

HEALTH COMMITTEE
OF THE
SUFFOLK COUNTY LEGISLATURE

A meeting of the Health Committee of the Suffolk County Legislature was held in the Rose Y. Caracappa Legislative Auditorium of the William H. Rogers Legislature Building, 725 Veterans Memorial Highway, Smithtown, New York, on June 11, 2015 at 2:00 p.m.

Members Present:

Legislator William Spencer - Chairman
Legislator Kate Browning - Vice Chair.
Legislator Robert Calarco
Legislator Monica Martinez
Legislator Robert Trotta
Legislator Leslie Kennedy

Also in Attendance:

Legislator Al Krupski - First Legislative District
George Nolan - Counsel to the Legislature
Jason Richberg - Chief Deputy Clerk/Suffolk County Legislature
Michael Pitcher - Aide to Presiding Officer Gregory
Elizabeth Alexander - Aide to Legislator Spencer
Bill Shilling - Aide to Legislator Calarco
Ali Nazir - Aide to Legislator Kennedy
Greg Moran - Aide to Legislator Trotta
Craig Freas - Budget Review Office
Katie Horst - County Executive Assistant
Kerri Suoto - County Executive Assistant
Walter Dawydiak - Director/Division of Environmental Quality
Alison Branco - Director/Peconic Estuary Program
Christopher Gobler - Professor of Marine Science/Stony Brook University
Adrienne Esposito - Executive Director/Citizens Campaign for the Environment
Robert Kessler - Yaphank Historical Society
Monique Gablenz - Appointee to the Food Policy Council
All Other Interested Parties

Taken By:

Lucia Braaten, Court Stenographer

*(*The Meeting was Called to Order at 2:02 p.m. *)*

CHAIRMAN SPENCER:

So I'm going to ask if we could stand, and as we begin our committee, we'll have our salute to the flag, to be led by Legislator Kennedy.

*(*Salutation*)*

Please remain standing for a moment of silence in honor of all those who are protecting this country both at home and abroad.

*(*Moment of Silence*)*

You may be seated. Thank you. Welcome to the Health Committee, and today we are going to have a special public hearing relating to a couple of crises that we've seen recently in the news, and that's with the fish kill, the turtle die-off, the brown tide, and today we learned that there's a cyanobacteria found in Lake Mattituck. But before we get to our special hearing, we are going to take our agenda. We have an appointment, and we usually, out of respect to the person who's here for the appointment, we'll take them first. But first, I wanted to see if there were any cards. And we will have our public comment portion. Thank you, Mr. Clerk.

If there's anyone here for the first time and you wish to be heard, if you fill out a yellow card, you'll have a chance to address the committee for three minutes about any topic that you feel that you would like to discuss. At this point, I have one card, and that's from a Robert Kester.

LEG. BROWNING:

Kessler.

CHAIRMAN SPENCER:

Kessler. Kessler, okay. Robert Kessler, a member of the Yaphank Historical Society. So, Mr. Kessler, welcome, and the floor is yours.

MR. KESSLER:

Thank you. Sorry I'm so late. My computer crashed, I had to write something up.

In 1871, the Suffolk County Almshouse was built on Yaphank Avenue in Yaphank. The poor from throughout Suffolk County were able to find shelter here. The Almshouse was surrounded by a large farm which provided food for the inmates. And it was also an Almshouse cemetery for the -- for the Almshouse, as well as for the children's home.

Suffolk County confirms at that they -- I'm sorry. They -- I wrote this. I can't read my own writing here, I'm sorry.

*(*Laughter*)*

CHAIRMAN SPENCER:

That happens to me frequently.

LEG. CALARCO:

But he's a Doctor.

*(*Laughter*)*

MR. KESSLER:

I can read reading, but I can't read writing. Suffolk County records confirm several -- through

several volumes that the list of inmates buried at the Almshouse from 1871 through 1953. Recorded are the names of the dead, their age at the time of their death, and also the burial location in the cemetery. A notation was made when a child from the children's home was buried in the cemetery, and there are actually 87 children buried there in the cemetery. They're all small stones there, they're all the same. It almost looks like a military cemetery. The stones are all marked with numbers. There are no names on it, but there are -- there is a map linking all of the names to the numbers.

The cemetery is in -- really in a state of disrepair for many years. Hundreds drove through the cemetery to get to the woods surrounding the cemetery and they had little or no respect for the dead.

A few years ago, the cemetery was sympathetically restored, and is now maintained by the Suffolk County Sheriff's Department Inmate Work Program. And we want to thank them and recognize them for all the hard work that they're doing, and they really keep the place nice. They fenced it in, they put paddock fencing around it, and it's really clean and neat now.

Today, the Almshouse Cemetery stands as a stark reminder of this -- of the -- of the support -- of the system of care that was provided to the poor of Suffolk County. The cemetery is one of Yaphank's historic sites, and is also visited by many hundreds of people each year.

(Timer Sounded)

Is that it? Is that the bell?

LEG. BROWNING:

Can I ask a question?

CHAIRMAN SPENCER:

That's the end of your time, but Legislators could ask you a question, which could --

MR. KESSLER:

Sure.

CHAIRMAN SPENCER:

-- kind of extend your time. Legislator Browning has a question for you.

LEG. BROWNING:

I guess you probably didn't get to the point of your visit, which, I guess, if you would like to expand a little bit on the reason why you're here to speak on it. Actually, I did go over there the other day and took some pictures, so I can certainly allow the other members to take a look at my phone and the photographs that I have. But if you could expand on the reason why you're here.

MR. KESSLER:

Well, we feel that this is a very historic cemetery, and was really -- it was really dedicated to the children's home and to the people who were in the -- the indigent poor who were in the Suffolk County Almshome.

We really feel that this cemetery should be protected and should be closed, really shouldn't be anymore burials. We do feel for the bodies that are in the morgue, that they want to open the cemetery up and put some more people in there. I just don't think that this is the proper place for it. I think this was -- this cemetery was actually, you know, created for the indigent poor and for the children's home, and I think that it should be kept as is and should be protected forever. The

Historical Society is very much in favor of this, of keeping it as is, and just not opening it up again. Thank you.

LEG. BROWNING:

And, Bob, I know you mentioned about the Historical Society now considering taking it over or --

MR. KESSLER:

Well, we would be --

LEG. BROWNING:

-- it doesn't have a designated status at this time.

MR. KESSLER:

Yeah, we would be glad to maintain it, you know, along with the inmates program. We do use the inmates a lot in Yaphank. We're renovating a lot of buildings. We've been doing -- and we've been using them for quite a few years already. So we would work very closely with them, and they would help us to maintain it. I mean, we have no problem maintaining it. We just think it should be maintained and just left as is, and not -- and not opened up again, because once you open it up, I think you're opening it up to a lot and it's just never going to be the same again.

LEG. BROWNING:

Thank you, Bob.

CHAIRMAN SPENCER:

Legislator Krupski.

LEG. KRUPSKI:

Thank you.

MR. KESSLER:

Thank you.

LEG. KRUPSKI:

That is a nice -- I've got a question for you, sir. That is a nice historical graveyard, I am familiar with it. And so do you know -- and I know there's a proposal to bury additional people there. Do you know where -- you said it's been closed for a number of years to burials. Do you know where the people from the County have been buried in that intervening time since then?

MR. KESSLER:

I don't know. It's been closed since 1953, was the last burial there. So we don't know -- I don't know where any other, you know, people were buried since then, I have no idea.

LEG. KRUPSKI:

Okay.

MR. KESSLER:

I know there are other County cemeteries, but I don't know where they are or what they are.

I've spoken to Richard Martin, who's the Director of Historical Services. He said there are a couple of other cemeteries. I think -- actually, I spoke to Sarah Anker last night, who was putting the resolution putting the resolution forward, and she pulled it, she pulled the resolution today, I know. But she said there was one out in Amityville, in Amityville somewhere, so I don't know where it is. And Richard Martin had said there was one out in Manorville also that was -- there was an old church

out there that was taken over by the County recently, so there was one there also, but I really don't know where the bodies would be buried.

LEG. KRUPSKI:

Thank you.

CHAIRMAN SPENCER:

You'll be pleased to know that it's in the Health Committee. I just conferred with Counsel. It's likely that it will be reassigned to a different committee. But I think that the action of this committee today will be to table this action, so you'll have some time.

MR. KESSLER:

Thank you very much.

CHAIRMAN SPENCER:

You're welcome.

MR. KESSLER:

Thank you.

CHAIRMAN SPENCER:

Thank you.

MR. KESSLER:

Sorry for the delay.

CHAIRMAN SPENCER:

That's all the cards that I have. Is there anyone else that wishes to be heard in the Public Portion? Seeing none, we'll close the public comment.

We're just going to move on to our agenda before we begin our hearing. And we have with us Monique Gablenz, who introduced herself to me, and she is up for an appointment.

So I'm going to ask for a motion to take *I.R. 1376, to appoint member to the Food Policy Council of Suffolk County Monique Gablenz*, out of order, and seconded by Legislator Trotta. All those in favor? Opposed? Abstentions? We have it before us.

Monique, would you mind coming up? And thank you so much for taking the time to be here out of your busy day. Have a seat at the table.

MS. GABLENZ:

Okay.

CHAIRMAN SPENCER:

And I'm going to make a motion to approve, seconded by Legislator Martinez. And on the motion, Monique, we have your resume. We thank you for coming out. We always appreciate your willingness to get involved and help us here, you know, in Suffolk County. And if you wouldn't mind, just take 30 seconds to tell us kind of where you're from, and maybe a couple of highlights about your background.

MS. GABLENZ:

Sure. For the past ten years, I have served as the Director of Stony Brook University's Calverton Incubator, which about two-and-a-half years ago completed an expansion to that facility, which

includes a small-scale shared-use food processing space. Since the inception of that facility, we now have more than 50 companies who have received their license from New York State Agriculture and Markets to do small-scale food manufacturing at the facility. So I hope that my experience with those folks, understanding the opportunities that they have, helping to create opportunities for them, and they -- but also understanding the challenges that they encounter in food processing could add something to the discussion of the Food Policy Council and assist the Legislature in its good work.

CHAIRMAN SPENCER:

Thank you. And we've had a -- we've been re-upping that committee with a lot of fine candidates. And I've been asking one question that I would like to hear, if you could give me a couple of thoughts about, and that is recently, I think we've seen the special on MSNBC talking about the fact that 40% of the food in this country is wasted either through the fact that it's not the appropriate size and shape, or through the harvesting process, or for whatever reason it might be called, but, yet, we know that even in this country and around the world, there's a significant hunger crisis, and food pantries are struggling to keep their doors open. What can we do? We're wasting almost half our food, and, yet, hunger is a major issue in this world. Are there things that we can do to address this issue? Have you thought about this particular question before?

MS. GABLENZ:

Well, I think that having some local relationship with the producers, and certainly using local product in the making of packaged food products is -- could prove extremely valuable. I also believe that adjusting procurement policies at all levels of government would be beneficial if there could be some preference given to local producers. Then we know that there are markets secured for that local production, and would give the agricultural producers in the area a little more confidence that their product is going to be purchased once they have produced it and made the huge investment of their labor and their capital in producing it.

CHAIRMAN SPENCER:

It's a huge issue that we should all take note of, especially when you look at just the predictions in terms of our global food supply over the next 50 years. And I hope that the Council will take up these issues, as well as the other Suffolk County issues. So any other questions? If not, we have a motion. Oh, Legislator Krupski.

LEG. KRUPSKI:

Thank you, Mr. Chairman. Thank you for indulging me, although I'm not a member of this committee. I would just like to speak highly of Monique. I know her from the -- running the Calverton Incubator, and it is really a well-run facility. I know a lot of people have taken advantage of the services there and it's been a real asset.

CHAIRMAN SPENCER:

Excellent.

LEG. KRUPSKI:

So she comes highly recommended.

MS. GABLENZ:

Thank you.

CHAIRMAN SPENCER:

Thank you for your words, Legislator Krupski. We have a motion and a second on the floor. We'll take the vote at this time. All those in favor? Opposed? Abstentions? **(Vote: Approved 6-0-0-0)**

Congratulations, Monique, you've been approved by this committee. You do have to go before the full Legislature, which meets Tuesday evening in Riverhead. You do not have to appear again, but your appointment becomes final once approved by the full Legislature. Thank you again for your time. Have a nice evening.

MS. GABLENZ:

Great. Thank you so much.

TABLED RESOLUTIONS

CHAIRMAN SPENCER:

Take care. With that, we have ***I.R. 1151 - A Local Law to ban the sale of personal care products containing microbeads in Suffolk County (Hahn)***. The sponsor has asked that we table this one more cycle, so I'll make a motion to table, seconded by Legislator Calarco. All those in favor? Opposed? Abstentions?

We just covered ***I.R. 1376***.

I.R. 1435 - Requesting legislative approval of a contract with Hudson River Healthcare, Inc. (HRHCare) for the operation of the Riverhead Health Center (Co. Exec.). I'll make a motion to table, seconded by Legislator Kennedy. All those in favor? Opposed? Abstentions? Motion is tabled. ***(Vote: Tabled 6-0-0-0)***.

INTRODUCTORY RESOLUTIONS

Introductory Resolutions: ***I.R. 1446 - Authorizing a limited reopening of the Suffolk County Cemetery in Yaphank (Anker)***. I'll make a motion to table.

LEG. CALARCO:

Second.

CHAIRMAN SPENCER:

Seconded by --

LEG. BROWNING:

I make a motion to table subject to call.

CHAIRMAN SPENCER:

We have a motion to -- we have a motion to table, and a motion to table subject to call, so which motion goes first?

MR. NOLAN:

Subject to call.

CHAIRMAN SPENCER:

Subject to call takes priority. So on the motion, Legislator Browning?

LEG. BROWNING:

No, not much more to say, other than this does pertain to my district and I was not informed about it. So I will tell you that I don't think it's appropriate to even have it considered at any point in time. I think table it subject to call so it will never come back up again.

CHAIRMAN SPENCER:

Legislator Browning, I think that you should have definitely the biggest say-so, you should have been informed. I don't support this. But as far as the subject to call, I need a -- is there a second on the subject to call, by the way?

LEG. KENNEDY:

(Raised hand).

CHAIRMAN SPENCER:

All right. Legislator Kennedy gives a second. I think that there is also -- Counsel was talking about reassigning the bill. But any other thoughts or considerations on the subject to call? Legislator Kennedy. It should be in Public Safety. It should be in your committee.

LEG. BROWNING:

But why would we reassign it?

MR. NOLAN:

Because it's in the wrong committee. If the committee tabled it, then we would definitely reassign it, because it's a difficult bill to slot to a committee. But I think the right committee is Public Safety, because the Medical Examiner's Office is involved. So I would suggest tabling it, let us reassign it, and let that committee deal with it or --

LEG. BROWNING:

Well, again, it's looming out there. Table subject to call. And, you know, with the Public Safety Committee, clearly, I'm not going to support it there either. So I don't -- I really just think it's just a technicality, and if we really want to do it, just kill it now.

CHAIRMAN SPENCER:

Any other discussion on the motion? Legislator Kennedy.

LEG. KENNEDY:

I know this cemetery well. It is a historic representation of our better -- a better part of our past where we took care of our people that had nothing in a better way. My feeling is it should remain as a historic cemetery. We do have other places to bury these people. So I agree with Kate, that it should be subject to call.

CHAIRMAN SPENCER:

No other discussion. So we have a motion to table and a motion to table subject to call.

MR. RICHBERG:

Can I just get a clarification on the motion to table? Who was the second?

CHAIRMAN SPENCER:

I was. Yeah, I was the motion to table. So subject to call motion takes precedence. All those in favor? Opposed?

LEG. CALARCO:

Opposed to subject to call.

CHAIRMAN SPENCER:

Abstentions? Motion is --

MR. NOLAN:

Who voted for it?

CHAIRMAN SPENCER:

They have the majority between --

LEG. BROWNING:

Motion subject to call?

CHAIRMAN SPENCER:

Four.

LEG. BROWNING:

Four subject to call.

MR. RICHBERG:

One, two, three, four. Martinez is four.

CHAIRMAN SPENCER:

Four and two. So it's four-two. All right. The motion is tabled subject to call. ***(Vote: Tabled Subject to Call 4-2-0-0/Opposed: Legislator Calarco and Chairman Spencer)***

And then the last resolution is ***I.R. 1450 - Developing a Wellness Program for County Employees (Lindsay)***. I'll make a motion to approve. Motion -- second the motion to approve?

LEG. KENNEDY:

Motion to table.

CHAIRMAN SPENCER:

And a motion to table. I need a second on the motion to approve. Legislator Calarco.

LEG. TROTTA:

(Raised hand).

CHAIRMAN SPENCER:

And motion to table is seconded by Legislator Trotta. All right.

So on the motion. So I've spoken with the sponsor, been working with him on this, and I know I had spoken with Legislator Kennedy earlier that, again, having members, representatives of this committee that would explore a wellness program. So when I mentioned some concerns as far as the representatives from the fitness industry, and the agriculture and nutrition industry, it doesn't lay out what their qualifications would be. The sponsor had indicated that in previous history, and he's correct, that when we've looked at these, it does say "Appointed by the Legislature and the County Executive", and we do -- we do have to approve these -- these folks. So we wouldn't take someone that didn't have the qualification of a nutritionist or a fitness person.

And then the other concern was that having someone on Economic Development seems that there may be an issue that this is a finance-driven issue. But the sponsor had asked me to share in his behalf, and I'll share this, and then I'll recognize you, Legislator Kennedy, is that when we look at it in terms of health care cost, our choices are to either raise premiums or to raise copayments. And the one thing that has been shown to lower, especially when we're self-insured, lower health care costs have been wellness programs. And the sponsor, you know, definitely addressed the concerns that this be voluntary, that there's no -- nothing about it to be compelling. But there are numerous studies, and the sponsor, being a member of the insurance industry, has the data that shows that this can save us money, indicating that this committee will look for a way to develop the appropriate

wellness program for Suffolk County, and there are many models that are out there.

But I did do some checking in. A lot of times when we do have representatives from a particular industry within the Legislature or the County Executive, we do choose individuals that are licensed or that are qualified. So the sponsor has asked that this committee would kindly consider approving this. And I, you know, support the sponsor in this effort, and so that's why I made the motion to approve. Legislator Kennedy.

LEG. KENNEDY:

We had discussed this. My questions are the idea of this is excellent, but I think wording has to be changed. The only medical personnel that's listed would be Dr. Tomarken or a representative. There's nothing that says that he has to choose another physician, a nurse practitioner, someone with a medical background. And nutritional industry, I would like that to be changed to certified nutritionist. And I'd like something to say that it's not mandated just in the writing.

It's a great idea. I read this initially hopeful. And when I saw that there was no backing for health and wellness, other than one individual who may not attend all the meetings, and I know what the nutritional industry could be, I just think we really need a change on that. And legally, I think we need to put it in there that the screenings are not mandated, just to cover ourselves down the road. That's all I'm asking.

CHAIRMAN SPENCER:

All right. Thank you. Legislator Trotta.

LEG. TROTТА:

Is this something the County Executive can just -- with a wellness program, I mean, I just went online, there's 400,000 wellness programs. I mean, I'm sure they could pick it up. It's a brochure, you hand it out to the employees. Do we need a committee? I mean, this has been done a thousand times already.

CHAIRMAN SPENCER:

It's been done a thousand times, and there are 400,000. And we've looked at this, and I have worked with him, and the reason is that there are a lot of -- out of these 400,000, there are a lot that are just instituted as boiler plate or that are just mandated that are ineffective. And, really, the effective wellness programs in large industries are ones that we have looked at our employees, and we have something that we study and tailor-made, and not just come up with just a boiler plate wellness program. So that's the sponsor's intent that was shared with me.

And so I do -- you know, I kind of see that, that we would have something that would fit Suffolk County, that would be appropriate for the people that are working here and some of the health challenges that we face. And so to have something that's more accurate, to have this committee that doesn't cost us anything, that we could work on something that, instead of one size fits all, something that's tailor-made I think is reasonable.

So we have two -- I don't see any other -- we have two motions, one is a motion to table, and another one is a motion to approve. So the tabling motion takes precedent. All those in favor? Opposed?

LEG. MARTINEZ:

(Raised hand).

CHAIRMAN SPENCER:

(Raised hand).

CHAIRPERSON BROWNING:

(Raised hand).

LEG. CALARCO:

(Raised hand).

MR. NOLAN:

Who's in favor of tabling?

CHAIRMAN SPENCER:

Who's in -- and abstentions? So who's in favor of tabling?

LEG. KENNEDY:

(Raised hand).

LEG. TROTТА:

(Raised hand).

CHAIRMAN SPENCER:

Legislator Kennedy and Trotta. And those that are against it are Martinez, Spencer and Browning. So the tabling motion fails. But -- and, again, I agree with Legislator Kennedy's remarks, but the sponsor is willing specifically to work -- I know you've reached out, and I did express that, and even between now and then, and is committed to modifying this resolution, but has asked that we get it to the floor, and we'll address those concerns, and which is one of the reasons why I didn't support a tabling, although I agree with you.

So we have a motion to approve. All those in favor? Opposed? So are you opposing or tabling?

LEG. BROWNING:

No.

CHAIRMAN SPENCER:

All right. So opposing -- opposing, we have Legislators Kennedy and Trotta.

LEG. TROTТА:

I'm not opposed.

LEG. KENNEDY:

No.

CHAIRMAN SPENCER:

Oh, you're going to rescind it. Oh. You raised your hand.

LEG. TROTТА:

I was approving it.

CHAIRMAN SPENCER:

Oh, okay. All those in favor? All right.

LEG. BROWNING:

We're all in favor.

CHAIRMAN SPENCER:

It's approved unanimously. *(Vote: Approved 6-0-0-0).*

Okay. Thank you. Thank you very much, we appreciate it. So we'll be working on a wellness program.

That's all I have on my agenda. So I'm very excited today that we are going to bring in experts from the field throughout Suffolk County to come together to discuss a very important issue, and I'm just going to briefly frame the issue.

We've brought together a panel today, and the panel that we have is Walter Dawydiak, who's our Director of Division of Environmental Quality. Walter, if you wouldn't mind coming forward. Give him a big hand.

(Applause)

We also have Alison Branco, Director of Peconic Bay Estuary Program. Alison, would you please join us? We have Dr. Christopher Gobler, who is a Biologist at Stony Brook University. And no stranger to any of us, we have Adrienne Esposito, Executive Director for Citizens Campaign for the Environment.

So, first of all, I wanted to express my thanks for the panel being here, and we've invited -- we do have some members of the media who are here. We thank you for joining us. But we've had some issues that we've seen in Newsday and in the news and national news, and that is recently, we saw tens of thousands of dead bunker fish that washed up on shore in Flanders Bay in the Peconic Estuary, and really postulated from all levels, oxygen levels in the water. And it was discussed that the fish were chased into shallow waters by predators.

There's been a turtle die-off in May, also in Flanders Bay, that was unprecedented, that we saw about a hundred diamond back turtles that died, and it prompted State officials to have a temporary ban of harvesting shellfish and flesh-eating gastropods in portions of the East End. And yesterday, there were reports of brown tide algae bloom causing brown tide in the Great South Bay, and put clams especially at risk as a result of this. And today, we see a warning from the Department of Health with regards to cyanobacteria in Lake Mattituck, more commonly known as blue-green algae, producing floating scum on the surface of the water.

So, as we confront these multiple issues, health issues in our waterway, I really felt it was necessary that we put together a panel of experts to focus on these threats and look for strategies to ensure that we have -- that we are doing all that we can. So we've got many challenges that we -- that we're facing with high nitrogen levels in our waterways due to a large part septic cesspools, fertilizers. And we've identified new technologies, that we have a trial system of new septic technologies that we've put in place. The County Executive has made water quality a priority here in Suffolk County. But over the past few years, we've seen progressive threats, red tide, the Northport Harbor has been a major issue. But we've made progress with Commissions, such as the Long Island Commission for Aquifer Protection. And, you know, are we doing all that we can? And these are -- these are the questions.

So what I'll do, we're going to have each of the panelists just introduce themselves and give an opening statement. But for the panel, I'm going to be extremely provocative today and I'm going to start out with something a little controversial, a letter in Newsday today an editorial that said, "The editorial 'Dead fish tell us: This is a crisis' needs to have better scientific advice and analysis. This years weather cycle and natural normal ecological interplay, along with coastlines, should not "Chicken Little" us into panic mode. These fish kills, especially those -- the recent death of

thousands of bay fish in the Peconic Estuary, were not directly related to nitrogen in the water. The fish kill catastrophe can be directly related to natural and normal seasonal interactions in the shallow bays of Long Island that occur each year in the transmission from spring to summer."

I'll stop there. And that is to say that, you know, part of the issue, if you look at this auditorium, and we're discussing this important issue, you know, there are those in the public that may actually say, "Aah, look at those guys, you know, there's nothing really going on here." So I put that out there for -- to stimulate some discussion. And I ask that each of our panelists would give an opening statement, and I'll start with Walter Dawydiak.

MR. DAWYDIAK:

Thank you, Dr. Spencer and Members of the Committee. Walter Dawydiak. I appreciate the opportunity to be here. If okay with you, I was just going to give about two-minutes summarizing the underlying factual premise of some of the issues that have been discussed and try and clarify what our role is at the Health Department, as well as other entities and institutions, just so we have a common basis of understanding.

This bunker fish kill began around May 27th. The estimates are now not in the tens of thousands, but approaching or exceeding 100,000. This is a fish kill such as one that none of us have seen in recent memory. It's true, that fish kills do happen occasionally. This one is bigger and worse, and it happens to be in the most nutrient-stressed portion of our estuary at a time where dissolved oxygen was clearly documented as being hypoxic.

So, yes, fish kills can happen in natural situations. This one is anomalous in terms of the intensity and duration of it. It's clear that hypoxic conditions, which are related to eutrophication, we have a longstanding body of information decades old showing that excess nitrogen causes low dissolved oxygen and stresses ecosystems. So it increases a risk of fish kills, as well as the intensity and the duration of fish kills.

I just wanted to mention that the State DEC is really the agency with primary jurisdiction on fish kills. I don't think there's anyone from DEC here today, but I would clearly defer to them for any definitive official statements on nature and extent and causes. But I think everyone agrees that it's low dissolved oxygen in a eutrophic area of the estuary that resulted in this, as documented clearly by USGS Son measurement data, and Drs. Branco and Gobler I'm sure can speak more definitively to this issue.

The turtle kill began May 13th. And, again, this one is really unusual. We had closures due to Alexandrium or paralytic shellfish poisoning, which began in May 6th at Meeting House and Terry's Creek. James Creek was closed May 14th. This turtle kill began circa May 13th, where approximately 100 or more diamond back terrapin turtles were dead. And as per DEC, both testing and circumstantial evidence clearly point to paralytic shellfish poison saxitoxin, not a normal cause of mortality for marine biota. And, again, Dr. Gobler can speak more to the linkages between excess nutrients and the prevalence of this particular harmful algal bloom.

So we in the Health Department have responsibility for bathing beaches. We got right out to South Jamesport, the only bathing beach in the area. Bacteriological samples were clean. No signs of dead fish, and there was clear water there. That beach was not closed. The sanitation element befell the Town. DEC's responsible for marine water quality, shellfish bed sanitation and harmful algal blooms generally. And, of course, we have Stony Brook here at the table that does our sampling for Alexandrium and a bunch of other parameters in our analysis. And Dr. Gobler has been a nationally prominent leader in harmful algal bloom research.

So we in the Health Department have served for decades in a support role. We have a robust

marine monitoring program. The shining star of this is the Peconic Estuary Program, now led by Dr. Branco. We coordinate our efforts with the State and with Stony Brook. So we did take a number of samples, initially intensively, in the Peconic River and Meeting House Creek and in Reeves Bay. We looked at a fuel sweep of parameters, not just bacteriological, inorganic, like nitrogen and phosphorous, volatile organic compounds, semi-volatiles, pesticides and radionuclides. These were example -- these were analyzed by our Public Environmental Health Laboratory. All results have been good so far. Full results will be available in two to four weeks.

We're doing this not out of alarm for anything unusual, given the magnitude and severity of this. We just wanted to rule out other potential sources to the extent that we can measure for these things. We don't really expect to find another causal factor, but we do want to rule it out, because we have that capability.

So the conclusion, again, is that the paralytic shellfish poisoning saxitoxins likely played a role in the turtle kill of the low dissolved oxygen due primarily to excess nutrient inputs caused and/or aggravated the fish kill in the Peconic River.

What actions are we taking? The Riverhead STP in that part of the Peconic River is clearly the biggest point source. It's a relatively small sewage treatment plant. It's functioning just beautifully. It's putting out about ten parts per million over the summer. It's in the process of being upgraded. It's going to go to limited technology to three part per million. That load reduction is being reduced from 170 to under 40 pounds per day. I mean, by way of perspective, that's just a few households worth of nitrogen being put out by an entire sewage treatment plant. It's just a phenomenal facility. And it historically has been a big nitrogen input into that part of the river, and that's been cleaned up. Groundwater and septics are still the problem. That's a legacy that we haven't come to terms with as a culture. About 74% of our population, or 1.1 million people, are unsewered. We're on a sole source aquifer, sandy and impermeable. Nothing happens to the nitrogen after it leaves the septic tank and goes to groundwater and surface waters. And our standards for public health and drinking water are not nearly stringent enough to protect the surface waters, and that's really at the heart of the problem.

So Suffolk County has embraced this. There's been more change in septic policy and direction this past year than in the prior 40 years, which is when the last time the residential standards were changed. There's a "Reclaim Our Waters" initiative, looking to remove 10,000 residences from septics onto sewers along the South Shore. This is going to be 25% of the nitrogen loading in four of the most sensitive watersheds, and 13% Great South Bay overall. This is going to be a huge step in helping to prevent and minimize brown tides and other harmful algal blooms in the South Shore.

In central and eastern Suffolk, where sewerage may not be feasible, we have a Septic Demonstration Program underway. Nineteen systems are being installed as we speak. These systems are going to remove nitrogen from individual residential households as part of an overall sub-watershed nitrogen reduction plan, which is under development. This is going to target nitrogen reductions to key areas in a tiered basis to start tackling this very, very big and longstanding problem.

Again, we've done a great job with the sewage treatment plants. About 70% of the load countywide is still from septics. It's a little lower in the Peconics, but it's still the single biggest external source of nitrogen loading.

And I just wanted to take a quick moment to mention the Harmful Algal Bloom Action Plan. This is something that the County Executive and Legislature funded. There was an acknowledgment of the fact that HABs have changed in the past decade. So we had this 30-year period of no HABs, as documented by Dr. Gobler, with this fantastic fishery and healthy ecosystem. And now we have not

one, not two, not five, but we're up to a half dozen different HABs, and they seem to be increasing in intensity, severity and impact.

We need to synthesize this research, and, more importantly, target the management areas that need it most that are going to help with the HABs, as well as the conventional dissolved oxygen, coastal resiliency, wetlands and eelgrass issues, all of which are so closely tied together. It's going to be a blueprint not only for research, but also for management and monitoring, as well as a public health response. You had mention, Dr. Spencer, cyanobacteria. This is occurring. We're again under contract with Dr. Gobler to measure our samples for us. It's now in several locations regularly. One dog died in Suffolk County, several Upstate. It's a human health risk that we're watching very, very closely. We want to make sure that we're measuring, monitoring and reacting from a public health perspective in as optimal a way as possible.

I think that was longer than two minutes, but I thank you for bearing with me, and I'm happy to answer any questions.

CHAIRMAN SPENCER:

Walter, it was longer than two minutes, but it didn't feel that way, because you really gave us so much important information, and you're always on top of these things, and I thank you for that. And, you know, one of the follow-ups that I'll do, after we hear from our panelists, is that it seems like we have a plan. And, you know, is it too little too late? And I'll ask that to all the panelists, and if there's more that we should be doing. But it does appear that the Administration and the Department of Health has really done a fantastic job recently in starting to really address these issues. And like you said, you gave a large number of nitrogen, but it's the equivalent to a few homes. But I'll move on.

I did want to say that I appreciate Legislator Krupski for whispering in my ear. And since we are on the record, the cyanobacteria, it was found in Mattituck, but it is Lake Maratooka. And I think I said it was Lake Mattituck, so I will correct that on the record.

And with that, I'll ask for an introduction from our second panelist, and that's Alison Branco, Director of Peconic Estuary Program. Alison, welcome, and thank you for being here and participating in this panel.

DR. BRANCO:

Good afternoon. Thanks for having me. So I just want to give sort of a brief explanation of what we believe happened, why there was a fish kill. I will say that it's true, fish kills do happen when there is not a hypoxia problem or an algae bloom going on, but that's not what happened here. Unfortunately, it's not possible to say the cause was this and not that. It really is a combination of factors.

So, for several weeks leading up to this fish kill, we've been seeing oxygen getting very low at night, which is a common thing to happen in the spring when there are algae blooms, algae photosynthesized during the day, which keeps oxygen high in the water column. At night, there is no photosynthesis, because there's no sun, so only respiration takes over, which draws the oxygen down. And that's typically worse in the bottom water, but throughout the water column, especially in the Peconic, which is pretty well mixed.

So we have, every year really, have had a hypoxia problem, so that's a condition of low oxygen, or in some cases even no oxygen. In the week or two leading up to this fish kill, oxygen was getting all the way to zero at nights. And then we were sort of bombarded by these menhaden, or bunker, as we like to call them. So just a bit brief little piece of good news. It's great news that there are so many bunker in the Peconic Estuary. All of the estuaries on Long Island were once full of them,

and have not been as full of them recently. So we should be a little bit happy that they're all coming into the estuary again. They are filter feeders and actually help with a lot of our problems as it is. But, unfortunately, not all of them made it. Not all of them died. There are lots of healthy ones schooling around in the estuary as well, but they get chased sort of up into the estuary by predators, and they enter this sort of shallow water, where they're a bit more confined and don't want to turn around for fear of being eaten by a bluefish.

And so what happens is the fish themselves can draw down the oxygen, and it does occasionally happen that a fish kill could occur in a well oxygenated system. You could have enough fish with a high enough density to draw the oxygen down very low in and of themselves. But simple arithmetic will tell you that if the oxygen starts out at two and not eight, it takes a lot fewer fish and a lot less time to draw that oxygen down to a dangerous level.

So it really is a combination of factors that causes this. We do believe it's an oxygen problem that's caused this fish kill. And we certainly think that the harmful algal blooms occurring in the estuary that recur every year and the hypoxia that they cause was certainly a contributing factor, although not the only one. The fish themselves did sort of help bring that oxygen down to zero.

CHAIRMAN SPENCER:

Thank you. That was really very important that I saw the graph that you released in your statement that highlights that. And a followup to that, after we finish our introductions, you know, are there things that we can do to increase the oxygenation to compete with the algae? And, you know, I see you have your hand on the button, so if you wanted to give a response to that briefly, that would be fine.

DR. BRANCO:

Sure, just real quickly. Sometimes people do ask about aeration and things like that. I think engineering solutions are practical on a very small spacial scale. So in the storm water retention in ponds, something like that, those kinds of solutions can help. But the geographic scale of the issue in the Peconic, and really all of our estuaries, is just way too tremendous to do anything mechanical to help this problem. Really, the best thing that we can do is address the main source of the problem to begin with, which is our nitrogen. And I don't think it's too little too late. I think it's a little late, but it's not too late. And I think, you know, there's still a lot to be done, but that's really -- rather than focusing on today's fish kill, you know, we can't go out and yell at the fish to turn around, we just need to focus on making the conditions as good as possible to help prevent these things in the future.

CHAIRMAN SPENCER:

A couple of fountains won't do it.

(Laughter)

DR. BRANCO:

No, not in this case. There are not enough fountains in Suffolk County.

CHAIRMAN SPENCER:

Thank you. Dr. Gobler, thank you. And just again, Dr. Gobler is our Biologist at Stony Brook University. Thank you very much.

DR. GOBLER:

Thank you. Pleasure to be here. And I'll just start out by saying that I think in Suffolk County here, we're very fortunate to have people like the ones sitting next to me at the table, and a program like the Health Department, and a program like the Peconic Estuary Program. We can

answer a lot of questions that we couldn't do otherwise because of the data that they've generated. For example, the water quality probe that is present in the Peconic River really helped us all put the pieces of the puzzle together to really understand that this fish kill was, in fact, due to an oxy, a zero oxygen persisting for hours at a time. And, also, it's great to have partnerships with Suffolk County. Walt mentioned the collaborative effort we've had together in looking at harmful algal blooms. And, in fact, some of the answers to the fish kill came because the County was out collecting samples that then my lab was able to look at before the kill actually happened, which gave us information we wouldn't have otherwise.

Just a few points. I guess I'll give one overarching point for all these issues. All of this boils down to essentially three factors. You had mentioned, Legislator Spencer, in your intro that there are four issues going on all simultaneously right now, or just about. The commonality in all four of those water bodies is that they're shallow, they're not mixing very well, and they receive high levels of nutrients. We can't do anything about in most cases the shallowness of water bodies or their mixing patterns, although sometimes things like hurricanes can help us with that, so we're left with addressing the nutrient issues. And very briefly, I'll just go through those four incidences and the relationship to nutrients.

The major part of that fish kill occurred on May 29th and 30th and the days thereafter. I note that in the days just before that, there was a large spike in nitrate that occurred in the Peconic River. And then following that, there was the great intensification of an algal bloom, and you could see the direct pattern over time, over a very short number of days, that the more intense the algal bloom got, the lower the oxygen levels were at night. And at the peak of the algal at night, again, the water anoxic for six to eight hours at a time. And I saw a video and saw it myself, fish literally swimming out of the river up a boat ramp trying to get more oxygen. So, in that particular case, the spike in nitrate was a clear indication of nitrogen fueling the intensification of the algal bloom leading to the low oxygen.

In the case of the turtles, Walter indicated the saxitoxin was the -- identified as the cause by the New York State DEC. Saxitoxin is made by Alexandrium. That part of the Peconic Estuary is vulnerable to Alexandrium blooms, also known as red tide. And research that we've done on Long Island has shown previously that more nitrogen gives you more Alexandrium cells, and also makes them more toxic. The toxin that they make, saxitoxin, contains nitrogen itself. So when the cells have enough nitrogen, they're going to divert that nitrogen into making plenty of toxin. And, conversely, if you starved it of nitrogen, they'll be less toxic, so a direct link there as well.

And then with regards to the cyanobacteria blooms, we know that those are promoted by nitrogen. And with regards to brown tide, I had mentioned to a few people, we've actually had brown tide now for 30 years on Long Island, but we've actually had it for only -- we only had it for only ten years in the Peconic Estuary. If you compare the Peconic Estuary to the South Shore, where it's persistent, and it continued to happen today, that levels, total levels of nitrogen are lower in the Peconics. And there's also lower, what we call, organic nitrogen in the Peconic Estuary. And so with the upshot being on the South Shore bays, which are much shallower in the Peconics, and, therefore, much more vulnerable to land-derived nitrogen loading. The levels of total nitrogen in the bays are higher, levels of organic nitrogen are higher, and that's been in the areas that are poorly flushed, such as now the center of Great South Bay, and also what we call Eastern Moriches Bay and Quantuck Bay, Western Shinnecock Bay. Those poorly flushed regions are getting high levels of nitrogen, and together, that's combining to lead to brown tide.

So there are links to nitrogen in all these different events that you're talking about. And it's actually exciting to see the initiatives the County has undertaken in the last two years to address these issues. In fact, I sometimes can't believe how far -- how many things have come up that the County Executive has brought to the table to address this issue in the last 18 months, be it the trial

septic systems that are being installed, or collaborative initiatives here at Stony Brook University. We're starting the Clean Water Technology Center in collaboration with the County to try to come up with new technologies to improve nitrogen loading.

Well, I was probably more than two minutes as well, but I'll leave it there.

CHAIRMAN SPENCER:

Thank you, Dr. Gobler. You and Dr. Branco really gave a very nice perspective in terms of understanding the physiology or how this is occurring.

One of the things that immediately came to mind, we're looking at in terms of producing nitrogen levels, but one of the things we always see is that because there's poor flushing, I'm wondering what are your thoughts about a very aggressive dredge in those bodies of water, at least in the openings to increase? Is that something that we could do that could be more focal and more immediate that could help with those, at least if the nitrogen is there and the algal blooms are there? If there was more circulation in those bodies of water, would that be something that could have a more immediate effect?

DR. GOBLER:

I think in some regions, like maybe a small creek or tributary that might be cut off, opening up, say, the entranceway to that tributary would help. But on the large scale, the evidence so far has suggested that, for example, dredging the ocean inlets doesn't have an enormous impact on the overall flushing patterns. We did see that the new inlet that was formed by Hurricane Sandy in Great South Bay has a -- is having a very positive effect on that region of the bay, but the -- that's an inlet that's 1,000 feet wide and 10 feet deep. And even with that, it's having a limited effect. So, in most cases, the dredging can help, but it doesn't move the needle as much as we would like.

CHAIRMAN SPENCER:

Thank you, Dr. Gobler. Last, but certainly not least, and very familiar to all of us here in the Legislature, and someone that has advised us and we're very close to, Adrienne Esposito, Executive Director of Citizens Campaign for the Environment. Welcome, Adrienne.

MS. ESPOSITO:

Thank you. Thank you, and thank you for having us today. My job is a little bit different than my colleagues. They provide the science, they provide the test results, and our job is to take good science and put in good common sense and yield good policy, and that's what I want to talk about.

To me, having been engaged and involved with Dr. Gobler, and Walt, and others, and Carl Lobue, and all the other scientists who have worked across Long Island, the picture is clear. It's septic waste seeping into embayments, causing low oxygen, causing harmful algal blooms, causing deterioration of our water bodies. The question to me is where are we going to go from here? What are we going to do about it?

So I want to present very quickly two things you need to know, and you may know some of this. But in this year's budget, the State put in \$5 million for Suffolk County -- not for Suffolk County, but to solve this Long Island clean water issue; 1.8 million of that funding goes to the Long Island Regional Planning Board; 3.2 million goes to the New York State DEC. But they're supposed to work collaboratively on crafting a plan to protect drinking and coastal water supplies for Long Island. The budget was passed in April. We're still waiting for the outline for the crafting of the -- how they're going to make this plan.

We've suggested to them, as I want to suggest to you today, that one very important way to do this is to update the 208 Study. The 208 Study was passed in 1978. It was a study that many other areas throughout the country also implemented. It told us that we have a sole source aquifer, what

are our hydrological zones. It identified drinking water quality, storm water issues, embayment water quality issues, everything that we need to do today. And, in fact, if many of the recommendations from that original study were implemented, we may be in a little better shape today.

Cape Cod just did this, so this isn't pie in the sky, just so you know. Cape Cod just updated their 208 Study. It cost them \$5.2 million. They have 13 towns, 996 ponds, they have 53 different embayments, 37 different shared embayments, and they had a large process in front of them, but they got a directive: Fix the problem. They were -- in the world of misery loves company, you might love this. They were having the same problems we are: Closed shellfish beds, diminished water quality, toxic tides. And so for them, 78% of the nitrogen loading into their embayments was coming from septic. They have an aquifer. This may seem all familiar to you. So they looked for solutions. They upgraded their 208 study. They did it watershed by watershed, and they'll be issuing permits for development based other their nitrogen input into that watershed. I don't see how we're going to get around doing that. It's going to be tough, you're not going to like it, it's going to be an unpleasant process. But if we don't do that, this will -- our waters will continue to degrade.

You know, I just read a 1981 New York Times story that could have been written today, and it said if we don't follow the recommendations of the 208 Study, we will have fish kills, closed shellfish beds, closed beaches and diminished drinking water quality. That was in 1981. So I'm saying to you, we have \$5 million, not we need, we have it for a planning process.

You said earlier, Legislator Spencer, that you're glad to see we have a plan, but we need a holistic plan, not just for harmful algal blooms, but for drinking water protection and surface water protection, because the two are married. Well, even more secure, they're Siamese twins, okay? They're not breaking up, they're linked intrinsically.

The second thing that I wanted to raise with you is that, you know, the good news is we know how to treat sewage. This isn't rocket science, as they say, but we need money. We do have a little money in the County, and some of you may know this, but you may not know it. But last year, in New York State's budget, in addition -- last year, actually, for the first time, New York State added a line item to the Environmental Protection Fund of \$3 million. Two million went to Stony Brook, one million to Suffolk County, to you, for decentralized wastewater infrastructure implementation. We still have that money. This year, that line item was funded again, an additional two million to Stony Brook, another one million to Suffolk County. That's two million.

Also, you may or you may not be aware that several years ago there was an amendment added for the Sewer Stabilization Fund that said no less than, no less than \$2 million per year should be used for decentralized wastewater infrastructure. I know, because myself and Kevin McDonald from the Nature Conservancy got that line added in there. The money was never spent. Let's do the math. Three years at \$2 million per year, so that's \$6 million, one million this year in the State budget, another million last year in the State budget. We have \$8 million to start switching out the old failing cesspools and septic and putting in new wastewater treatment technology.

I know we're waiting to see how our pilot programs go, that's great news. And there is an application process already crafted, it's a great one, on how we allocate that fund. But I want you to know that there is some basis for selecting. We want you to participate in using biological science as the driving force and not political science as the driving force in allocating those funds.

So my bottom line is we need a holistic plan. We have State funds to do that. Some of us worked very hard to obtain them. We need your engagement and involvement to make sure those funds are spent on a really effective overall Clean Water Action Plan. And we also have funding in the

County to start implementing the change-over from antiquated cesspools to the newer wastewater treatment technology. Thank you.

CHAIRMAN SPENCER:

As usual, well said, Adrienne, we appreciate that.

MS. ESPOSITO:

Thank you.

CHAIRMAN SPENCER:

And I think that you've given us a lot of topics that we can follow up on. And I will -- I have questions. But Legislator Krupski drove over an hour from the East End and he's not on this committee. He felt it was very important to be here. He has a major, major stake. And Legislator Krupski has some questions for the panel.

LEG. KRUPSKI:

Thank you, Mr. Chairman, for indulging me. So the question for anyone on the panel, really, and I do really appreciate the work that everyone's done and how, you know, we're taking this seriously, that starting with the number of fish, does anyone know -- because historically, the amount of bunker in the bay -- I've got records in my office of when Riverhead had their 100th Anniversary, they did a historical -- a couple of historical books. And records in the office were in 1835, and it said how many of the clubhouses along the bay, how many millions of bunker they caught. And that was at the point where they were starting to transition from using them for fertilizer to rendering them as oil, which was kind of the end of the -- the beginning of the end for the bunker population.

So does anyone know how many fish are in the bay? Because I just got a report from Fred, who was out there yesterday, last night, and I asked him, you know, about the condition and the color of the water, but he said there was a big -- a big school in Wickham Creek the day before. And I heard anecdotally from people in Riverhead, just before the big fish kill, how many fish were packed into Meeting House and Terry's Creek and up towards the Peconic River, and they thought it was going to be a real disaster. And they said they couldn't believe how most of the fish made their way back out into the bay.

So does anyone have an idea the percentage of the fish that were killed versus the total population, you know, currently?

DR. GOBLER:

I don't think that number is available. But I do know that the menhaden population is now rebuilding on the Mid-Atlantic and Northeast Region. And my estimate would be that this -- unlike the turtle situation, where the ecologists are actually worried about the future of that population in that region because of their slow reproductive rates, while this was a large fish kill, largest I've ever seen in 20 years, and I think Walter was indicating perhaps one of the larger ones he's ever seen, my sense is this is not a population issue. Recognize that the bunker population that's in the Peconic Estuary right now is in all of Long Island's coastal estuaries, and, in fact, throughout the northeast as well. So I don't think this is a worry or a troublesome sign with regards to the overall population of these fish.

LEG. KRUPSKI:

So where do the -- and I remember the beginning of the brown tide in 1985. Where -- where do these algae come from? If you think back historically with all the duck farms, that we're trying to preserve a parcel there that was an old duck farm, with all that lining the western bays, and you never heard of brown tide or red tide, or all the spectral colors of tides, so where did these come

from? Why weren't they -- were they not historically present, or have they been brought in over time and bilge water or shellfish related programs, or that sort of thing.

DR. GOBLER:

It's a good question. It's one that actually has puzzled scientists for centuries. In fact, in the 1800s, a scientist came up with a hypothesis, everything is everywhere, and the environment selects. And so we believe that that's probably the case for all of these organisms. They are a part of what we call the background flora, they're there at some level. But then the environment changes and creates a -- comes up -- creates a situation whereby they're able to thrive.

And so, as I think I mentioned before, the brown tide did thrive for five years in the Peconic Estuary, but five years only. And so seeing at the time that it was a permitted fixture and that it was going to -- something had changed forever. But five years, between 1985 and 1995, and that was it; happened one in Narragansett Bay as well.

So the best science would tell us that most of these organisms have been there, and there's data to support some of that, and that the environment changes to be ideal for them to come to prominence.

LEG. KRUPSKI:

Thank you.

MR. DAWYDIAK:

Legislator Krupski, if I could add to that. One of the most early prominent theories about brown tide, which I think is still prominent, was posed by Drs. LaRoche and Wallace from Brookhaven National Lab when they did work for us, and they postulated that the brown tide was triggered in the Peconics by a destabilization of the ecosystem, which was a decoupling of natural cycles that would have happened with organic and inorganic nitrogen. So you had a few things going on. You had these pulses of very rich organic nitrogen in the sediments providing this reservoir, and then you had these wet and dry years with inorganic going up and down. So that source of organic nitrogen, coupled with a low rainfall year, seemed to pulse the brown tide. I mean, why it never came back is anybody's guess, but the theory is that some of that duck farm matter may have essentially capped itself, burned itself out, flushed out, worked its way through the system, whereas in the South Shore, you still have the same unstable, shallow dynamic with pulses of inorganic nitrogen resulting in organic cycling. So that was the thinking, anyway, back then in the Peconics, and I think it's still valid.

LEG. KRUPSKI:

Thank you. Just a couple of more, please, Doc. One is, and I guess it's mostly to Walt, and someone asked me this, as people retrofit their existing septic systems, will they be able to use their existing -- they're old septic, which would no longer be used for, well, waste disposal, like it is now, so you're treating your waste in a better -- in a cleaner manner, would you be able to use your old rings as drainage? Because a lot of the problems that we have are, you know, water flowing off the land, picking up everything off the land, flowing down the road, becoming road runoff, going -- and mainlining into the estuaries. Can people use that as drainage, putting that -- what would essentially be clean like roof runoff or from their driveways, recharging the aquifer with the existing structure?

MR. DAWYDIAK:

It's an excellent question. I don't think it's one that has been posed to us before, and we would certainly consider that. In general, the ideal situation with the retrofit is if you have a precast tank and pool, a minimal retrofit might be an add-on system, like an Orenco, which could be retrofitted without having to dig the whole thing up and abandon it, or diversion to a constructed wetland,

recirculating gravel filter. If we do have to start going in and tearing up and abandoning systems, we would certainly look at that official reuse of existing infrastructure.

LEG. KRUPSKI:

Thank you. And one last thing. The blue-green algae in Maratooka, could you attribute any of that to, you know, the really extremely high goose -- Canadian goose population that exists there that historically didn't, and now it's -- now they seem to be resident?

DR. GOBLER:

It's probably -- it could be part of the issue. But I know in discussion with the DEC, that lake has some of the highest phosphorous concentrations they've ever seen. And that wouldn't come just from the duck population. I do note that in very close proximity in that region, you have Maratooka Lake, and same watershed essentially, James Creek, which is closed to saxitoxin, and then Mattituck Creek, which has had chronic problems with both PSP and low oxygen.

So I think in that area, there's some very heavy nutrient loading, and it's probably a combination of both farms and homes. And so, you know, I don't think -- the other point on the goose population front is it's important what they're eating and where they're eating, and that is if they're -- if they're just consuming food that's already in the watershed, they're not necessarily a source, they're just sort of moving the nutrients around. So for them to really be an important source, you'd have to have a situation whereby they're eating out of the watershed and then defecating in the watershed.

LEG. KRUPSKI:

That seems to be the case where the cover crop comes up early in the Fall, and the cover crop is there to protect the soil all winter. It's also there to recover all the nutrients that are left over from the cropping system that year. And when the geese march across the field in October and November and eat that whole cover crop, it can't regenerate, because now it's too cold, and then they go and they use the lake and the creeks as their bathroom. So that's a big problem. Thank you.

CHAIRMAN SPENCER:

Thank you, Legislator Krupski. You may have answered one of my questions.

My question to the panel, and I'll start with Dr. Branco on this one, one of the things we saw at the end of last summer -- particularly near and dear to my heart is my district in Northport Harbor. For the first time in several years, at the end of the summer, we did not see any tides, we didn't see any harmful algal blooms. And some of the things that were postulated at the time was that last summer was cooler than the previous several years. And some said, "Well, you know, don't get excited." I thought it was due to our work at Northport where we saw the nitrogen go from 18.6 pounds per day down to five or six. But, in any case, this winter, January and February was the coldest month on record. We had pretty much from the end of December to the middle of March below freezing temperatures. And combined was the second coldest winter ever recorded. And we saw that the winter didn't break until well into April, led to a very intense allergy season.

So with all of that cold, and snowfall, and the cold water temperatures, why are we seeing the algal blooms now? I thought the cold water -- you know, every time I think I have some basic understanding of this, it just -- you know, it seems to be blown away. Usually, we see it in late summer. And with the colder waters, all the scientists I hear said, "Oh, this is why." So could you maybe help me out a little bit?

DR. BRANCO:

So, like everything, it's typically a combination of factors. So what you're describing that happened in Northport last year probably was a little bit water temperature and a little bit sewage treatment

plant changes. It's almost always some combination. It's very difficult to ever pinpoint one cause and effect.

So this year, things have gotten started maybe a little bit later than usual. But if you look at the monitoring data, you see a real increase in water temperature around the same time that these blooms were getting going. So the blooms that we typically see at the end of the summer are actually a different species. The Peconic is sort of plagued by a species called Coccodinium. That's usually an August problem. But spring is the time that Alexandrium, the one that causes paralytic shellfish poisoning, we typically see that in the spring. And then some of the nontoxic ones that we're seeing, it is also sort of typical for those to bloom in the spring as well, a combination of there's more sunlight and the water is starting to warm up and things.

I think we can hope that the cold winter helped, but it's not like a mosquito or something where they just all die in the middle of winter. You know, some of them form cysts. Dr. Gobler can speak to that much better than I can. But they're pretty safe there in the estuary, the winter won't kill them off. It might slow them down a little bit, get them started later, which sometimes can -- you know, it will get too hot for them. You know, their growing season time may be shortened a little bit by a real cold winter or real long winter, but, you know, it's difficult to predict, because there are so many variables. But I think we shouldn't necessarily expect to have a really great algal bloom summer just because we had a cold winter.

CHAIRMAN SPENCER:

That makes sense, what you said. And the reason I asked you that questions first was you had, I saw in your report, the monitoring of the oxygen levels. Same time last year, was there monitoring in place? And what did the oxygen levels look like? And could the fish kill be a result, not only, you know, that -- because of the oxygen conditions, but also the fact that we are seeing a replenishment and there were more fish to kill, because there are more fish coming in? Any thoughts about that?

DR. BRANCO:

Yeah, absolutely. So last year at this time and the year before, we do see that day and night fluctuation in oxygen, similar to what we've seen this year. What's been different in the past is that overnight, it just gets down very low for a short time. During this fish kill, as Dr. Gobler mentioned, the oxygen was essentially zero for many hours at a time, and that probably is a combination of a very intense algae bloom and the fish, helping to get it down all the way to zero, so, again, a combination.

So we do see hypoxia pretty much every spring in this area since we've been monitoring continuously, which is only since 2012, but we don't see those extremely long extended periods of oxygen near zero. It sort of starts to fall off as the sun goes down, and then as soon as the sun comes out, it comes up again. But what is different this time is that it stayed very low for long periods of time overnight, and that is probably a combination of a more intense algae bloom with all of those fish coming in.

And also, coincidentally, right when the fish kill started to get really bad, we had a few cloudy, rainy days in a row. And so what that does is when there's less sun during the daytime, the algae aren't able to bring the oxygen up as high during the day, so it's easier to get it down more quickly at night.

CHAIRMAN SPENCER:

That makes a lot of sense. Two more questions, and then I'll yield, but the -- as far as -- and, Adrienne, I'll direct this to you and also to Walter. When the County Executive put his plan in place, he had a graph showing coastal wetlands and greenery from the 1940s until now. And we've seen

that there's been a dramatic decrease, which we talked about it from the standpoint of it breaking storm surge. Do those coastal wetlands or the greens that we see, do they contribute to oxygenation as far as we know, I mean, to anyone? Does that help? Is the loss of coastal wetlands, has that contributed -- or to the cover crop, has that contributed to the decreased oxygenation?

MS. ESPOSITO:

Walt, you want to go first?

MR. DAWYDIAK:

This is a question for a PhD, Dr. Spencer. I could answer it, but it would be an engineer's answer.

CHAIRMAN SPENCER:

Okay.

DR. GOBLER:

I'll just say briefly that seagrass is -- the Executive actually is referring to two classes of vegetation, wetlands that are right at the shoreline, and seagrasses that are under the water.

CHAIRMAN SPENCER:

Okay.

DR. GOBLER:

Subtidal we call them. Seagrasses are definitely known to be a very strong source of oxygen. So your line of logic is correct, we have a lot less of those now, and, therefore, we don't have that strong source of oxygen we had in the past.

CHAIRMAN SPENCER:

Okay. Thank you.

MS. ESPOSITO:

I'll just embellish. For instance, Long Island Sound has lost 90% of all its seagrass beds, which is quite extensive. So you can extrapolate out, obviously, there's a reduced amount of oxygen. But the other thing about the wetlands is they serve as the prime nursery ground for finfish, and shellfish, and turtles, and others, creatures that live there. So their role in the ecosystem is not limited to just oxygen, it's limited -- it's also expanded to nursery, and breeding ground, and feeding grounds for the life forms that originate. It's said that estuaries and wetlands are equivalent to the ocean to what rain forests are to diversity on the land.

LEG. KRUPSKI:

Doc, can I answer that?

CHAIRMAN SPENCER:

Yes.

LEG. KRUPSKI:

If you don't mind. So, also, if you look at the wetlands, and we talked about the submerged aquatic vegetation, but when you talk about the ones that are tidal on the shoreline and you talk about what the County Executive said about storm resiliency, they're important physically for storm resiliency and holding the shoreline, but they act as a filter. And then when you talk about all the nutrients that are in the water, they kind of buffer that. If there's a healthy shoreline, they're taking up all those nutrients and storing them in organic matter, so they're acting as a buffer. Once you destroy those wetlands and you bulkhead and you eliminate them, you lose that buffer and there's no place

for the nutrients to go, except to be there for algal blooms or anything else.

CHAIRMAN SPENCER:

Thank you. Adrienne, I'll direct this directly to you. And I think that we have a professional relationship, and you know that I think the world of you, so I'll poke a little fun and I'll have you poke right back.

MS. ESPOSITO:

Go right ahead, Dr. Spencer.

CHAIRMAN SPENCER:

All right. You said we got one million from the State, and we got maybe a million from these particularly. And I know it's a lot of money, but when we're talking about this type of problem, and when we look at, for instance, one STP in and of itself or to just do a pipe on the Great South Bay, to the outfall pipe, \$22 million, \$8 million, are you kidding me? What are we going to do with \$8 million that can make a significant difference?

MS. ESPOSITO:

We're going to begin. You know, look, the journey of a thousand miles starts with the first step. So that's what it is for us, it represents the beginning. It's not a cure-all, it certainly is not all we need, but it's the beginning. So -- and as we figure out how -- what is the best way to transition from septic and cesspools to the newer wastewater technologies, and this is the seed money, the money where we begin to make the change. And if we start doing it right, I will help you, but we will get Federal grants for the County, other State grants. And we'll have to craft a funding stream from within the County, but also perhaps with State help. So that to me, that \$8 million represents the beginning of the significant change we need to make, and we can do this. We have to do it. It's really -- we have no choice. And I just -- I'm compelled to say this, too. When you read letters like that in today's newspaper, you know, there are those who want to say it's the circle of life, and we believe they've seen too much Disney movies.

(Laughter)

But, you know, please don't be dissuaded, don't be impacted by that. There are always the naysayers who work to get us off track, but we have a big job ahead, and we have to base it on good science, like the people sitting here, and good common sense.

CHAIRMAN SPENCER:

Well said, and I knew you would handle it that way and take my question in the spirit in which it was meant.

MS. ESPOSITO:

Yeah. And I agree with you, we need more.

CHAIRMAN SPENCER:

Thank you. I asked my colleagues quietly if they had any particular questions, and I think that, you know, this has been a great panel that started the discussion. And for what it's worth, this is on the record, there's six media outlets that are here in the audience, and I'm hoping that they're writing stories and will help us get the word out. Immediately concluding this, I hope that you'll stick around and interview our panelists, because they would love to answer your -- any questions that you may have.

But with that, I will just give the panel an opportunity, if anyone has a take-home message that you would like us to leave, or Legislators to have. If you could tell us, which, Adrienne, I think you've

done, but, you know, again, the most important thing that we can do today. And, Walter, I'll start with you.

MR. DAWYDIAK:

Legislator Spencer, if I could just point out three County Executive initiatives very briefly that I forgot to mention? The first is a Subwatershed Nitrogen Plan. We have funding in place to do the scoping for the bigger program. Adrienne has cited there's \$300,000 underway. We don't believe it's worthwhile to do a multi-year tens-of-millions-of-dollars study. We know what the problem is. There's certain improvements we can make in fertilizer, the rest is all wastewater, and we got to figure out how to do it most smartly and most quickly, and that could be done in a year or two, not many, many years with many, many millions.

Second is I just want to give credit to my partners over at Economic Development and Planning and Public Works. This has been a huge team effort. Sarah Lansdale has issued a call for proposals for Appendix A System, small cluster decentralized systems. The deadline, I believe, is June 30th, and the idea is to try and use some of this quarter percent money intended for individual on-site upgrades for small community cluster systems to remove nitrogen. This is a part of the toolbox that we haven't really discussed so far.

Last piece of this is the DEC, \$3 million, Economic Development does have a work plan that's designed to get the Alternative Individual On-Site Septic Program off the ground with database management, enforcement, training standards, licensing, certifications. There's a bunch of steps we need to do as we go from 19 systems to hundreds and thousands. That's the first year, and we're working on scoping the next element, so we are actively involved in that.

My two last points is fertilizer has not been discussed, and I'm remiss if I don't mention that. Everybody can do a part by reducing or eliminating fertilizers. It's not the biggest part of the load, but it's a significant part of the load, and it's by far the most cost effective one to address. Use native vegetation, choose not to fertilize, if possible. If you do, use minimal fertilizers, ecologically sensitive fertilizers, no more than label restrictions.

My last point is whether this is doable. I mean the pat answer is it's got to be done, and we all know that. But the Peconic TMDL is on the order of 25, 30% reduction in sources. This is doable. I mean, we've modeled that if we reduce the nitrogen to the point where it needs to be reduced, we will significantly improve the oxygen, as well as help the wetland, the HABs, the SABs and the other issues. We just haven't gotten it done, because we haven't tackled the cesspools. We've reached and passed this ecological tipping point whereby we just have too much wastewater in too small a space. It can be reversed and it needs to be reversed, and we appreciate you giving us the opportunity to be here to address this.

CHAIRMAN SPENCER:

Thank you, Walter, and I appreciate you being here, and thank you for the very valuable information. Dr. Branco.

DR. BRANCO:

I'll mention the TMDL that Walter just mentioned. So that's -- it stands for Total Maximum Daily Load. It's essentially a pollution diet for an estuary. The Great South Bay doesn't even have one yet, Peconic does. And at the five-year point, which was in about 2012, the EPA did an assessment of how we're progressing toward our goals. And I call it a generous D+ that they gave us. We're not doing a very good job, and that's because we sort of focused on the low hanging fruit, the sewage treatment plants, the things that had written permits that were very easy to regulate. So we've addressed all the low hanging fruit and we did a great job with it, and we're now at the point where we have only the tough stuff left.

And so, you know, what can we do with \$8 million? Adrienne is right, we just need to get started. So two things. One is that we need to do a decent job of planning. We did all the traditional things, but it wasn't enough, and we need to plan how we're going to address these nonpoint source septic and cesspool and fertilizer problems. But in addition to that, like Walter has mentioned, and the County Exec repeatedly says, we don't want to hold up the progress with planning. So we need to do a good planning effort, and that will cost a lot of money, and be sort of painful, and take a long time. But while we're doing that in parallel, we need to get started there. Some really obvious places, we know that some things need to be upgraded. We can get started, like we have actually started to do in the last couple of years, while we undertake that big planning effort that will be necessary to bring together the massive amounts of money that we need to address the problem.

CHAIRMAN SPENCER:

Thank you. And again, thanks for the report. A lot of the information that I had coming into this hearing was because of the report that your agency issued, and it's helped me a lot.

DR. BRANCO:

I have copies of that here, if anybody needs that.

CHAIRMAN SPENCER:

Well, that would be very important to have. Dr. Gobler.

DR. GOBLER:

I'm just going to echo what Adrienne had said about that small amount of money. I think it can be used for planning, and kicking things off, and generating consensus, and I think that's what's needed now, consensus-generating, and get everybody on board and with the plan and moving forward. And then the final thing I'm just going to say is location, location, location, and that is to say Suffolk County is a large area. There are 360 some-odd thousand septic tanks that need to be replaced. There are certain areas that are critical high priorities, that, if we don't address, are going to get worse. And there are other areas that, frankly, if we don't make the change -- if we do make the change, they won't necessarily be a very obvious improvement in water quality, because there's not a water quality problem. And so I just -- I'm sure it will happen. But just in the event that it seems overwhelming, we probably don't need to address all 360,000 of these systems, but there are some that are in dire need. And as Walter had pointed out, if we do make those changes in certain locations, we can see rapid and appreciable improvements. Remember, in some areas in the South Shore, groundwater travel times can be less than five years, and, therefore, if a change is made, you can start seeing changes in the water bodies in a short period of time.

CHAIRMAN SPENCER:

Thank you, Dr. Gobler. And you've been working with us for a long time, especially done a lot of work in Northport. And I think that in a year, what's happened in Northport, we're looking to get those beaches reopened over there. And I think there's been extensive testing and things are very favorable. We can see that's really, in my opinion, what we can do. And we're starting to see a difference, and I'm hoping we can continue working. Adrienne, you have the last word.

MS. ESPOSITO:

Chris wants to --

DR. GOBLER:

I just -- just last follow-up. You mentioned Northport, and I will say, and very happy news, this is the third consecutive year where there has not been a PSP event in Northport. It coincides with the upgrade of the sewage treatment plant. We know that wasn't the biggest source of nitrogen there, but it was a strong point source. And so I think that change -- you know, we have three years in a

row that suggested that change does help, and again, evidence that when you do make a change, you can see improvement.

CHAIRMAN SPENCER:

This is the third year I've been the Legislator from that District. I don't know.

*(*Laughter*)*

MS. ESPOSITO:

Really, the relationship is undisputed.

CHAIRMAN SPENCER:

Adrienne.

MS. ESPOSITO:

To conclude, we'll just -- let's just read three sentences that was written in 1981 in the New York Times. It says, "Nearly three years after a comprehensive study recommended immediate action to clean up the Island's polluted bays and safeguard its drinking water, major portions of the bay are still closed to shellfishing, and known source of toxic chemicals still threaten drinking water. The study concluded that residents of the Island were fouling their own nest, often unwilling" -- "unwittingly, and that further development should be limited in certain areas." So you're tasked with what will people be reading 30 years from now based on your decisions? Inaction costs us money, way more than the money we'll spend by acting to preserve our Island. Thank you.

CHAIRMAN SPENCER:

Well said. To the panel, once again, you have my thanks as the Chair of this committee. We appreciate everyone who appeared.

And I have no other business before this committee. We do have members of the press asked if the committee members -- I mean, the panel would stick around if the press has any questions. Thank you. We stand adjourned.

(The meeting was adjourned at 3:32 p.m.)