture farm?
A. Yes.
Q. You can't swim through it?
A. Well, it would be very difficult to swim through it. I mean, if you sort of took off from say the Hunts' property, which would be the closest to the farm, you probably could swim there, but it probably wouldn't be advisable.
Q. You can't waterski through this area, aquaculture farm, correct?
A. Well, you could waterski by it.
Q. Not through it?
A. Not through it.
Q. How about a sailboat, can you sail?
A. Nope.

MR. CAPIZZO: All right. Now, Ryan, do I have the ability to share again? For Leslie and Madam Chair, I would like to share my screen. It's a figure I showed Audie Osgood. It's Figure 4A, Exhibit 1 of the ESS report.
[EXHIBIT DISPLAYED]
Q. Dr. Rice, can you see what's on the screen?
A. Yes, I can.
Q. Okay. See if I can reduce it. Is this similar to the application reviewed as to Mr. Raso's aquaculture farm as you observed it?
A. Yes.
Q. The area that you're talking about where you could swim between Mr. Hunt's property and the aquaculture farm is between the blue line, for the record, which references a shoreline, the eastern shoreline or western shoreline of Mr. Hunt's property and the yellow line which references the aquaculture facility; is that correct?
A. That is for this particular polygon, yes, and the normal
practice of CRMC, in my understanding, is that there is an encouragement of multiple uses. So there are the -often the aquaculture placements are willy nilly. People do in fact go through the lanes and the like.
Q. Okay. How about navigating a boat from Mr. Hunt's property, his property. I'm going to scroll down. Ram's Point, are you familiar with Ram's Point?
A. Yes.
Q. And again, looking at the blue line for the record which references Mr. Hunt's western side of his property to the shoreline, going along the yellow line which is the proposed aquaculture, would you be able to navigate a boat between the aquaculture facility and the shoreline?
A. Depends on the size of the boat and probably the tide, but the 10 -foot might be a pinch point. But then again, there's nothing that particularly excludes the boat from the lease if they're sort of taking a look at where they're going.
Q. Would you agree with me, Doctor, if you were entering Segar Cove -- strike that.

If you were traveling south in Segar Cove by water, the western boundary of this aquaculture facility, it pushes you closer to the center of the cove if you were in a powerboat?
A. If you're in a powerboat, there is a potential for being forced to go toward, more toward, the center of the pond, yes.
Q. What about a sailboat?
A. Sailboat certainly too.
Q. Jet skis?
A. Jet skis as well. Probably wouldn't be prudent to get in and about the farm area, but most of the deeper water gear would be on the outer edges.
Q. The markers to that facility, will you agree with me those would be considered stationary objects, the cages and the markers for this facility?
A. They are temporarily stationary projects very much like fishing gear might be.
Q. That gear changes from season to season, correct?
A. Oh, it would change from season to season, yes.
Q. Here you could have the cages on top in some parts of the season and in others you won't have them; is that correct?
A. Yes. I mean, that would be part of the management plan. So probably the management plan would include such things as --

## [ZOOM INTERFERENCE]

MR. CAPIZZO: Hold on one sec, Doctor. Madam

Chair, may I proceed?
CHAIRWOMAN CERVENKA: You may.
MR. CAPIZZO: Thank you.
[PAUSE]
Q. Doctor, you mentioned something about this being deep water. You're familiar with Potter Pond; is that correct?
A. Yes. I mean, not as intimately familiar as the people that live there, but I've been down there around the pond enough to kind of know it somewhat.
Q. Would you agree with me that Segar Cove in the northern basis are the only two deep water areas in this cove for in the cove?
A. That is true. That's the deepest water areas in the cove, those two coves, sort of the northern end and those two coves.
Q. Would you agree with me that it would be difficult to do towed water sports or power boating in other areas of Potter Pond because of the lack of depth?
A. Oh, yes, very much so.

MR. CAPIZZO: One moment, Madam Chair.
[PAUSE]
MR. CAPIZZO: Madam Chair, I'm going to be sharing a screen, Exhibit 1.

CHAIRWOMAN CERVENKA: This is your Exhibit 1?
MR. CAPIZZO: Part of the Exhibit 1 only for ID purposes right now, but it's for Ms. Parker and Ms. Noonan and Mr. Wagner. It's Figure 1A. It's using it for a map reference so we can show the committee where Segar Cove is in relation to the northern basin for those who are not familiar with it.

CHAIRWOMAN CERVENKA: Thank you.
[EXHIBIT DISPLAYED]
Q. Doctor Rice, can you see this map that $I$ have on the screen?
A. Yes, I do.
Q. Okay. For the record, this map is entitled, it's from ESS Group existing conditions 2020, ecological and recreational resources, 1A. Do you recognize this aerial map, Doctor?
A. Yes, I recognize this. I'm not an expert in recreation, if that will help you.
Q. I'm not asking -- I'm just asking you if you recognize the area that I'm referring to in the map?
A. Yes, I do.
Q. Okay. So you testified that there's only two deep water areas in Potter Pond here, if you can -- I don't know if my cursor shows up on the screen. Do you see my cursor?
A. Yes.
Q. Okay, great. So the area that I'm circling right here, it says Segar Cove. I'm not asking you to confirm the acreage or the percentage. The numbers that are referenced in it, that is Segar Cove; is that correct?
A. That is.
Q. Have you been on Segar Cove?
A. Yes, I have.
Q. I thought you said you went out -- you didn't get the big boat but you got the little boat?
A. Yes, I did.
Q. Have you been on Segar Cove before you went out with Mr. Raso?
A. Yes.
Q. Are you familiar with the areas of Segar Cove?
A. Yes, I am.
Q. Okay. The area that I'm circling down here, we talked about public access, right?
A. Right. There's public access down there. That's a mooring area.
Q. Okay. This area that I'm circling which is in the southern portion of Segar Cove --
A. That's the mooring area.
Q. And the public access points which are referenced as
yellow triangles, are you familiar with the public access points down there?
A. Yes. I saw -- I seen them, yes.
Q. Is that a fair and accurate representation of where those public points are on Segar Cove?
A. Yes, I would say that would be matched up to what $I$ saw.
Q. When we're talking about public access points, those are access points where the public can get into the cove, and we have to drive through the mooring area to get to the area outside of the mooring area which would be north of Segar Cove; is that correct?

MS. PARKER: Objection. He's not an expert on the geography of Segar Cove.

MR. CAPIZZO: I'm not asking if he's an expert. I'm just asking if he used those public access points.
Q. There's only one direction which you could go which is north; is that correct, Doctor?
A. That is correct.

MS. PARKER: Objection. Dr. Rice is an expert on aquaculture, not on navigation or recreational activities like he said.

MR. CAPIZZO: He can --
MR. DESISTO: He can answer the question, and I'll tell you why. He's familiar with Segar Cove, and
this ties in to whether or not the aquaculture project here is appropriate for this. So I do think it's appropriate that he answers, Madam Chair.

CHAIRWOMAN CERVENKA: Yeah, I mean, if there's -- your objection can go to the weight of the testimony. Okay, yes. If the public is accessing it, they would have to go through -- there's some feedback --

MR. CAPIZZO: I agree there is feedback.
CHAIRWOMAN CERVENKA: Hold on.
[PAUSE]
CHAIRWOMAN CERVENKA: Mr. Moore, Mr. Willis, is Mr. Moore around? I know he's having trouble with his audio. We're working on that.
[ZOOM INTERFERENCE]
[PAUSE]
CHAIRWOMAN CERVENKA: Should we take a break right now so you can fix it?

UNIDENTIFIED SPEAKER: That might be a good idea.

CHAIRWOMAN CERVENKA: Okay. Well, let's see.
It's 3:14. Can we come back at 3:30?
MR. CAPIZZO: What time, Madam Chair?
CHAIRWOMAN CERVENKA: 3:30.
MR. WILLIS: Come back in 15, and we'll let you
know where we're at.
UNIDENTIFIED SPEAKER: I just spoke with
Mr. Moore and he asked during the break that everyone log out and $\log$ back in at the end of this break.

CHAIRWOMAN CERVENKA: Okay. We'll take
20 minutes then. Everyone to get back in, try to start logging in at $3: 30$ which would be okay. Thanks.
[RECESS WAS TAKEN OFF THE RECORD FROM 3:15 TO 3:35]
CHAIRWOMAN CERVENKA: Are we ready from a
technical standpoint?
MR. MOORE: Ready to go.
CHAIRWOMAN CERVENKA: Are we ready from an everyone admitted standpoint?

MS. NOONAN: I believe so. Dr. Rice, you're good? You're on mute and you changed locations.

THE WITNESS: It's Zanzibar.
CHAIRWOMAN CERVENKA: Ryan, you have everyone in the public that's been admitted? You know how that works?

MR. MOORE: They can come and go as they please. They are still filing in a little bit, but the same number we had before we had a slight issue.

CHAIRWOMAN CERVENKA: Okay. Just for the record, as people can see, Dave Beutel has joined us for
this meeting. He'll be with us until we conclude at five. I believe, Mr. Capizzo, you were at Objectors' Exhibit 1, Figure 1A, asking a question of Dr. Rice.

MR. CAPIZZO: That is correct, Madam Chair. I want to confirm. Did you say -- I know you mentioned yesterday. Are we concluding at five today? Is that correct?

CHAIRWOMAN CERVENKA: We are.
MR. CAPIZZO: Okay. That will help me manage the time. May I proceed, Madam Chair? CHAIRWOMAN CERVENKA: Please.
Q. Dr. Rice, I know you've switched locations to Zanzibar now as you just indicated, but during this break did you speak to anybody about your testimony that you are giving today?
A. No.
Q. Okay. Excellent. That's what I was hoping you'd say. So let's take you back. I'm going to share the screen. You know, one sec.

Did you communicate with anyone about your testimony whether it was a text, email or whatever other device you use about your testimony today?
A. I sent a text to Leslie Parker.
Q. Okay. Don't tell me what she said. But you did send a
text to Leslie Parker?
A. Yes.
Q. Did she respond to you?
A. No.
Q. Okay. I'm going to share screen. Give me one second. Can you see that map?
A. Yes, I can.
Q. Perfect. I want to reorient the committee with where we were. We were talking about, you had given an opinion that Mr. Raso demonstrated that this facility won't interfere or significantly impact existing public access or use of the tidal waters and/or the shore.
A. Yes.
Q. You also gave the opinion that Mr. Raso has demonstrated that the alteration will not result in significant conflicts, water dependent uses and activities such as recreational boating, fishing, swimming, navigation and commerce; is that correct?
A. Yes.
Q. Okay. You testified that you're familiar with this map and we're looking -- for the record, I'm going to start at Segar Cove. I believe you said that for traveling north that that was the only direction that you could go from those four public access points that you said you
were familiar with?
A. Yes. Those are public access points that are largely for very small craft that could go through there. This is not a major -- those are not major boat launching areas.
Q. But the public has access and they can launch from there?
A. Yes.
Q. Okay. I want to draw your attention to what we talked -I asked you and you testified that there's two deep water coves in Potter Pond. I'm going to draw your attention to the north of Segar Cove and where my cursor is now, following the blue line, is that the northern part of the cove, the second deep water cove?
A. Yes, that is. That's the major one. There's this so-called Skier's Cove.
Q. This is the one -- okay. I got it. This is the same one that Mr. Raso talked about that he lives on now, right?
A. That is correct.
Q. Okay. So this is where Mr. Raso lives. Does it appear at least, or are you familiar with any public access points on Skier's Cove?
A. I'm not familiar whether there's public access there or not.
Q. Fair enough. Is it fair to say that the only way to get to Skier's Cove is to go through Potter Pond?

Rebecca J. Forte Court Reporters
A. I can't say for sure, but $I$ would suspect that that might be true.
Q. Let me rephrase that because $I$ think the question may have been a little confusing.

Is the only way to get to Potter Pond from Segar Cove by a motor vessel through Potter Pond?
A. Yes. I mean, basically it appears the access ways are either through the channel to Pt. Judith Pond itself or from these various access roads.
Q. Okay. I don't know if you can see my cursor. It was working last time.
A. Yes, it's working.
Q. Thank you. So starting at Segar Cove leaving that mooring field, if you were to travel to the northern cove -- have you been to the northern cove?
A. Yes.
Q. The northern basin?
A. Yes.
Q. Okay. How did you get to the northern basin? Was it with Mr. Raso?
A. Yes.
Q. Okay. Where did you leave from when you went with Mr. Raso?
A. We left from his dock -- his dock at the restaurant.
Q. Okay. So just for -- so I understand, and the committee members understand, is his restaurant, and following my cursor to the east --
A. Yes.
Q. -- is that his restaurants right there?
A. That's his restaurant right there.
Q. Where the cursor is, okay. What road is that?
A. Succotash Road.
Q. I'm not that familiar with that area. At least -- can you access Potter Pond from Mr. Raso's restaurant?
A. Yes. That is actually the main -- the main water inlet to the pond. And in fact, all of the tidal exchange for the pond goes right through it. So the currents going through that channel are very, very intense during sort of peak tidal exchange.
Q. Okay. So you take a -- when you went with Mr. Raso you took the small boat, $I$ think we said, and you went through that little channel right there?
A. Yes.
Q. Okay. And did you go to the northern basin when you were with him?
A. Yes.
Q. So is it fair to say that the way you went there, following the cursor, you would have gone north up Potter

Pond?
A. Yes. It was toward the end of the trip, but I've been up there several times.
Q. Okay. Okay. On your own?
A. Yes.
Q. Do you have a boat? Do you own a boat?
A. No, I don't.
Q. But how did you come to find yourself on $I$ guess Skier's Cove?
A. Well, I accessed it from several ways. I mean, basically from Perry Raso's house and the vegetable farm. He has the vegetable farm at the north end of the pond, and I've been there and on boats several times, various people. I don't own a boat.
Q. Probably a best case scenario, you don't own a boat, but you know people who own the boats so you can get to those locations?
A. Right. I mean, it's best to know people.
Q. Fair enough. When you went from -- so we understand, so the committee understands, or I understand how you got to the northern basin, I want to talk about going from Mr. Raso's restaurant to Segar Cove.
A. Yes.
Q. So when you left the restaurant on this trip with

Mr. Raso, you traveled I guess you would say southwest past his current operation?
A. Yes, in between that point and his current operation. That's where the deepest water navigation channel is. And it's the most -- it happens to be the most direct. There's a shallow area that you have to avoid.
Q. Okay. And is that shallow -- so I want to take you two steps back. Right here, is this the channel that you're talking about that's deep water?
A. Yes.
Q. Okay. So for the record it's between, and I don't know what point that is, but it's the point to the right, excuse me, to the east of Ram Point which you're familiar with you said --
A. Yes.
Q. -- and between Mr. Raso's current operation. Do you know what the size of his current operation is?
A. I don't know the exact size. I thought it was -- I'm not entirely sure --
Q. That's okay.
A. -- offhand.
Q. That's all right. Right there, driving by that aquaculture that is highlighted in red, do you know what the depths are there? Is it deep, is it shallow?
A. Yeah, it's fairly shallow there. At low tides, extreme low tides, sometimes the oysters are out of the water.
Q. When you say that the oysters are out of the water, does that mean the cages are out of the water?
A. Yes.
Q. Okay. Are you familiar with that operation there?
A. Very familiar.
Q. Okay. What type of operation does Mr. Raso have there? You said it's floating cages?
A. Well, the vast majority are bags that are plastic mesh bags that are on sort of a railing system, and these bags get attached by bungee cords to it.
Q. Okay.
A. And they are very neat little lines.
Q. Okay. On the south side of that of Mr. Raso's aquaculture farm, is that area still shallow as well?
A. It's very shallow and, yeah, it's a very sandy bottom. The last few storms it's become a little bit more shallow.
Q. Do you know if you can waterski in that area to the south of that farm?
A. No. I mean, that would be pretty dangerous and actually probably outboard engine extensions would be dragging bottom.
Q. Okay. So when you said no, you're saying you can't waterski in that area right there?
A. Right. That would be not particularly wise.
Q. Okay. I want to bring you back to the channel that you are talking about. If you follow the cursor going west towards Ram's Point and Segar Cove, you got Ram's Point to the north where the cursor is?
A. Yes, and the Hunts' house right there.
Q. Yeah. So that's good memory. When you prepared for your testimony, did you review the entire $C$ file?
A. Yes. I looked through pretty much everything.
Q. Everything that's on file with Coastal?
A. Yeah, everything that was sent to me, yes.
Q. Do you remember what that included?
A. Well, that was your package from the ESS Group, we've got Dave Beutel's report, we've got the various applications that Mr. Raso had. So those were what I have.
Q. I thought you testified that you already reviewed the letters of objection?
A. There was -- yeah, I saw a few of the letters of objection.
Q. Okay. Okay. Going to Ram's Point, you said Mr. Hunt's property is to the north and the channel -- strike that.

Gardner's Island, are you familiar with Gardner's

## Island?

A. I don't know which one exactly is Gardner's Island.
Q. All right. So across from Ram's Point --
A. Okay. If that's Gardner's Island, okay, I'll buy that.
Q. But you're familiar with that channel right there, correct?
A. Yes, ma'am.
Q. Is that the only way to access that cove?
A. Other than the public access points for small craft, yes. I mean, if you're basically coming in there's no boat launching ramps in that area.
Q. Okay. And the area that I'm outlining right now, you reviewed his application. I think we went through this, and the area, the general area where he's proposing his 3-acre farm, is right along the western portion of Mr. Hunt and Ms. Cooney's property?
A. That is correct.
Q. Along this shoreline right here, right?
A. Yes.
Q. Did you have an opportunity to go to the northern part of Segar Cove?
A. Yes, I did.
Q. What about the western side of Segar Cove?
A. Yes, we went all the way around those as well.
Q. Okay. How many times have you been to Segar Cove other than that one time with Mr. Raso?
A. I've been there a couple, a couple times boating there with some friends.
Q. Power boating?
A. Power boating.
Q. Okay. When you say a couple times, more than --
A. I mean a couple times. Not more than two.
Q. Okay. And the two times, is one of those times with Perry, or is that separate and apart from being with Perry?
A. Separate and apart.
Q. So other than with Perry, you've only been to Segar Cove once?
A. Twice.
Q. I'm sorry, so a total of three times?
A. Yes.
Q. Okay. The three times that you've been there, did you observe recreational water dependent -- what Coastal calls water dependent uses and activities such as recreational boating, fishing, swimming, navigation and --
A. The times that $I$ went there was in the high summer, and there were people that were boating, and there were some
people that were fishing.
Q. Okay. Do you recall what areas of Potter Pond they were boating and fishing?
A. Well, I can recall that there were people kind of more on the south side of the cove, kind of the Gardner's Island area.
Q. So fair to say this area right here?
A. Yes.
Q. Okay. What about you? Were you on a power boat, sailboat?
A. Power boat.
Q. Okay. How about activity over here? Did you make any observations of activity over where the proposed aquaculture farm is?
A. No, I don't recall ever seeing anything ever there. But again, I've only been there three times, so --
Q. Got you.
A. Add your weight to that.

MR. CAPIZZO: Okay. May I have a moment, Madam Chair?

CHAIRWOMAN CERVENKA: Yes.
MR. CAPIZZO: Thank you. Madam Chair, I would
like to at this point move to have the CRMC file that Dr. Rice reviewed entered as a full exhibit. He
indicated that he reviewed the entire file including all the objections. I'd ask that be moved as a full exhibit.

MR. DESISTO: Well, it already is in the
record. That's the basis for this matter going forward. So I don't know why it has to be admitted as a full exhibit if it's part of the file already. I mean, it's the basis for this application.

MR. CAPIZZO: I guess my point is, Mr. DeSisto, I just want to ensure that that entire file is available for the subcommittee to review since this expert is basing his opinions on his review of that entire file, including any reports or letters that he indicated and testified that he reviewed.

So if it's already part of the file and review, I just want to make sure the subcommittee has the ability to review that entire file that he relied on.

MR. DESISTO: The application wouldn't be heard if the subcommittee didn't have access to the file. I just think it's duplicative.

MR. CAPIZZO: That's fine, as long as it's part of the file and the committee will have an opportunity to look at that, that's all I wanted to accomplish.

CHAIRWOMAN CERVENKA: I don't really understand what the CRMC file is, how that's defined, what he looked
at. So I don't know what we're admitting as a full exhibit.

MR. DESISTO: Well, here's the thing. I agree with you, Madam Chair, by the way. You know, the file is the file, and the file that Dr. Rice has stated that he's reviewed, that's a public document. It's part of the file already. It's part of the package that the subcommittee gets going forward. So I don't know why you want to put that in as an exhibit anyway. It seems like it would be in twice.

MS. NOONAN: If I may interject? I know this is Leslie's witness. Two weeks or so ago I asked Lisa Turner for the file and she sent it on a USB. That's what $I$ sent to Dr. Rice in addition to what he also described. I'll send it to you, Christian, if you want to take a look at it.

MR. CAPIZZO: No, as long as -- Mr. DeSisto and Madam Chair, as long as whatever is encompassed in the file that $M r$. Beutel reviewed to come up with that staff recommendation is available for the subcommittee to review, I'm all set. I think for the record we want to make sure that that is part of what the subcommittee, whether it's an exhibit or automatically reviewed by the file, any reviewing court would want to know it's part of
the subcommittee's review.
MS. NOONAN: And I will state that what
Dr. Rice was referring to is what $I$ forwarded to him that was provided to me by Ms. Turner from CRMC a week and a half ago maybe.

CHAIRWOMAN CERVENKA: Is Ms. Turner on? She can say what that is?

MS. TURNER: I can read out 14 documents included. Do you want me to read out what they?

CHAIRWOMAN CERVENKA: Sure.
MS. TURNER: Okay. CRMC staff reports and reference materials, application materials, state and local comments, Dave Beutel email correspondence, attorney information, public notification, pictures, cover sheet, July 2019 pictures, August 2019 pictures, September 2019 pictures, October 2019 pictures, letters of support, letters of objection, comments received after public notice expiration date.

CHAIRWOMAN CERVENKA: Okay. So that doesn't include the applicant's exhibits and memos and the objectors --

MS. TURNER: We were asked for that before any of that would be submitted, so I don't think -- it may now be included.

CHAIRWOMAN CERVENKA: I don't have a problem with that as it's been defined, and I'm looking at it right now, too.

VICE CHAIR COIA: Madam Chair, it's Ray Coia. May I add something? Does the witness have anything that we do not have?

MS. TURNER: No.
VICE CHAIRMAN COIA: Then what does it matter then? We have everything he has or more. I think what Attorney Capizzo wants to be sure of is that we have what he's referring to, and I think staff can attest to that. I think our counsel Anthony has said that. The file is the file. If they culled out certain things to send to him for his testimony, that's something from what we have.

CHAIRWOMAN CERVENKA: Mr. Coia, I didn't know if it included all the exhibits that were being proffered by applicant and objectors' counsel. If that's part of the quote unquote file, and $I$ understand that's not, so I'm okay with how the CRMC file has been defined and that be an exhibit. We consider it. It would be -- if there was any appeal it would be the certified record on appeal.

MS. PARKER: And for the record, I believe

Dr. Rice testified to this, but he also does have things that were submitted after we received the CRMC file. So I think he testified that he has the report, the objectors' materials and our exhibits.

CHAIRWOMAN CERVENKA: Okay. Tony, do we need to do anything other than admit it as an exhibit as it's been defined as the CRMC file?

MR. DESISTO: You can, but you're going to have a file and then you're going to have an exhibit with just the file. You know, to me, it's just duplicative. I hope it doesn't confuse things later on when it gets to court. That's my concern.

CHAIRWOMAN CERVENKA: Okay. Mr. Capizzo, are you satisfied that it will be duplicative and you don't need to have it admitted as a full exhibit?

MR. CAPIZZO: Yes. My only concern as the Vice Chair said, I wanted to make sure that the subcommittee who is reviewing this has opportunity to review all that information that's being referred to, and that individuals are basing their opinion on. If that's part of the record, then I'm satisfied.

CHAIRWOMAN CERVENKA: Yes. All those items
have been provided to this subcommittee.
MR. CAPIZZO: I don't have any further
questions for Dr. Rice.
MS. PARKER: Madam Chair, if I may, I have a short redirect.

CHAIRWOMAN CERVENKA: Yes.
REDIRECT EXAMINATION BY MS. PARKER
Q. Dr. Rice, you're aware that the current application lays out three plans for the possible site for the aquaculture farm; is that correct?
A. That is correct.
Q. And would you say from reviewing those plans and your expertise that the original site plan submitted by Mr. Raso provides more access to the shoreline; is that right?
A. That is correct. I mean, that is demonstrable and we saw that from the testimony of the engineer yesterday.
Q. And when you reviewed site plans with Mr. Capizzo, did he show you that original site plan that was submitted by Mr. Raso in his application?
A. I sort of recall the subsequent months, but not the original.
Q. So he showed you the polygon?
A. Yes, the polygon, yes.
Q. And finally, Dr. Rice, based on your review of the application and your expertise, does this application as
the full 3 acres provide the balance of aquaculture and public access sought by the CRMC legislation?

MR. WAGNER: Objection for the record.
A. Yes, it does. It basically fulfills all of the requirements and it has been gone through a very extensive review according to the procedures that the statute that Attorney Capizzo has pointed out including the Marine Fisheries Council.

MS. PARKER: Thank you, Dr. Rice. No further questions.

CHAIRWOMAN CERVENKA: Thank you, Ms. Parker. Ms. Noonan, do you have two or three more witnesses? You're on mute.

MS. NOONAN: Just one.
CHAIRWOMAN CERVENKA: Okay. So you're not calling, is it Kristen Hamel, because you had Mr. Osgood?

MS. NOONAN: That's correct.
CHAIRWOMAN CERVENKA: And then you had Rice, Byron, and you're at Rheault now?

MS. NOONAN: Rheault, correct, sir.
CHAIRWOMAN CERVENKA: You do have 50 minutes, and hopefully we can get through this witness with some cross-examination questions.

MS. NOONAN: Okay. If I can quickly just, one
housekeeping? I forgot to move Dr. Byron's CV full. Can I move that full?

MR. WAGNER: No objection.
MR. CAPIZZO: No objection.
MS. NOONAN: Thank you.
CHAIRWOMAN CERVENKA: It's submitted.
[EXHIBIT \#3 MARKED FULL]
MS. NOONAN: Pull up Dr. Robert Rheault. And thank you, Dr. Rice. We'll take you out of Zanzibar.

Good afternoon, Dr. Rheault. How are you?
THE WITNESS: Good afternoon.
MS. NOONAN: Can he be sworn.
ROBERT RHEAULT,
Being duly sworn testifies as follows:
COURT REPORTER: Please state your name for the record.

THE WITNESS: My name is Robert Rheault.
DIRECT EXAMINATION BY MS. NOONAN
MS. NOONAN: I would like to have Exhibit 4,
Mr. Moore, if you could find Exhibit 4 which would be Dr. Rheault's CV.
Q. As he pulls that up, if $I$ can start with you, Dr.

Rheault. Can you please give the Council some of your background as set forth on Exhibit 4?
A. So I have a master's degree in zoology from URI, a Ph.D in biological oceanography, grad school oceanography at URI, 20 years of experience growing oysters in Pt. Judith Pond. One of the people who helped craft the current regulations sold my farm 13 years ago to become an executive director of the East Coast Shellfish Growers Association. I represent growers from Maine to Florida. I worked on federal matters, but occasionally on state matters like this.
Q. Do you teach also?
A. So my appointment with the East Coast Shellfish Growers is a half time position, so I'm also a professor at URI. I teach through the Rhode Island Department of Labor and Training. I teach other opportunities, and I do consulting work on the side nationally and internationally.
Q. And have you also published papers in your field?
A. So I wrote chapters, several dozen peer reviewed signed publications and a number of opinion pieces.
Q. And what professional affiliations do you have?
A. I am a member of a number of professional associations from the National Aquaculture Association, National Shellfisheries Association. I'm sure I'm forgetting some.
Q. I believe they are listed on Page 1 of your curriculum vitae. Can I ask, the most important question is that are you the guy that gave us Moonstone oysters?
A. I was the owner of Moonstone Oysters, President and CEO for about 29 years, started out at a hatchery and moved on to growing and selling oysters. I'm quite proud of that.

MS. NOONAN: Great. I would ask that
Dr. Rheault be qualified as an expert in aquaculture.
CHAIRWOMAN CERVENKA: Any objection?
MR. WAGNER: No objection.
MR. CAPIZZO: No objection.
CHAIRWOMAN CERVENKA: Okay. Will someone make a motion to accept the qualification of Mr. Rheault as an aquaculture expert?

VICE CHAIRMAN COIA: Madam Chair, Ray Coia makes that motion.

CHAIRWOMAN CERVENKA: Thank you, Mr. Coia. Is there a second?

MS. REYNOLDS: Reynolds seconds.
CHAIRWOMAN CERVENKA: I will do a roll call.
Ray Coia?
VICE CHAIR COIA: Ray Coia votes aye.
CHAIRWOMAN CERVENKA: Patricia Reynolds?

MS. REYNOLDS: Reynolds votes aye.
CHAIRWOMAN CERVENKA: Don Gomez?
MR. GOMEZ: Don Gomez aye.
CHAIRWOMAN CERVENKA: Vin Murray?
MR. MURRAY: Vin Murray aye.
CHAIRWOMAN CERVENKA: And myself Jennifer
Cervenka aye. The motion to qualify carries.
MS. NOONAN: Madam Chair, I would also ask that his curriculum vitae be admitted full, Exhibit 4.

CHAIRWOMAN CERVENKA: Admitted full.
MS. NOONAN: Thank you.
[EXHIBIT \#4 MARKED FULL]
Q. Dr. Rice, you were retained as an expert in this matter, right?
A. Yes. Dr. Rheault, yes.
Q. I'm sorry. That was my mistake. Dr. Rheault. Thank you. Do you know Mr. Raso?
A. I do. I employed him briefly as a diver in early 2000 s before he started his farm, subsequently as president of the Ocean State Aquaculture Association where he was a member, we'd meet on occasion. And my wife was a big fan of his restaurant, and we occasionally would see him there.
Q. All right. Do you serve on the Shellfish Advisory panel?
A. I am an alternate, so $I$ was called up the day of that hearing when he was being -- when his application was being reviewed. I got a call that afternoon, and the primary, Jeff Gardner, said he couldn't attend so I made plans to attend.
Q. And that committee made a positive recommendation at that time, correct?
A. We did, yes.
Q. And at that time did you have any idea that you would be providing testimony for Mr. Raso on this application?
A. Providing this testimony at this time, or providing testimony at that particular meeting? I mean, I knew at that time that Perry Rasa's application was going to be reviewed. Going into the meeting I was not totally caught off guard.
Q. All right. But in terms of your expert testimony, you were not retained until well after that meeting, correct?
A. Well, that's correct, yes.
Q. And other than discussions at the shellfish advisory panel and the work that we've done together since you've been retained as an expert, did you have any other knowledge of the application?
A. I had read certain publications. Popular Press, Facebook postings get circulated around. I tend to monitor what's
going on in the state when it comes to aquaculture. So I was not totally in the dark, but I hadn't been following it very carefully until very recently.
Q. Okay. Did your involvement at the shellfish advisory panel have any impact on your testimony here today?
A. I don't see, no.
Q. In terms of the proceedings that we're at now, were you watching or listening to the testimony both yesterday and then earlier today starting at 1:00?
A. With great fascination, yes.
Q. Wonderful. We've heard a lot about this, but are you familiar with Mr. Raso's application, and if so, can you describe your familiarity with it to the committee?
A. I too reviewed the entire packet that we just discussed in length. I don't recall seeing extensive letters of objection, but obviously they were referred to in the coastal committee's and the waterfront advisory's letter. So I was pretty much aware that almost any aquaculture application is going to be met with a bunch of, we'll say objectors.
Q. That's based on your personal experience since the 80s, correct or --
A. Certainly this whole hearing is bringing up sort of a PTSD. I, too, had a Coastal Resources subcommittee
hearing in Narragansett after nine public hearings over a two-year period with 600 objectors in my file. So I certainly am well aware of the nature of these proceedings.
Q. Okay. Did you have an opportunity to review the staff report which is Exhibit 17?
A. Yes.
Q. And you heard Mr. Beutel testify?
A. Yes.
Q. Obviously you're familiar with the history of aquaculture. Can you just provide any further information of your familiarity with the history of aquaculture in Rhode Island?
A. Well, it goes way back. At one point we had almost one third of Narragansett Bay leased out for oyster aquaculture, and it provided hundreds of jobs in the late 1800s and early 1900s. 20,000 acres of Narragansett Bay was leased out for oyster farming. There were massive oyster checking houses on the East Bay, and it was one of the largest industries in the state.

That went into disrepair when we discovered that bacteria caused disease. People stopped eating oysters. We had some wars that drew away the workforce. The Hurricane of '38 buried most of the beds. The price of
oysters was not sustained by the work involved.
We brought aquaculture back in I want to say the 70s. There was a Rhode Island Aquaculture Association in effect. One of the early leases was Water Skier's Cove by Dr. Rogers, and then I revived the Ocean State Aquaculture Association in late 80s. I started my farm in '86, started the Ocean State Aquaculture Association in '89, and we've experienced rather substantial growth subsequently.
Q. And hearing both Dr. Byron and Dr. Rice's testimony, there's been discussion about balancing sort of the public's access to the water and aquaculture. Can you describe that based on your experience with the aquaculture and the statutory I guess evolution in Rhode Island?
A. Sure. So I don't want to tell the Council their job, but I mean, obviously the Council is in charge of balancing the multiple uses of this state, and it's quite a challenge because any time you permit something like a marina or a fish trap or a private dock or something like that, you are jeopardizing someone else's use of the free and commons and diminishing their access.

So the Council has to balance the various uses of the commons, and indeed $I$ think almost every state has
something in their constitution words to the effect that it is incumbent on the resource managers of the state to manage the subtitle -- I'm sure I'm botching up the constitutional language badly, but to the benefit of the sovereign, not necessarily to the waterfront homeowners right there, but to the sovereign meaning the members, all the people of the state of Rhode Island. So the Council has a very challenging task, to balance these multiple users.
Q. So when you're looking at an application such as this, and Dr. Rice was led through some questions by Mr. Capizzo about the impact of the polygon on the shores of Mr. Hunt's property, while that may be true or have an impact, is that the balance that is required under CRMC regulations?
A. Well, certainly the coastal waterfront marsh of the right to wharf out and have riparian access. Both of the adjacent waterfront homeowners have docks. So that raises being honored. And then, you know, people have the right of recreation and certainly the fisheries, and the fisheries impairment in terms of what would be prepared by a 3-acre lease in that area, either Option A or Option B has been addressed, looked at and both DEM, and Mr. Beutel has looked at it and determined that it's
not a huge loss of fisheries access.
And then we look at the recreational use. Then in my mind this is one of those spots that's almost ideal because you have to try and find a spot that impairs the least number of people to the least extent possible. And so, obviously we've got a bunch of rules that say you can't put a farm in the middle of a channel. You can't impair certain fisheries resources, essential fish habitat, some -- vegetation. These are all off limits. But when you find a spot that is sort of out of the way that is tucked to the side and impairs the least amount of space, and the least amount of users, in the most insignificant fashion, to me that seems like a perfect spot to try and squeeze in a little bit of aquaculture.

When we created the 5 percent rule, it was an attempt to try and placate. So just going to take you back a little bit to the evolution of the 5 percent rule, we were challenged by oyster shell fishermen who were complaining that we were growing far too fast. I was applying for 7 -acre lease expansion above my initial 2-acre lease, and I was being called the Walmart of shellfish aquaculture in Rhode Island.

Obviously this was growth that was out of control. So a moratorium was being proposed by the fisheries
council so we reengaged in a group that we had established, an aquaculture working group, which is a multi-stakeholder group to really sit down and try to hash out the various issues. And I wrote one of the chapters entitled "carrying capacity," and did some research and moved around, and we were being accused of consuming too much of the phytoplankton. In other words, the shellfish that our farms were consuming was going to impair the wild shellfish in the area.

So I looked at the literature, and there wasn't a lot at the time, but we did find some related work down in New Zealand. I tried to do some packing the envelope calculations. It was very rough. At the time we all acknowledged that this was an imperfect comparison, that this giant bay in New Zealand wasn't anything like the ponds of Rhode Island. But we all agreed that the calculation that $I$ did was at the very least it was very conservative -- carrying capacity. And until we had better available science, it was a recommendation based on the best available science.

So we went with it. Everybody agreed. Everyone had a chance to challenge it. This was a consensus document, and we all agreed that until better science was available, we would work with the 5 percent as an
estimate of the ecological carrying capacity, and as long as we didn't exceed that, we could rest assured that we were not sucking up all the phytoplankton to the disbenefit of all the wild animals that depended on it.

Everyone agreed that that was good. And then about 5 years later, Carrie was able to do her modeling work and showed quite eloquently and very convincingly that my rough calculation was obviously a vast underestimate. And then there was a capacity. In terms of the ecological carrying capacity, we could put a lot more shellfish back in the water. It just makes a lot of sense.

If you look historically at the populations of shellfish in these areas, long before man started to get here, we had, you know, these bottoms were paved with shellfish. We are quite able predators. Oysters can escape very well and we were very proud to overharvest. So populations are well down from what they are historically.
Q. When you talk about consensus and reaching that, who was at the table for that?
A. We had -- it was a multi group of about 30 people, aquaculture working group, representatives from all various walks of life. We had biologists, scientists,
fishermen. We brought in pretty much anybody who was willing to attend 29 meetings over a space of $I$ think a year and a half.
Q. Are you familiar then based on all this experience with the Category B assent requirements for CRMC that apply to all applications that follow including aquaculture?
A. Very much so.
Q. The first requirement is need. Can you address the concept of need generally in the context of aquaculture?
A. Sure. So we added that based on concerns that were raised by the fisherman because, you know, we didn't want people coming in and leasing up areas on a speculative basis. So, in other words, we wanted people to show that they had filled up their first 3 acres before they applied for another. That was what we meant. It was probably poorly worded, but that was the intent of that section. That you shouldn't be allowed to apply for more acreage beyond your 3 acres, your initial 3-acre application until you had filled that up because we didn't want people leasing up areas in speculative fashion.

So that was the primary thing. I think broadly, to put it in terms that perhaps a lawyer would understand, need, you know, do you need to hire another partner and
more interns to get more clients? Or a restaurant, do you need to have another location?

Well, certainly, as any businessman would be able to tell you, the larger your operation, the economy is to scale. So your fixed costs are likely fixed and remain a small percentage of your operating cost. And if you can expand your business, you will be more efficient in terms of this proportion of fixed cost to a variable cost. So you become more economic if you can increase the scale of your operation.

I would just add that, you know, various operation and 7 acres, hopefully to be 10 is a small farm, very small farm.
Q. So we talked generally about the need. Let me ask you specifically. Do you have an opinion whether or not Mr. Raso has demonstrated a need for this proposed oyster and scallop farm of 3 acres?

MR. WAGNER: Objection. No foundation.
MS. NOONAN: I believe I've laid the
foundation. He looked at the application, he heard the testimony, he gave his background. He understands the standard.

MR. WAGNER: I don't understand how that's a foundation for what his need is for an oyster farm. I
frankly still don't understand from his testimony what this need requirement means. I don't think that because he had a hand in drafting it should have any admissibility before the subcommittee.

MR. DESISTO: Rather than have an argument between the lawyers, Madam Chair, what I would suggest here is allow the witness to answer the question, and it can go to the weight as to whether or not he actually has expertise in this. But at this stage I think it's permissible for him to answer and then be cross-examined on it.

MR. WAGNER: If I could just request, I will interpose objections, and I don't mean to -- we don't have to have an argument after each one. But $I$ want for the record to interpose objections.

CHAIRWOMAN CERVENKA: That's fine, and then you'll get your chance on cross-examination.

MR. DESISTO: May I ask if this is going to be a continuing objection for this entire line of questioning?

MR. WAGNER: Yes, if I could do that.
MR. DESISTO: Okay. You can.
CHAIRWOMAN CERVENKA: Can I ask the stenographer to read the question back, please.

## [PENDING QUESTION WAS READ]

A. As I said, based on the reasoning for which that standard was inserted, yes, I believe that Mr. Raso has clearly filled up the space of his existing lease and that was certainly the intent. We want to take a different view of the term "need." I would say that if he wants to grow scallops, he needs additional depth. This is a spot with greater depth I think that shows needs, greater depth to grow scallops and lantern nets. I that the depth is another view of the term "need." You.

Know, in terms of profitability and economy to scale, I think that is a perfectly valid interpretation of the term "need" as well. So I would say that, yes, depending on how you choose to interpret the term "need," he has fulfilled all three considerations.
Q. Do you have an opinion as to whether or not the shellfish aquaculture proposed by Mr. Raso will have any negative effect upon the erosion or deposition along the shore?
A. Looking at Segar Cove, one thing that I notice about the cove is a lot of the homes, especially along the south side, are protected by buttresses. It looks like there are erosion concerns, probably from boat wakes. There is not a lot of [ZOOM INTERRUPTIO] -- for wave action. Erosion seems to be a concern. A lot of the homes have
rip rap and things like that.
On the north side immediately adjacent, I'm sorry, Rocky Beach, $I$ don't imagine that that's got significant erosion right there. You can't expect structures in the water to mitigate wave energy slightly. We don't have good science on the amount of wave energy mitigation, but if anything, it would slow the effects of the boat wakes on that particular shore. I can't imagine that we would experience anything else.
Q. Since you talked in detail, can you tell the committee about your familiarity with Segar Cove?
A. I've been to Segar Cove once.
Q. And you visited the proposed site?
A. I did.
Q. Okay. Just going back generally to oyster farming and aquaculture, is this considered a green industry?
A. Absolutely. It's one of the things I'm most proud of. We get very high marks from the environmental communities which is -- aquarium, the nature conservancy, other things like that because we have no food, no drugs, no chemicals, no fertilizers. We got the gold star. And then to boot, we offer what are called ecosystem services. In other words, benefits that we take for granted. In other words, still for the water improving
turbidity levels, mitigating the eutrophication impacts from access fertilizers.
Q. Can I stop you? What is the word you used so the stenographer has it?
A. I'm sorry. We mitigate the impacts of eutrophication. Eutrophication is the syndrome that's related to excess nitrogen, phosphate inputs from lawn fertilizer, and wastewater from ISDS runoff. So when you have certainly fertilizer, and fertilizer are generally good, but when you have excessive amounts of nitrogen coming into the coastal waters, especially in almost all of our estuaries in the northeast, we see something called eutrophication. It's a tendency for excessive algal blooms that are stimulated by the nitrogen and phosphate runoff. After the algal blooms can diminish water quality by causing eutrophication, which is low oxygen, a buildup of excessive phytoplankton blooms which will shade out the eelgrass and then change the nature of the bottom to be more dominated by Rosularia and lesser habitat types. So, as I said, because the shellfish feeding can mitigate and remove some of the nitrogen associated with the phytoplankton that they consume, we get the gold star from a lot of these environmental groups who recognize that when TNC, when the Nature Conservancy is coming out
in favor of the aquaculture, shellfish aquaculture, you know you're doing something right.
Q. And is Mr. Raso's proposed farm consistent with what you've just described for a green industry?
A. Absolutely.
Q. Moving on to a different topic. Do you have an opinion as to whether Mr. Raso has taken measures to minimize any adverse scenic impact?
A. Certainly the low profile choice for his floating gear, he's trying to make it less visible. Certainly that's probably the primary concern we hear on most applications is the aesthetic concern. Of course it's very challenging to assess what in someone's eyes is offensive to their sense of aesthetics is not necessarily so under someone else's.

For instance, I think those windmills off the coast are beautiful. Not everyone agrees with me. But, you know, a nice neat field of corn, to me that's beautiful, but it's not what nature intended. So everyone has their own view of what is an aesthetic view and what is something that is not.
Q. And the fact perhaps that half of the farm for scallops that is not on the surface, does that also play in for people that may find something on the surface offensive?
A. Certainly, anything you can do to minimize the number of buoys, the number of things that are sitting on top of the water is going to hopefully minimize the aesthetic impact, if you will.
Q. Have you worked with aquaculture farms that have been located in the areas where the public participates in recreational activities?
A. Of course.
Q. And then what type of recreational activities?
A. Well, I mean, my own farm, people would waterski down the middle, sail around, use the buoys, fishing. Fishing was actually quite popular on my lease. Turns out, since I never predicted when I got into oyster farming, but the gear, the cages, serves as an excellent habitat. We actually did studies to show that associated with the bottom cages that $I$ was using we attended ten thousand times as many too little fish associated with our gear as a nearby -- grass bed. It was something that $I$ observed while diving on the lease, but $I$ never expected it. There was all these larger fish that would come and circle around the lease to try and eat the smaller fish. So when I was taking my kids fishing, I was never a good fisherman, but I'd always take them to lease because I knew we would catch fish.
Q. In terms of the current application, have you seen the three different layout plans?
A. Yes.
Q. You heard us talk about $A, B$ and $C$ ?
A. Yes.
Q. What's the effect of changing the original rectangle to either the polygon that is depicted in $B$ and $C$ ?
A. So most of the discussion is focused on B, alternate B. The initial polygon is a regular shape, easy to mark. Four corner markers. It's relatively easy to manage in terms of laying out your lines and dealing with that.

I believe that the effort to move the polygon and go to alternate -- so-called preferred alternate $B$ was an attempt to move away from the area of the center of the pond where the water sports activities has been described, move it closer to the beach and get it out of the main area of water sports activities. And I think it achieves that.

The detriment is that you're obviously closer to the shore, so you have to look at are you impacting activities on the shore and access to the water by the Hudson. I forget it's the neighbor to the north -anyway, the two properties that are immediately adjacent on the northeast shore there. You know, they certainly
have a lot of beach access on their own properties.
Q. That's the one that's on the peninsula too, right?
A. The peninsula, yes. The question is, is the beach that's right adjacent to the farm, is that better beach? It's mostly cobble. It didn't look like it was an excellent sunbathing beach. I do understand that there's some access to clamming there right up on the shore.

Certainly that access is still there. The beach points do prevent somebody from circumventing the lease on the east side in a motor craft. My question is, why would you want to go in there? You know, I mean, if I was trying to get around the lease I would go around the other side. If I were trying to access the beach, you could certainly access it from the south or the north. It doesn't appear to me that -- point poses a tremendous challenge, but it's not for me to say. I'm not trying to navigate in that pond.
Q. Well, let me ask you the question which is, based on what you heard and the testimony over the last two days, as well as all the materials that you have reviewed in your experience, do you have an opinion as to whether or not the proposed farm would result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming and navigation?

MR. WAGNER: Objection.
A. Am I allowed to answer?

MR. WAGNER: Objection to the foundation. He's been to Segar Cove once. He has no idea what the activity and uses are in that cove. There's no observations at all about any activity uses in that cove. He's been there once.

MR. DESISTO: That goes to the weight, doesn't it? You know, it seems to me with these witnesses that the issue comes down to this use versus recreational uses. It seems to be part and parcel of what goes on in these things. So to me the witness should be allowed to answer the question.

The fact that he's been to Segar Cove once, the fact that his expertise is with aquaculture itself, goes to the weight of his testimony. I think it's appropriate for him to answer, and that can be an issue for cross-examination later.

Madam Chair, I recommend that he be allowed to answer.

MR. WAGNER: Madam Chair, may I have a continuing objection?

CHAIRWOMAN CERVENKA: Yes.
MR. WAGNER: Thank you.

CHAIRWOMAN CERVENKA: Is that reflected by the court reporter? I would ask that the court reporter just read the question back again, please.
[THE RECORD WAS READ BY THE COURT REPORTER]
A. So having visited probably over a hundred aquaculture farms up and down the coast, having spent my entire life working on the water, having spent my entire life recreating on the water, $I$ would say that, you know, there is ample space to, you know -- it actually looks like a pretty small cove for waterskiing in my mind. I mean, growing up on a body of water where we waterskied regularly, but, you know, nowadays most people get dragged around in a tube, slower speed doesn't necessarily require as much space. Certainly there's, you know, the lease doesn't necessarily impair battling in a kayak or canoe or a wakeboard or standup board.

Actually, I would say that the lease actually enhances the experience because now you have something cool to look at, you have somebody there to talk to, I'm sure very happy to explain how they are growing oysters. Typically we find that people are fascinated about what we do in the water, very, very curious and they want to see what's going on and have a conversation.
Q. Just finally, Dr. Rheault, based on your experience with
aquaculture in Rhode Island over the last few decades, can you speak to how the interest of Mr . Raso and objectors in terms of these conflicts of other water-dependent use be reconciled?
A. So, you know, it's a balancing act. You have to try and assess the number of people who are impacted and the degree of their impact versus the desire of the state to foster aquaculture.

We understand that the oyster act was passed because the state recognized that if you give somebody a lease, they are going to invest in that lease. They are going to plant seed, they are going to pull out predators, and it's going to enhance the productivity of those waters and enhance the value to the state.

So when I sell oysters across the country and somebody has them in a restaurant in Chicago, and they have a big smile on their face, and they read about Rhode Island oysters, now they want to come to Rhode Island and go to recreation and have a vacation in Rhode Island.

So there are a multitude of cultural, social, economic as well as environmental benefits associated with that aquaculture.

The state recognized that when they put this aquaculture bill into place, and also it's a balancing
act that is obviously quite a challenge which is why we're here with a hearing that's lasting several days.
Q. And while we're focussing with the objectors and we're here, they are not the only interest that needs to be balanced in terms of Mr. Raso's application, correct?
A. Well, it's incumbent upon the managers of this resource or the sub tidal waters to manage them for the benefit of the sovereign, which is everyone in the state, not just those who are lucky enough to have waterfront homes.

MS. NOONAN: Thank you, Dr. Rheault. No
further questions.
CHAIRWOMAN CERVENKA: Okay. I think I'm going to end it here. I don't want to start the cross-examination questions because we only have ten minutes and that's going to chop up someone's cross-examination.

I was looking, Ms. Noonan, at your list of witnesses and you did have one additional listed. I assume you're not calling him, Michael Stach?

MS. NOONAN: Correct. He was the harbormaster, and instead we introduced the certified Minutes. You're correct, I will not be calling him.

CHAIRWOMAN CERVENKA: All right.
THE WITNESS: Do the committee members want to
ask me questions? We have ten minutes. Might as well. CHAIRWOMAN CERVENKA: Okay, but I will end at five, and $I$ just want to address what we're going to be doing next time.

So next time we have to finish up Dr. Rheault, and then we have to move on to the objectors' case. You're going to have some closing argument, Ms. Noonan?

MS. NOONAN: I don't know if you want us to argue just at the subcommittee level or submit -- I would prefer to argue orally, yes. And possible rebuttal. I don't anticipate a rebuttal witness right now, but I might.

CHAIRWOMAN CERVENKA: Okay. So I think I should ask -- well, let's do five minutes with Dr. Rheault if there's any subcommittee questions, and then I want to ask some questions of Mr. Capizzo and Mr. Wagner as far as their cases and timing.

So does anyone on the subcommittee have questions for Dr. Rheault?
[NO RESPONSE]
CHAIRWOMAN CERVENKA: I don't believe we have any questions. It was thorough.

MS. NOONAN: Madam Chair, to avoid the question
from Mr. Capizzo to ask on Tuesday afternoon, just to
instruct the witness not to speak with anyone because as he is under cross-examination.

CHAIRWOMAN CERVENKA: Okay. All right.
Mr. Capizzo and then Mr. Wagner, how much time do you think that you'll need? I'm just trying to gauge for the public when we'll be starting public comment, if we will be starting public comment on Tuesday. And, you know, I mean, you take the time that you need to get through your case. I just want to get an idea.

MR. CAPIZZO: From my perspective we have four witnesses. I've listed five, but I think there's only going to be four. The bulk of the testimony will be through Pace and Whitney from ESS, our expert witness. That will be the first witness, and then $I$ believe we'll follow order of Mr. Hunt, Ms. Cooney and Mr. Latham. So I imagine it will take up a good part of Tuesday between presentation and cross.

CHAIRWOMAN CERVENKA: Okay. And you,
Mr. Wagner?
MR. WAGNER: I have one witness.
CHAIRWOMAN CERVENKA: Okay. So it sounds like most of our third day will still be with attorneys and witnesses, and we will unlikely reach public comment. Mr. Willis?

MR. WILLIS: Madam Chair, that's what it sounds like to me. We have been taking names all meeting long as well as yesterday and via the email and we set up for this hearing. So we do have a list. As we mentioned this morning, it was at 50 plus, and I'm certain it's grown over the course of today.

CHAIRWOMAN CERVENKA: Okay. So, we will need to schedule at least a fourth meeting and potentially a fifth meeting.

MR. WILLIS: Agreed.
CHAIRWOMAN CERVENKA: We have to get to the rebuttal and workshop. Okay. So do we want to tell the members of the public that they will not be speaking on Tuesday?

MR. WILLIS: Yes, we can do that. We can get an email out tonight. We will amend our website and let everybody know that. We have already amended the website during the hearing to broach the possibility that Tuesday was hopeful to be for public comment, but maybe not. And we will expound on that and get information out tonight so that the public has clear expectations that Tuesday will be for continuation of this hearing and public comment will no doubt be at a date to be determined shortly thereafter.

CHAIRWOMAN CERVENKA: Okay, and if you can communicate that there will be a time limit on each of those speaking because we have to do that so that we have an end point. We'll figure out what the number is and then we'll calculate the time limit.

MR. CAPIZZO: Madam Chair, may I inquire just for those who are listening so there's a clear understanding for the public? Are they going to be able to sign up on Tuesday for participating in the public comment, or is that closed as of today?

CHAIRWOMAN CERVENKA: It is closed as of today.
MR. CAPIZZO: I just wanted to make sure.
CHAIRWOMAN CERVENKA: I think we've given ample opportunity for a period of time before these hearings started. They got yesterday, they got today and, you know, they just have to show up and register and we have given a lot of opportunity.

MR. CAPIZZO: Does it make sense, Madam Chair, to allow members of the public because of the number of objections that Mr. Beutel had, to leave that open for Tuesday? Because there will be additional testimony that may sway the public one way or the other.

CHAIRWOMAN CERVENKA: Is that your request?
MR. CAPIZZO: Yes.

CHAIRWOMAN CERVENKA: Okay. I'll ask
subcommittee members what they think about it, the request of Mr . Capizzo to hold open the registration of those who want to give public comment orally.

VICE CHAIRMAN COIA: Madam Chair, Ray Coia. I I think we've had nine hours of Zoom that they had an opportunity to register and if there was any time before that or not, I'm not sure. So I think ending it at the end of today would be fair.

CHAIRWOMAN CERVENKA: Mr. Gomez?
MR. GOMEZ: I agree with that. I think that you started the meeting indicating that this would be the last opportunity by the end of today or the end of this meeting, and $I$ concur that they've had ample time to voice, to request to be heard.

CHAIRWOMAN CERVENKA: Okay. Mr. Murray?
MR. MURRAY: I would agree as well. I think Mr. Coia mentioned nine hours plus the lengthy travel of this application, and all the public comment that's part of the package in terms of the letters and what have you, so I think it's fair.

CHAIRWOMAN CERVENKA: Ms. Reynolds?
MS. REYNOLDS: I'm also in agreement. I think ample opportunity has been provided.

CHAIRWOMAN CERVENKA: Okay. So there you have it. We're going to close it at five today.

MR. CAPIZZO: Thank you, Madam Chair.
CHAIRWOMAN CERVENKA: Okay. Anything else administratively that we need to discuss, Mr. Willis, Mr. DeSisto?

MR. WILLIS: No, Madam Chair. We have just addressed what staff needs to do at 5:01.

MS. NOONAN: I apologize to staff that it's 5:01.

MR. WILLIS: No worries.
CHAIRWOMAN CERVENKA: I'll move to adjourn this second session of the subcommittee meeting.

MR. COIA: Second.
CHAIRWOMAN CERVENKA: Thank you, Mr. Coia. All those in favor say aye.
[UNANIMOUS VOTE TAKEN]
CHAIRWOMAN CERVENKA: Have a nice weekend, everyone.
[ADJOURNED AT 5:00 P.M.]

> C ERTIFICATION

I, Lisa M Reis, hereby certify that the foregoing Pages 169 through 295, inclusive, are a true and accurate transcript of my stenographic notes of the proceedings, via Zoom, which occurred on the above-entitled dates, to the best of my ability.

LISA M. REIS, RPR
Court Reporter/Notary Public
My Commission expires on 7/27/24

Sworn to and subscribed before me, This 16th day of November, 2020

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