

ENVIRONMENT, PLANNING & AGRICULTURE COMMITTEE
OF THE
SUFFOLK COUNTY LEGISLATURE

Minutes

A meeting of the Environment, Planning & Agriculture 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 August 13, 2012.

MEMBERS PRESENT:

Leg. Kara Hahn, Chairwoman
Leg. Lou D'Amaro, Vice Chair
Leg. Sarah S. Anker
Leg. DuWayne Gregory
Leg. Edward P. Romaine

ALSO IN ATTENDANCE:

George Nolan, Counsel to the Legislature
Sarah Simpson, Assistant Counsel
Renee Ortiz, Chief Deputy Clerk
Ben Zwirn, County Executive's Office
Marie Berkowski, Aide to County Executive
Laura Halloran, Budget Review Office
Sarah Lansdale, Director/Department of Planning
Frank P. Castelli, Environment Projects Coordinator/DEE
Chris Pickerell, Cornell Cooperative Extension
Tom Ryan, Aide to Legislator Hahn
Marge Acevedo, Aide to Presiding Officer Lindsay
Justin Littell, Aide to Leg. D'Amaro
Dominick V. Ninivaggi, Department of Public Works, Superintendent/Division of Vector Control
Amy Juchatz, Department of Health Services
Dr. Christopher Gobler, Stony Brook University
Walter Dawydiak, Department of Health Services
Michael Kaufman, Appointee to Suffolk County Planning Commission
And all other interested parties

MINUTES TAKEN BY:

Diana Flesher, Court Stenographer

THE MEETING WAS CALLED TO ORDER AT 2:17 PM

CHAIRWOMAN HAHN:

Will all Legislators of the Environment, Planning and Agriculture Committee please report to the horseshoe.

Okay, we're going to all rise for the Pledge of Allegiance lead by Legislator Romaine.

SALUTATION

Okay. All be seated. All right. We don't have any cards yet. Does anybody in the audience want to speak? Okay.

INTRODUCTORY RESOLUTIONS

I wanted to take out of order -- we have two appointments. If the presenters don't mind, we just have two individuals waiting to be appointed. And I would like to take those resolutions out of order. So I'm going to make a motion to take **Introductory Resolution 1749, To appoint member of County Planning Commission (Michael Kaufman). (Co. Exec.)** out of order. Seconded by Legislator Gregory. All those in favor of the motion to take it out of order? Opposed? Abstentions? Okay, 1749 is before us. Mr. Kaufman, if you'd like to come up front. I believe if you sit down there, you're going to have to hold your finger on the button.

MR. KAUFMAN:

I'm experienced. I can handle it.

CHAIRWOMAN HAHN:

1749, I'm going to make a motion for 1749 to approve, seconded by Legislator Anker. So, on the motion, Mr. Kaufman, if you'd like to tell us a little bit about yourself and your background and why you want to serve on the Planning Commission.

MR. KAUFMAN:

Well, I think I'm well qualified to represent village interests. I have 20 years of dealing with village government. I've been a village official in the Village of Nissequogue all that time. I know how villages work. I know how they work, how they think and how they react to various proposals that come before them. I know how they work also with the Towns, the State and more importantly the County. And I think that's an important aspect.

Villages sometimes feel sort of at the tail end of things. And they are very, very happy to have a seat on the Planning Commission to try and represent their interest. Normally it's the Town or the State coming in doing something. And the villages do like to have, again, people who understand villages. And that is an important thing. Villages are different, shall we say. So I think I can represent the villages before the -- for the Planning Commission. I think I can do it pretty well.

Just to let you know a little bit, I've helped develop a number of master plans for my two villages. I've rewritten several village regulations above Nissequogue and Head of the Harbor to reflect village concern. I understand the zoning and planning that's associated both with villages and with -- practicing before the courts and also before various boards. I've run a village local waterfront revitalization program for about 20 years, dealing again with zoning, environment and overall land use. I also have regional experience, 20 years of experience in dealing with coastal plans integrated with the Town of Smithtown and also the State of New York. I helped develop some of the precursors to the Long Island Sound Plan with the State. I helped the MTA's Land Use Plan for regional transportation needs of the Island for the next 25 years.

I've also, as you know, as a member of CEQ, been dealing with many regional issues of the County. I think I'm experienced in dealing with and understanding County needs. And I think the best word -- best way to put it is County imperatives, especially in these difficult times. I dealt with a lot of the environmental issues, EISs. As you know I have a proven track record basically of professional service to this County. And that's what I think I can bring to the Planning Commission and to this County.

CHAIRWOMAN HAHN:

Thank you very much. Do we have any questions for Mr. Kaufman? Legislator Gregory.

LEG. GREGORY:

Hi, Mike. How are you?

MR. KAUFMAN:

How are you doing, sir?

LEG. GREGORY:

Good. I think you're obviously qualified. You've served the County well, but there have been -- I guess one concern specifically that I've heard from several people that are not necessarily on the Committee, but I felt -- because this appointment won't go to the General Legislature -- well, you won't go to the General Legislature should it pass today, but your nomination, your appointment will. So I figured I will ask the question for those that are concerned that your service on CEQ may be a conflict in serving on the Planning Commission. So I just want you to explain how it is not a conflict and how you serve us admirably.

MR. KAUFMAN:

Well, first off, I'll note that neither job pays anything so there's no monetary conflict. There's a doubtful -- it's doubtful that any conflict exists between CEQ and the Planning Commission. They have basically totally separate jurisdictions. CEQ was established by the Suffolk County Charter and operates under Suffolk County laws. As such we advise the Legislature on a specific area of state jurisdiction, that's SEQRA, and I've appeared before this board and before the full Legislature many times on those issues.

So, we're dealing at CEQ only with SEQRA issues. We're advisory. We do not have line authority and we're only appearing or dealing with public projects that are brought by Suffolk County. If you look at our agenda at any time, it's purchases, it's construction, it's local laws. All of them dealing only with public Suffolk County activity.

The Planning Commission is a totally different creature. It deals with private projects, not public, but private projects as its primary emphasis. It deals with zoning, planning and master plans of municipal agencies such as towns and villages; and, also, frankly the County, but that's something that CEQ does not do. It deals with the integration, if you will, of private projects into an overall plan of the County.

I'll also note for the record that it is created by State law; for example, I have with me the Town law which creates this particular Commission. State jurisdiction is critical to the analysis. The County's Planning Commission is formed by the State under the Town Law 239. Its jurisdiction is clearly spelled out there. And, again, it's dealing with zoning, planning. It does not deal with SEQRA. That's left for the individual towns, individual villages and for the County such as those issues may come up.

So we're not -- so what we do at CEQ is totally different. Again, we are created differently, the two Commissions. They deal with entirely different areas, again, public versus private. And the private aspect of things deals with, again, private developers, town plans, village plans, etcetera. There's

no real conflict. I've checked all the regulations. There's one minor little area and I would recuse myself if that happened. If the question came up at a future time, yes, I would have to recuse myself, as it happened. Again, I'm -- for 20 years I've been dealing with CEQ. I've never seen anything that really deals with the Planning Commission.

I will note for the record I will have to resign one local office at village level to clear up a conflict because of the Suffolk County Ethics Regulations. But that's not a problem. I've been on there for about 25 years and maybe it's time to give it a rest.

So I hope that answers your question.

LEG. GREGORY:

It certainly does. Thank you.

CHAIRWOMAN HAHN:

Any other questions for Mr. Kaufman? Okay. So, we have a motion to approve and a second. All those in favor? Opposed? Abstentions? Okay. That is passed and you do not need to come before the full Legislature. **(VOTE: 4-0-0-1. Legislator D'Amaro not present)**

MR. KAUFMAN:

But it's so much fun to do it.

CHAIRWOMAN HAHN:

Thank you. Okay, what's the IR number? 1772. Yes, I would now like to take out of -- make a motion to take out of order **Introductory Resolution 1772, to reappoint member of County Planning Commission (John J. Finn). (Co. Exec.)** I'll make that motion, seconded by Legislator Anker. This is a motion to take out of order. All those in favor? Opposed? Abstentions? Introductory Resolution 1772 is before us. I'm going to make a motion to approve, seconded by Legislator Anker. On the motion -- this is a reappointment, correct, so is Mr. Finn present? No. Okay. Then I don't know why we took it out of order, but since it is before us, all those in favor? Opposed? Abstentions? **Introductory Resolution 1772 is approved. (VOTE: 4-0-0-1. LEG. D'AMARO NOT PRESENT)**

PRESENTATIONS

Now we are back to the presentations. And I thank you, presenters, for your indulgence. We have two presentations today. Dr. Gobler and we have representatives from Suffolk County Division on Environmental Quality and Stony Brook University School and Atmospheric Sciences who will make a presentation on findings related to Capital Project 8224 harmful algal blooms. And then we also have representatives from Suffolk County Department of Public Works to discuss Vector Control efforts.

Legislator D'Amaro had a doctor's appointment. He's the one who requested that Dr. Gobler be here. He is on his way. Would -- I know your time is so very valuable and I apologize for asking this, but would it be possible to take the other presentation first?

DR. GOBLER:

No problem.

CHAIRWOMAN HAHN:

And he'll probably walk in, like, two minutes after we begin this one, but I would like to give him the opportunity to hear what you have to say because I heard you at Brookhaven National Lab and it's really quite a presentation. And I'm looking forward to hearing it and I'm sure Legislator D'Amaro

would like to as well.

So if that's okay with you and with Public Works Department, Dominick, are you here for that? Are you ready? Is that okay with you that you go first?

MR. NINIVAGGI :

That's fine.

CHAIRWOMAN HAHN:

Thank you. I know that we requested you to come here today after in Newsday some findings that the State of Connecticut had found with regard to the possibility of pesticides being found in lobsters. And so we just wanted to know if you could give us a little bit of an update on what's going on and any kind of clarification that might need to be made regarding those findings, etcetera. So, thank you for being here today.

MR. NINIVAGGI :

All right. For thank you for inviting me and giving me an opportunity to let you know what's going on with the program. And this particular issue, I think the most important thing to understand about Connecticut's findings is that they very frankly say that this is highly preliminary data. And frankly that this is not what they expected to see from the sampling.

And the reason for that is that for everything we know about these materials and the way they behave in the environment, you know, you really should not find these materials in lobsters taken from deep water in the Sound. So I think that before we react to this finding, let's find out, you know, if it can be verified. I mean I know that they're going through some process to verify to see if this in fact a correct finding. So that's, I think, the most important thing about this.

As far as Suffolk County Vector Control is concerned on this, the one thing I can tell you with great confidence is that whatever they found in the lobsters, it didn't come from us. The main reason for that is that these samples were taken in September of 2011, which was a very low year for treatments for mosquitos control for us. We had very low West Nile activity. We didn't do any adult control treatment with resmethrin north of the Long Island Expressway. So, the idea that this material, you know, somehow shows up in Long Island Sound, it simply can't happen. And same thing with methoprene. We have very, very miniscule use of methoprene on the North Shore of the Island. And 40 to 50 miles away. So, I don't know what they found. They're not quite sure themselves, but I'm very confident it's not from any of our activities.

CHAIRWOMAN HAHN:

Okay. Is there more that you want to talk about, the need for spraying at this time or before we ask -- pepper you with questions?

MR. NINIVAGGI :

Well, I can just tell you that we're monitoring the situation as we always do at this time of the year. I work very closely with Health Services and the State Health Department. We've been sending -- we're working with the Health Department to send mosquito samples up on a regular basis, looking for West Nile Virus. And we are finding it particularly in the types of mosquitos that bite birds.

We did have one sample from species that bite -- species that bite people, a small sample. But we've already done some treatments in the areas of the County where we think there's the most risk of humans contracting the virus. And at this point we're going to be monitoring the results of that and we're going to be looking at our surveillance data to see if we need to do any additional treatments.

CHAIRWOMAN HAHN:

Okay. I have a question or two, if you don't mind. And then we'll start over there. So is the Health Department in any way doing any further testing to look into what was found and to check? Because I know when you say we do do most of the spraying on the South Shore. Now are we finding similar -- any kind of results similar to this in any crabs or other animals that are found on the South Shore in our bays?

MR. NINIVAGGI:

Well, we did the very comprehensive study, the Vector Control Program. The County spent about four-and-a-half million dollars on our Environmental Impact Statement and long-term plan. And one of the things that we did was look at the behavior of these materials in the environment used in the way we actually used them. And what we found is that, for instance, methoprene, even in the immediate area where you're intentionally putting it into the marsh, you might find it low part per billion levels immediately after the spray, which you should because we put it there. But if -- you'll find this material gets below the technical levels very rapidly and we've shown that it doesn't accumulate in the environment.

For resmethrin the adult control material, it disappears even more rapidly and even less when it gets into the environment. You have to start sampling down to the parts per trillion levels to detect it. So that's one reason why -- if you're not finding it right after the spray in the water at those types of levels, to start looking for it in the places you'd never expect to find it is really not good use of resources.

CHAIRWOMAN HAHN:

So, you said that the samples from September of 2001, are lowest year for adulticide, what is the life span, you know, of a lobster? And when was our highest year for adulticide? Although I'm feeling better now that you're saying we really aren't spraying north of the L.I.E., that we weren't contributing to this. But when was our highest yield year in the adulticide spraying?

MR. NINIVAGGI:

Well, the samples we collected in September of 2011, which is a low year. Our highest year was 2010, but, again, these treatments go on in basically July and August and maybe a little bit in September. These materials are intended, and are very rapidly degrading materials. So, again, that's why when you actually go out and look for them using the most sensitive techniques, you can't find them within hours or, at most, days after the treatment's over.

CHAIRWOMAN HAHN:

Okay. One more thing. I know our Cornell Cooperative Extension, which Legislators -- a bunch of us on this Committee are very supportive of the activities that they're doing. Is there anything that we can do as a County to work on alternative, you know, alternative methods to preventing the spread of these diseases among pests like mosquitoes, that we can study? Like, they're doing some very interesting bug studies for farm -- you know, farm applications. But are there similar kinds of research that we can encourage for something new? And should we -- Suffolk County given our unique environment here be investing in that kind of work?

MR. NINIVAGGI:

Well, the County -- actually we have excellent methods for reducing the use of pesticides. Most of our methoprene use, about 90 plus percent of it goes into salt marshes. And we did, for instance, a pilot project at the Wertheim National Wildlife Refuge, where we drastically cut the need for using this material. We've published a study in the peer review literature, made and accepted and put out there. And we continue to monitor those areas and they continue to look very positive in terms of not only reducing the need for pesticides, but in terms of improving and enhancing the natural resources in the marsh.

So that's probably the biggest thing that we can do to reduce our use of pesticides. And the County has a Wetlands Stewardship Program, which hopefully by this Fall will have a Wetlands Stewardship Strategy in place and that will allow us to move forward with more of these types of projects. Obviously not exactly the same, but projects that we can do that are both good for the marsh and good for reducing the use of pesticides.

CHAIRWOMAN HAHN:

Okay, Legislator Romaine, I know you wanted to be on the list.

LEG. ROMAINE:

Yes. Just a few general questions. In terms of fighting mosquitos, I know at one time the County was advocating a marsh pond -- a ponding situation in the marshes. Is that still part of the County program?

MR. NINIVAGGI:

Well, it's a lot more sophisticated than that. The term we use is Integrated Marsh Management.

LEG. ROMAINE:

Yes.

MR. NINIVAGGI:

Basically it's combining the whole series of techniques to improve tidal circulation, for instance, to create fish habitat. Sometimes the fish need a place to live and small ponds or pools might be part of that, but it's only a small part of it. And what we find is that if you go to a marsh like the Wertheim where we put in tidal channels and ponds, you get a lot more fish, a lot more diversity among the fish, the type of fish that you would expect to find in a salt marsh. And basically what we're doing is replacing a very degraded habitat for fish, which is the old mosquito ditches, with a much more natural habitat and much more valuable habitat, which is these tidal channels and tidal pools.

LEG. ROMAINE:

Some people argue that the ponding program was, in fact, destruction of the marshes; by tearing up marshland and creating -- artificially creating ponds, that, in fact, it wasn't the best way to go. Some people even question the ditching that occurred in the 1930's. And if you wanted to stay with ditching, some people said why didn't you do -- why didn't you purchase something like a Bomadier Tractor, that could keep the ditches open as opposed to tearing up the marshes and ponding them? I mean, I think you recall that debate.

MR. NINIVAGGI:

Yes, I recall the debate and that's why we were so anxious to do an excellent job, a scientifically credible job in terms of evaluating the project we did in cooperation with the Fish and Wildlife Service. And we put out -- before we even put that work out to peer review, we recruited some of the leading scientists on this subject, Dr. Sue Adamowicz from US Fish and Wildlife Service, Dr. Mary Jane James-Perri, from University of Rhode Island. And they worked with us, co-authored with us the studies on this, you know, saw all of our data, worked with us to analysis the data and agreed to publish that, you know, with their names on the paper, that the results of this project were positive so --

LEG. ROMAINE:

And I'm sure that there's scientists with equal caliber that would oppose this and have opposed this in the past, if I'm not mistaken, according to testimony that was presented to this body in 2007.

MR. NINIVAGGI:

That's simply not true.

LEG. ROMAINE:

Oh.

MR. NINIVAGGI:

There really -- these are leading experts who are hands-on on this. And, again, this is -- this is published in very reputable and international journals. We've also published a Review Paper with these same authors plus authors from the Connecticut Department of Environmental Protection. And, again, I don't know what people thought in 2007, but I could tell you it's 2012 and we've collected a lot of data, we've analyzed it statistically. All those results are out there in the literature. They've been fully peer reviewed. And the results speak for themselves. Reputable scientists can actually look at our data.

LEG. ROMAINE:

Does Vector Control have a report on this including a list of those scientists that you mention that would be available to members of this Committee if requested?

MR. NINIVAGGI:

We can send you the peer reviewed literature. It's actually on the internet. It's openly available literally to anybody who wants to see it.

LEG. ROMAINE:

If you would send me those addresses, just e-mail them to me, that would be great.

The other thing that I wanted to mention, someone told me a longtime ago, and I don't know if it's still a valid thing, is that whenever you see people aerial spraying for mosquitos, they've lost the war; that in fact the war against mosquitos to be effective takes place in the early Spring, with people going out and making sure those ditches have a tidal flow to them to prevent mosquito accumulation, making sure that you would spray for larvae and that when you have to do aerial spraying, it, in fact, because of its -- it's such a general nature when you do aerial spraying, it's not as effective and certainly more environmentally intrusive than the backpacks that you would carry in going out and doing that. Could I have a comment on that or your reflection on that?

MR. NINIVAGGI:

Well, I agree, that the most important thing you can do is to eliminate the sources of mosquito production wherever you can. That's why we are a year-round program. And we do operate in the winter, for instance, on these wetland projects. We do that work in the winter because the vegetation is dormant. A lot of the wildlife is gone. So, there absolutely -- you need to go to the source whenever you can. The reality is in a County this size, we're never going to get every place that the mosquitos come from, nor do we need to.

And as we get into the summer, we'll find places where either we didn't get to it or just by the nature of that wetland, it does produce mosquitos. And at that point we need to treat them. And we do try to minimize, particularly the treatments for adult mosquitos because we realize that that's a major step, was using pesticides in residential areas. So, we don't undertake that lightly and have very stringent criteria for that.

LEG. ROMAINE:

I'm glad to hear that. I also look at the -- {off mic} -- as an admission of our defeat in terms of the larvae, in trying to restrict the larvae. Because when you do aerial spraying, it means your larvae prevention program has not been as effective as it could have been or should have been.

I also have received e-mails from constituents who've complained that they did not know of the spraying. And this is something that I'm not going to ask you to respond to, but just think, because they're saying they were out there, the infant child was out there, their dog was out and the

spraying is overhead. And they didn't know it was coming.

Now I know that you do post in the newspapers and that you do post on line, but not everyone is that diligent in their busy lives. And that is a concern to some people that, yeah, I didn't know they were spraying my neighborhood. It's just something to think about.

Let me ask you about methoprene again. You don't spray on the North Shore; is that correct?

MR. NINIVAGGI:

We do have -- most of the North Shore marshes don't produce a lot of mosquitoes so there's no need to treat them. We have a couple of small ones, Iron Pier Marsh. These are a couple very small ones that we do use methoprene in. And, again, it's the exact same program we run on the South Shore.

LEG. ROMAINE:

You do have extensive spraying areas both in the Town of Riverhead and the Town of Southold.

MR. NINIVAGGI:

We have treatments -- very small areas on the North Shore and Long Island Sound side. We do have a series of marshes along the Peconic Bay Shore front.

LEG. ROMAINE:

Indian Island, Aquebogue, Crescent Duck Farm, Aquebogue Farm. Obviously I'm reading. And we can all read in our e-mail the methoprene spraying that will take place tomorrow. It's all listed. And the last time I looked Riverhead and Southold both are on the North Shore of the Island. And I know that you do methoprene spraying there.

MR. NINIVAGGI:

Yeah, I just -- I thought when you were talking about North Shore, I thought you were talking about the Long Island Sound Watershed. But we obviously have the information --

LEG. ROMAINE:

Unless -- and I looked, both Riverhead and Southold face -- in fact, my District has more Sound front than any other District in Suffolk County.

MR. NINIVAGGI:

I understand that. But there's very little treatment there.

Just -- I also wanted to let you know as far as public notification for adult control when we're actually using pesticides in residential areas, last year, now this year, the County uses its Code Red automated callout system. So we'll actually call all the phones within the treatment area and we'll let them know that *there's treatment going on there tomorrow night*.

LEG. ROMAINE:

This woman that e-mailed me obviously didn't get that call. Or if she did, she never listened to her messages.

MR. NINIVAGGI:

Well, also, we might be talking two different things. Code Red System refers to the adult control when we're actually treating residential areas. We also have the aerial larvicide program for the salt marshes, which is extremely different. It's a very different type of treatment. And it's an area where the residential areas are not affected. We're going out into the marsh, into the non-residential areas.

Now, we have recently started posting those on the web as well. And as you know, I've had an e-mail list, which I voluntarily started, you know, quite a few years ago, that Legislators get it. If there's a neighboring landowner next to a marsh, I get their e-mail and I put them on that, too. So we go far beyond what the law requires to notify people and let them know what we're up to.

LEG. ROMAINE:

What is your approach to handling mosquitoes control within Suffolk County Parklands? There's tens of thousands of acres of parkland throughout this County, some of which -- a few of which are developed and a lot of which are not.

MR. NINIVAGGI:

Generally we do larvae control of a County Park if the mosquitoes that come, stay at the -- say if the County Park has a marsh in it, then the mosquitoes are going to fly out to residential areas, or bother the people in the campsite. Then we'll treat the mosquito larvae in that area.

If it's in a relatively undeveloped area, like, for instance, Hubbard County Park, where the mosquitoes can basically fly around and not bother anybody when we leave them alone. So it's very much tailored to the individual situation.

LEG. ROMAINE:

North Fork Preserve comes to mind because that's right adjacent to the Sound. In fact, some of their water, as you know, flows to underground pipes right onto Sound beaches.

MR. NINIVAGGI:

Yeah, we do very little control there because, again, it's a fresh water area. Mosquitoes don't generally fly very far. And they mostly go out into the woods. It's not a high priority area for us.

LEG. ROMAINE:

Thank you again.

CHAIRWOMAN HAHN:

Thank you. Just a quick follow-up to what he was asking. The Code Red, isn't that an opt in?

MR. NINIVAGGI:

No. You can actually -- what we do is, if we're going to treat an area, we send emergency management, a GIF file that basically is a map of the area where we're going to treat. And they can actually call every land line in the data base for that treatment. For instance, we did a treatment in the Town of Babylon. And they sent out about 30,000 phone calls for that one.

CHAIRWOMAN HAHN:

Okay. I know we have a Code Red System whereby I had to go on and sign up to get the phone calls to my phone and to my phone and to get the e-mail. Is this different? This is like you have access to Verizon or whoever's phone list and you call everybody within, you know, a square mile or whatever?

MR. NINIVAGGI:

Exactly. It's both. It's both the opt in in terms of -- and in terms of -- it's the same system that's for, for instance, if there's a hurricane evacuation or other emergency and we want to reach all the people in an area, exact same system.

CHAIRWOMAN HAHN:

Good. I was hoping that was your answer. Thank you. Legislator Anker.

LEG. ANKER:

Okay, let's see. Just a couple of questions. Can you clarify West Nile mosquitoes, mosquitoes that carry the West Nile, I thought they were basically produced from freshwater and not saltwater.

MR. NINIVAGGI:

Most of the virus activity you see is in the freshwater species, especially the ones that live in polluted water; however, one of the very important species for transmitting -- and most of those species where we're detecting virus, are species that bite primarily birds. There are species that live in the salt marsh. There's another species of culex called culex salinarius, that will breed in salt marshes. And is an excellent transmitter to humans. So, that salt marsh species is of concern. And the other salt marsh mosquitoes are capable of transmitting the virus. They appear to not pick up the virus as often as some of these other mosquitoes, which is very good. But certainly if we let them run loose, there's the possibility that they would transmit.

LEG. ANKER:

Okay. And how many people have died as a result of West Nile Disease?

MR. NINIVAGGI:

I don't have figures for the -- in the County. I believe it's -- over the ten years, it's been about 12. We had about 50 something cases. Health Department would have the exact figure.

LEG. ANKER:

How many people have died in the past five years?

MR. NINIVAGGI:

Again, are you talking -- at Suffolk County? I believe it's five, but, again, I would get Health Department to confirm that.

LEG. ANKER:

Okay. How many gallons of --- first of all, let me backup. What pesticides are used to control mosquitoes?

MR. NINIVAGGI:

Okay. Our primary materials are for controlling mosquito larvae. We use a bacterium product called BTI, which is bacillus that mosquito larvae eat that controls them. We use a live bacterium called bacillus sphaericus, which is a live bacterium that will actually state in the environment. We use the insect growth regulator methoprene, particularly in salt marshes because it's effective in situations where the bacterials are not. For adult control in small ground applications, we do in Fire Island, we use a material, the trade name is Anvil, and the technical name is Sumithrin. It's a very low dose, high degradation material. The materials we use in trucks and helicopter has a very snappy name of scourge. And resmethrin is the active ingredient. And this is also a very rapid degradation product.

LEG. ANKER:

I'm trying to -- again, you may anticipate the question, how many gallons of pesticides have been used on Suffolk County property?

MR. NINIVAGGI:

We haven't broken it down by County property. The last time I looked at the larviciding, I think, it was about 10, 20% of our larvicide output. I tend to look at it in terms of acres treated because that way the different pesticides have different doses. So, it's hard to compare them. For instance, (inaudible) of liquid in a salt marsh goes out as an ounce per acre while our BTI product Vectobac goes out as 16 ounces per acre. So, you know, we could say, "oh, gee, we used a lot more of the bacterial than the insect growth regulator, but you might find that the acreage is similar.

So that's what I look at.

LEG. ANKER:

Okay, again, I'm trying to get an understanding, could you get back with my office, if you could give me a list of how many gallons of each pesticide -- you mention one, two, three, four, five different types, have been used, I guess, in, what, ten years -- how long have we been using them in this program? Twenty?

MR. NINIVAGGI:

The Suffolk County Vector Control has been around since 1934. But every year we put together a listing of the pesticides we use. And the last few years since long-term sphaericus have been in effect, that pesticide usage for the previous -- for that year is put into the next year's plan of work. So, for instance, by October 1st I have to have a plan of work into you for 2013. And it'll have the 2012 totals.

LEG. ANKER:

And you can get me a list of the year to year totals of gallons of pesticides used?

MR. NINIVAGGI:

Yeah, we have that information for quite a few years back so if you want to e-mail me, you know, we can figure out how to get that back to you best.

LEG. ANKER:

So when did we first start spraying? What year was that; 1934?

MR. NINIVAGGI:

1930 -- in the 1930's a lot of the program was the construction of ditches, because basically that's what they had and that's what they knew worked at the time. I would say they also used things like oil. The DDT era went from about the mid-40's to the early '60's. The materials we use now, BTI, the bacteria product, we started using about 1982. And we were actually one of the first programs to incorporate that into their regular program. Methoprene we've been using since about 1995. Scourge goes back to the early '90's.

LEG. ANKER:

Okay. Again, I'm just curious -- I guess with that breakdown of the different pesticides -- five? Five. But, um -- and how much has it been costing Suffolk County? How many dollars? And, again, I'm just trying to weigh, you know, the price benefit versus -- and I understand the safety with West Nile. But my concern is, and of course, as many, many of my constituents have called and written and e-mailed me, especially saying, "what's this lobster article" and saying, as Legislator Romaine, I have a very, very large amount of coastal line, wetland, if you could give me that information and the breakdown, because, again, my concern is that how much money are we spending to protect the health of our constituents. But what are the repercussions? You mentioned 1940 to 1960's we used a chemical that was not beneficial. It was detrimental. So, again, that's a concern.

MR. NINIVAGGI:

Well, we also have to keep in mind is that today we operate under the long-term plan, which, again, cost the County about four-and-a-half million dollars to put together. It was completed in 19 -- 2007. And this plan was probably the most comprehensive environmental study we had ever conducted for any mosquito control program anywhere. It was very comprehensive. It looked at all the risks associated with all the pesticides we use as well as the benefits and the Legislature approved it at that time. So we're -- and basically we're operating under that plan ever since. So a lot of these questions have been thoroughly vetted and revisit this plan, which is very thorough, there was full public participation by all the stakeholders. And we can continue to have -- there's a

Wetland Stewardship Committee that looks at our wetlands' activities. There's a Vector Control Pesticide Management Committee that continues to oversee the pesticide use. We continue to review the literature periodically. So, in addition to having a very comprehensive plan, we have an ongoing program to update that.

LEG. ANKER:

What was the year of the plan?

MR. NINIVAGGI:

2007.

LEG. ANKER:

Okay. Just a couple of quick questions. You mention the different types of methods of broad spray with helicopters. And then the methoprene with the -- briquettes? Is that a -- which one do you find to be a better method?

MR. NINIVAGGI:

Well, the method and the formula you use is really targeted toward where you find the mosquitoes, near the habitat. The briquettes are used in catch basins where there's going to be long-term breeding of mosquitoes. Out in the salt marsh where the mosquitoes tend to come and go, we use a liquid product that basically is there only for a short period of time, but that's all the time that it's necessary to be there. We use a live bacterium in some of these polluted areas where we need something that lasts for several weeks. So we tailor it very much according to the situation.

LEG. ANKER:

Okay. And, again -- and this one last question. Again, my concern, again, with the length of the time that these chemicals have been used, and I know we've changed as we develop. And it's been since 2007, since the plan has been instituted. What is the active ingredient of these pesticides? And most importantly, have they been tested on children and pregnant woman?

MR. NINIVAGGI:

Well, obviously you can't actually test these materials on children and pregnant woman for ethical reasons. We've done risk assessments based on the toxicology of those.

LEG. ANKER:

And what are they?

MR. NINIVAGGI:

The Risk Assessment determined that the risks to human health are negligible and far less than the risk of West Nile Virus. We know for a fact that people get exposed to West Nile Virus. And we have to remember for each case that we identify, there's about 150 other infections that either they're not symptomatic or the person didn't seek medical treatment. So, in a given year, there are actually hundreds of West Nile infections. Fortunately, relatively few of them become clinical illnesses.

LEG. ANKER:

And, again, the active ingredient -- you mention some of the scientific names, but what is the active ingredient of the pesticide?

MR. NINIVAGGI:

Well, again, there are different active ingredients for different purposes. BTI is a -- it's short for bacillus thuringiensis israelensis -- and I apologize to the stenographer for that one --

MS. FLESHER:

I'll be calling you for spellings.

MR. NINIVAGGI:

Bacillus sphaericus, again, it's a live bacterium. Methoprene, and it's a growth regulator. And the two short lived pyrethroids for the adult control.

LEG. ANKER:

Okay. I think our -- the Health Department's here and, Amy Juchatz, she has a little bit of information related to that. Do you mind explaining a little bit?

MS. JUCHATZ:

Is this working? Yeah, I can try to address that just real quickly. I don't have to hold that one, okay. (Referring to mic).

Amy Juchatz. The last name is spelled J-u-c-h-a-t-z. As part of the re-registration process, the Food Quality Protection Act, EPA has gone through a re-registration review of both -- of resmethrin. And in that they did look at some of the developmental and reproductive effects of resmethrin. And it did not find any cause for concern with resmethrin. Methoprene has not gone through as rigorous a toxicological, because there's not as much data there. The toxicity data, however, does not look of concern. And the data that is there is similar; there does not appear to be any developmental or reproductive effects for mammals.

LEG. ANKER:

Okay. Okay. Thank you. And, again, I'm sure I have more questions, but I appreciate everybody coming up here and giving input. I know this is an important topic -- a very important topic, especially for my district. And I have had a number of calls and concerns. And the more we understand, the more at ease, you know, people will be. And, again, I appreciate you coming here to the Leg.

MR. KAUFMAN:

Chairperson Hahn, may I add something to the presentation.

CHAIRWOMAN HAHN:

Mr. Kaufman.

MR. KAUFMAN:

Thank you. I'm a member of CEQ, as I think was announced a couple of minutes ago. I was one of the people who oversaw the production of the Vector Control Plan. I'm also Vice Chairman right now of the Pesticide Review Committee.

A couple of facts need to be stated. In Nassau County, in 2010 when suppression efforts failed, four people died, I think, over 25, nearly 50 people were infected with encephalitis-like symptoms. That was in Nassau County. This year -- that was West Nile Virus I'm talking about.

This year in Texas, I believe, there are 12 dead in a certain area of Texas and several hundred infected. Okay? That data has just come out recently. The problem is, when suppression fails, you have to adulticide when the insect population or the vector population has identified problems to it. That's when Dominick starts dealing with things. But you have actual real world casualties when this West Nile stuff gets out there. That's a problem. That's a statistic.

Four years ago, four people dead in Nassau. We have a much more active program here in Suffolk County. The County's program is oriented towards suppression as a first line of defense. Adulticiding, as Legislator Romaine pointed out, is something done as a last resort when suppression

fails. So, you have to look at the program as a -- if you will, a two-tiered effort. And the problem is, there's real world result.

Also, to answer Legislator Romaine for a moment, ponds are something, they're simply one technique in a battery of, if you will, managing marshes. They really depend upon -- or the installation of ponds really depend upon the individual marsh. That was a giant victory that we got. Rather than a cookie cutter approach of putting in ponds all over the place, ponds were only adopted for Wertheim Refuge because that was a fish and wildlife imperative. They wanted to have ponds so the ducks could settle in there. That's not something that's particularly applicable to the entire County. Ponds, frankly, would not work in a number of County marshes. We all know that.

West Meadow marsh near me, Nissequogue River, which is outside my window, if they put a pond in, I'd have serious problems with it. So not every marsh gets a pond. It is simply one of the techniques depending upon what is appropriate for the area. And that's totally reviewed by DEC, every bloody federal agency out there. It's fully reviewed also by this Legislature. If a plan is submitted, there is a complicated chain of both evidence and also review. It starts with the Wetlands Committee, which suggests it. Then it goes to CEQ, which vets it; goes to the management committees again. And then it comes to the Legislature. So ponds are not necessarily something that are looked at as the sine qua non as the absolutely perfect thing. Again, they are very inappropriate in many, many locations. And again, I point out Wertheim. They did have that imperative over there.

To put it very bluntly, this plan is a balance between protection of environmental health and public health. It gives flexibility to government to respond. You saw several years ago what happened in Nassau. This County has a different emphasis. And bluntly, I don't know if Dominick really hit this enough, as part of the plan, the adulticide usage is way down. We see that at CEQ every year. Prevention is preferred. And that's the primary approach, that the County undertakes both the larviciding and also clearing of ditches to increase tidal flows and reduce vector populations.

The marshes are protected. It's not as if we're going to go in there -- I shouldn't use the word "we", but it's not as if Dominick is going to be allowed to go in there with his Vector Control teams and blow apart a marsh. It's very, very carefully controlled. The equipment and the techniques are very, very carefully monitored. The problem is outbreaks do happen. And that's what you have to watch out for. And that's what the plan was designed to deal with. It's designed to have flexibility.

CHAIRWOMAN HAHN:

Okay. We have a question also from Legislator Gregory.

LEG. GREGORY:

Yes, thank you, Madam Chair. Dominick, early on in your remarks, you were very careful to say with the EIS, that the application -- the intended application that Vector Control is looking to use is very safe. Now that -- what do you mean by a location? Is that in the concentration of the chemicals or where we're going to be spraying or applying the chemicals? Or what exactly do you mean by that? And is there room for human error?

MR. NINIVAGGI:

Well, to answer your last question first, we make allowances for human error. We try not to run an operation where if somebody screws up somewhere along the line something disastrous is going to happen. So we have multiple levels of safeguards in this.

The way we use these materials, for instance, when we're talking about controlling adult mosquitoes with scourge and aerial application, this material goes out at the rate of six tenths of an ounce per acre, which is less than half a shot glass per acre of the material. About two tenths of an ounce per

acre is the actual resmethrin product. So we're using incredibly small doses and we're using it in a very finely controlled droplet size. The idea is to have a droplet that will hang in the air long enough to kill mosquitoes, but not leave any kind of significant deposit. And by using the proper droplet size, and also using the techniques that we use to control the helicopter, we have margins of safety.

One of the important things at droplet size, if you use droplets that are too large, it is possible for materials to get into the water. So that's why we pay a lot of attention to that. The aircraft is actually controlled by a very sophisticated system called the Windham System. And basically we have a weather station on the ground, a weather station at spray height in a balloon, transmitting that information to the aircraft and telling the aircraft where it needs to fly based on computer modeling to have the material land where we want it to land. Because we're using a very fine droplet that tends to get carried by the wind, it's very important to take the wind and other meteorology into account. So we do have, again, multiple levels of control. We have to maintain a good operation.

LEG. GREGORY:

Now, you made an example that -- so is the difference between the safe application just in the manner of dosage or -- because I think you had mentioned six ounces or half a shot glass?

MR. NINIVAGGI:

Yeah, six tenths of an ounce. So we use an extremely small dose, much less than you would use, say, if you were spraying your yard.

LEG. GREGORY:

So what would be an unsafe -- what's the bottom -- bottom level of an unsafe application?

MR. NINIVAGGI:

Well, we're using actually the maximum label rate, because we're dealing with virus. And, you know, we need to get good results. So for this material, that's about as much as you would put out.

LEG. GREGORY:

Okay. But we're right there where it could go -- where it's safe and unsafe, no? Is that -- or am I interpreting --

MR. NINIVAGGI:

No, no. There is margin for safety, you know, ten to a hundred fold, but EPA registers these materials, especially in terms of human health risk. So, you know, if there is small overdose, we're not suddenly creating a problem. But, yeah, again, we also have a lot of technology in place to use the the correct dose.

LEG. GREGORY:

Okay. You wanted to say something?

MS. JUCHATZ:

Actually I think the margins of safety are even greater than that. And I can pull from the EPA review of -- especially resmethrin, what those margins of safety are for public health applications for vector control. I just don't have it off the top of my head. But I think it's several hundred orders of magnitude. I can get that for you.

LEG. GREGORY:

Okay, sure. You know, I'm just not familiar with -- and maybe I ought to come out and just kind of view your operations. I'm just not familiar with it. Just see if there's safety and it's double checks

and all that stuff, just --

CHAIRWOMAN HAHN:

We'll plan a trip; a field trip.

MR. NINIVAGGI:

The type of application we use, especially for adult control is very highly specialized and it's very different than the type of treatments here associated with pest control and with agriculture. We're using very minute doses in a very carefully controlled manner.

LEG. GREGORY:

Just one last question about the notification. Or actually -- well, yeah, you use the Code Red System. And that's, you know, there's a data base obviously or some -- or that you alluded to earlier, that you stated earlier, that contacts the community that's going to be sprayed. But how -- what determines what communities -- do you go out and do checks on a weekly basis or is it complaint driven or how is it -- you know, because we get -- sometimes we'll get two notices a week or it seems like two notices a week, or sometimes it's less, sometimes it's more. There's no set schedule, I guess, is what I'm saying. It seems like we're kind of reacting maybe? Or maybe it's just -- I don't know.

MR. NINIVAGGI:

Well, you know, good integrated, you know, vector management involves acting on the latest surveillance and not simply going every week and spraying. And we have a system. There are about 46 locations around the County that are monitored for West Nile Virus on a weekly basis. And those -- based on the results of those -- the testing of the mosquitoes based on numbers of mosquitoes. We do work at service request. They're not complaints; they're service requests, to get an idea where people are having mosquito problems. And we also look at the history of the area.

One of the things that we found is the southwest Suffolk area, Amityville through West Babylon, into West Islip seems to be the areas where we get human cases most frequently and where we get human cases year after year. And we take that history into very strong consideration as to whether we need to treat it or not.

LEG. GREGORY:

Okay. Yeah, I thought that because I know I get a lot of notices because I cover Amityville and the Copiague areas. And there's always -- there's frequent notices about spraying in those areas.

MR. NINIVAGGI:

Well, we also got more frequent notices than usual. Usually we schedule a treatment, we notice it. It gets done and then, you know, you don't see us for another year. We had a treatment schedule that we had to cancel due to weather. We had another one we had to change the date due to some operational issues. So a couple of notices went out in the same week. We would try to avoid that, when we can, but, you know, this year in particular the weather has been very fickle and it's been very -- frankly nerve wracking deciding, you know, when to go ahead and do the public notice and when not to.

LEG. GREGORY:

Okay. Thank you, Madam Chair.

CHAIRWOMAN HAHN:

Yeah. No, no, no, I have a couple other questions but I really want to be noticing the time because Dr. Gobler's waited for so long. But go ahead, Legislator D'Amaro, and then Legislator Anker.

LEG. D'AMARO:

Okay. Thank you. Is the Vector Control Program we have in place adequate?

MR. NINIVAGGI:

We can always make it better. I think that obviously, like all County programs, we're dealing with a budget crisis. We've lost some staffing. I would certainly love to have them back. We'd always like more. I think in terms of -- we continue to do a good job in terms of suppressing mosquitoes. For some species the weather's been favorable. More resources, we can do a better job. But I think we do a pretty good job of suppressing virus activity.

LEG. D'AMARO:

Well, I wasn't questioning the job that you do. I was only asking -- you know, because we're protecting against West Nile Virus. And I know I've been receiving the alerts and the Health Department releases about cases of West Nile popping up. And so that's why I ask the question, is the Vector Control Plan that we have adequate? How many cases of West Nile have we had this year confirmed?

MR. NINIVAGGI:

We've had one confirmed case so far. One of the things, though, is that --

LEG. D'AMARO:

Wait a minute. We've had one confirmed case of West Nile Virus? Just one?

MR. NINIVAGGI:

Yeah, exactly. One of the things you have to keep in mind is that --

LEG. D'AMARO:

How come I feel like I read about a lot more than that in the paper?

MR. NINIVAGGI:

There is also a potential case where they're still trying to vet that out. But keep in mind is that at this time of the year, we don't know how many cases we're going to get because there's a several weeks lag between somebody getting bit by a mosquito and us knowing that they're sick with West Nile Virus.

CHAIRWOMAN HAHN:

You meant one human case?

MR. NINIVAGGI:

Human case, yes.

CHAIRWOMAN HAHN:

He probably read about the numbers that were found in the samples of --

MR. NINIVAGGI:

Yes, we have about 140 samples of positive mosquitoes.

LEG. D'AMARO:

Oh, I see. Okay.

MR. NINIVAGGI:

That's certainly higher than we normally see.

LEG. D'AMARO:

So those 140 confirmed positive mosquitoes would have had the potential to infect humans?

MR. NINIVAGGI:

That's correct. Most of them were in species that -- like primarily birds but they do bite humans. And we did find a virus in a species that does bite primarily humans.

LEG. D'AMARO:

Right.

MR. NINIVAGGI:

So we look for the mosquito -- we look at the mosquitoes that bite birds, because that's where you see the virus first.

LEG. D'AMARO:

Right.

MR. NINIVAGGI:

What we try to do is do our control before people get sick.

LEG. D'AMARO:

Right. So far there's only one confirmed case in an individual?

MR. NINIVAGGI:

Yeah, that's correct. But, again, you have to keep in mind that we're right about at the peak of the transmission season. So somebody's who's infected, say, today, we're not -- they'll take a few days, two weeks to get sick, they go to the doctor, they get samples sent off. It could be a month. We might not -- if a person is infected today, we might not find out that that's the case until mid-September. That's why we have to go by the mosquito surveillance. We can't wait for people to get sick.

LEG. D'AMARO:

How many confirmed cases did we have last year, roughly?

MR. NINIVAGGI:

We had four.

LEG. D'AMARO:

No, I mean total, animals and people?

MR. NINIVAGGI:

We had four human cases -- four human cases. We had about 81 positive mosquito samples. It was a relatively low year for us.

LEG. D'AMARO:

Are we on track for similar results this year?

MR. NINIVAGGI:

At this point we're about double or more than we saw last year. So we are seeing a lot of positive mosquito samples, again, most of these species that bite birds. And one of the things that we have to be very careful about is making sure -- we know that virus can circulate between birds and mosquitoes in a lot of places without people getting sick. So what we try to do is also look at other factors to see if humans are truly at risk and, you know, do we need to spray an area.

LEG. D'AMARO:

Okay. So, I would assume, then, by -- when you say we have one confirmed case and we had four last year in individuals, that shows that the Vector Program that the County has in place is relatively meetings its target, its goal; it's successful?

MR. NINIVAGGI:

Well, so far so good is the way I put that. We won't know the score until the end of the season.

LEG. D'AMARO:

Okay. I'm talking about for last year, though.

MR. NINIVAGGI:

Yeah, last year, you know, was a low year in general. And certainly it seemed like we were effective. If you look at 2010, which was our peak year for human cases, we had about 24; Nassau had 54, similar population. Now, of course, the circumstances are a little bit different, but it shows you the kind of potential we could have in this County if we were to do anything.

LEG. D'AMARO:

Right. Okay. Thank you.

CHAIRWOMAN HAHN:

Okay. We -- I know that Legislator Anker was suggesting that maybe we get another presentation, or take some kind of tour with you and really get more in-depth about what it is that your Division does. And is that what you wanted to ask? So we can set that up as a Committee.

MR. NINIVAGGI:

Yeah, also keep in mind in late September this year, you'll get my Annual Plan of Work for 2013, which describes the program. And it's very similar from year to year since we put in the EIS. Obviously we you get a chance to look at the Program at that time as well.

CHAIRWOMAN HAHN:

Sure.

LEG. D'AMARO:

And I just want to point out that our Newsday article from August 2nd says there's 125 positive findings this season, which is historically high in mosquitoes samples. Is it 125?

MR. NINIVAGGI:

It changes every week.

LEG. D'AMARO:

Okay.

MR. NINIVAGGI:

We had 125, we got another 21 so that brings us to what, 146?

LEG. D'AMARO:

Right, okay.

MR. NINIVAGGI:

So every week we get a new batch of samples in. Usually -- lately it's been Thursday. We've had a habit of getting in mosquitoes results Friday at four in the afternoon, but so far we've been getting them in Thursday and then we would plan the next week.

MR. KAUFMAN:

Just to amplify something that Dominick was talking about, when you report or you see these reports in Newsday about insects biting birds, that's really an indicator of cycling of the disease throughout a larger overall vector population. So when you see it cycling through the crows and through the bird populations, and you see it in these species that generally just bite birds, from an epidemiological standpoint, you got to -- what they call a cycling, okay, there's more disease out there than people are just seeing. And it indicates that the disease has the potential for breaking containment. That's what he's trying to say.

CHAIRWOMAN HAHN:

Legislator Anker.

LEG. ANKER:

I look forward to speaking more with you and learning more about the process. The question I have is, are you looking into any other method other than chemical and the ditches to keep the mosquito population in check?

MR. NINIVAGGI:

Well, obviously community sanitation is very important. As a matter of fact, our most troublesome mosquito right now is called the Asian Tiger Mosquito. It's a little black mosquito that bites you in the middle of the day that you probably haven't seen before. And those mosquitoes, unfortunately, will bite or breed in any little container of water anywhere around the house. They're extremely difficult to control because, you know -- one of my guys brought in a cat food can that was full of larvae of the species. You know, good luck with trying to control that on a Countywide basis. So, we're looking to improve, you know, education and community sanitation. We're certainly looking to work on -- if there's anything we can do to better manage storm drains and things like that. And, of course, in the winter we're out there clearing ditches and doing all those things to reduce or eliminate standing water, you know, so we'll have less work in the summer.

LEG. ANKER:

Now of course I have more questions, I know -- I know, Legislator Hahn -- but have you looked into the effect on the wildlife? I know you were saying we're getting mosquitoes to help protect the birds, but also the -- but my concern is the chemical getting into the wetlands? Wetlands are the incubators of fish and lobster and -- aqua life beginning. And I'm assuming you researched all that and we're in great shape and there's no effect on this particular population?

MR. NINIVAGGI:

That was looked into very thoroughly and was a major part of the Environmental Impact Statement. And we actually worked at the Stony Brook University and the US Geological Survey and we used state of the art techniques for sampling and finding how much, if any, material got into water. And what we found was that the amount of material that gets into the water is minute and it degrades and disappears extremely rapidly.

None of our current vector control pesticides have ever been detected in drinking water in Suffolk County. And I think that's a very important thing to know. It's totally unsurprising because the type of materials we used don't migrate through groundwater. They degrade rapidly. In many of the Parks we use -- are bacteria released. And, again, this is part of our margin of safety.

CHAIRWOMAN HAHN:

And this is a good transition into our next speaker because we know with nitrogen, ten parts per million might be the human -- or drinking water standard, but there's a much, much lower environmental standard for nitrogen below two parts per million or whatever it is.

So, we're going to hear more about nitrogen in our coastal waters. And I would like to welcome Dr.

Gobler and Walter. And state your name and spell your names for the record. But -- thank you for being so patient and I hope you found the previous presentation interesting at the very least.

SECOND PRESENTATION

MR. DAWYDIAK

Our pleasure. Thank you, Madam Chair, members of the Committee. My name is Walter Dawydiak. I'm the Acting Director of Environmental Quality in the County Health Department. We are fortunate to have today Dr. Christopher Gobler to give us a terrific presentation on harmful algal blooms. And I understood that there they were questioning generally about HAV's, or harmful algal blooms, as well as about the County Capital Program.

If I could just take one minute of your time to give you a bit of background on the County Capital Project, it's 8224, it dates back to 2000, and I've been involved since the beginning of this, and it basically appropriates a modest amount of money, the current cycle, the \$25,000 per year on a rolling basis each year. We started with -- to address cutting edge harmful algal bloom issues that were not being addressed in Suffolk County. And that's really the theme of what we at the Health Department do for our local residents, whether it's drinking water or marine sanitation issues.

At that time in early 2000 the concern was *pfisteria piscicida*, which was an an issue in the Carolinas and a national concern. We found that organism in our waters but not in toxic levels. We also look for alexandrium in our red tide that you hear about, which can cause paralytic shellfish poisoning. That is a human health concern. At the time we documented it, but not with toxins at levels that would harm human health. Subsequent to that time, those levels have been detected and now the DEC does monitor for that routinely.

More recently you'll be hearing about the cyanobacteria which is a health concern and *cochloidium polykrikoides*, or c poly, as we call it for short. That's the cause of a current massive fish kill, massive bloom which resulted in a fish kill in the Peconics.

The four points I want to emphasize is that some of this money has been used for equipment and supplies over the years. Some of it's been used for planning. It's never pure research that we in the Health Department are interested in. We're interested in identifying not only what it is that's out there and whether it's harmful, but what's causing it and what we can do to minimize impacts or eliminate this algal bloom, whether it's pollution control or other measures. That's always our goal and that's always our focus. We've assisted in Resource Restoration Programs and we've improved our sanitation programs such as beat surveillance to minimize exposure to blooms such as cyanobacteria.

When we propose a project, it's always consistent with our central core mission. Again, whether it's protection of public health with bathing beach exposure or central to our environmental health concerns with respect to the Peconic Estuary Program. When we fund a project, we coordinate with other federal and state agencies. This is typically something which is not going to happen for our residents, but for the County stepping forward and helping to lead the way with looking into these blooms.

The last point I wanted to make is that we're always looking to leverage resources. This capital project that we're doing right now can be used as match for our \$600,000 a year Peconic Estuary Program Grant. Harmful algal blooms have not been systematically revisited since the Peconic Comprehensive Conservation and Management Plan was issued in 2001. This is very high priority for us in the County as a program office for the Peconic Estuary Program. And in the coming year we'd like to issue an updated reprioritized HAB strategy. Unless there are questions for me, I'd like to turn it over to Dr. Gobler for the presentation. Dr. Gobler?

SLIDE SHOW PRESENTATION

DR. GOBLER:

Okay, thanks. So I think my identification's on the screen there. Okay, great.

So, I'm going to give you an overview on harmful algal blooms. I wasn't intending on talking too much about the causes but I'd be happy to do that at the end. And I'll try, since we're running a little late, try to go through it at a good pace.

So these harmful algal blooms are made up of phytoplankton and microalgae. And they're very abundant in sea water and you can have over a billion of these cells in a liter of water, which means in a gallon of water you could very well have more of these microalgae cells than you have humans on the planet. So, that's again more microalgae cells in a gallon of sea water than humans on the planet. So, it's a lot.

And, therefore, they play an important role in marine food webs. And generally in manner ecosystems the more microalgae you have, the more productive these food webs. However, we do know in science that there are dozens of species that aren't beneficial to ecosystems, but rather are harmful. So if we have the growth of these harmful algal blooms species to density that can have an ill effect on human health or the ecosystem, we call them harmful algal blooms. And I have a couple of examples shown here. Things that fall within this category are things such as brown tides, red tides. So the water can be different colors but scientists have settled on the idea of harmful algal blooms sort of encompass -- encompass all of these different events.

Many of these blooms are harmful to humans because some of these microalgae make toxins. And typically when humans are exposed to these toxins, it's through filtered feeding bivalves, things like mussels, clams or oysters. An oyster, for example, can filter 50 liters of water in a day. So even if you have a low density of these cells in a liter of water, they can very rapidly accumulate these toxins. And that's most commonly how humans are exposed to such toxins.

In other cases these events are not necessarily a threat to humans but rather a threat to the ecosystem. I'm showing you here a fish kill in the Peconic Estuary where you can see thousands if not millions of fish die because of one of these harmful algal blooms. And in the US this cost the US economy hundreds of millions of dollars on an annual basis.

What I'm showing you here is actually a timeline of these harmful algal blooms on Long Island specifically actually in Suffolk County over the last 60 years. And to cut to the meat of the situation here, while we have three decades from the '50's through the '80's where they didn't really have any of these harmful algal blooms and our shellfish industries were quite robust, in fact, we had some of the leading shellfish fisheries on the east coast of the US for clams and scallops. The last 25 years have seen a disturbing trend with the emergence of multiple harmful algal blooms that are occurring on an annual basis. And you can see this started in 1985 with brown tides. And then in the last decade we've had in succession toxic cyanobacteria blooms, red tides, all occurring in very rapid succession; and in all cases situations, these harmful algal blooms that we have not seen previously.

So, if you look across Suffolk County today, you can see, be it the North Shore, the South Shore, the East End, these different events are afflicting our coastal waters on an annual basis. So I'm just going to take a few minutes to introduce you to essentially five of these different harmful algal blooms and what's being done about them. And, again, if you have questions about causes, we can address that as well.

I'm going to start with this species known as Alexandrium. It creates the compound you see in the middle of the slide which is known as saxitoxin and causes the human health syndrome known as Paralytic Shellfish Poisoning. That compound can stick in sodium channels in mammals. And

sodium channels are what make our muscles fire. And, therefore, if you're exposed to high levels of saxitoxin, you can experience weakness or in the end paralysis. And if your diaphragm is paralyzed, you can't breathe. So, in some states, like Alaska for instance, people die every year from exposure to this paralytic shellfish poisoning because they have such an enormous coastline. And the inability to monitor all that coastline to protect human health. Thankfully it's not the situation here in New York State. The DEC is, in fact, in charge of monitoring shellfish and does a good job of it. But it is a serious human health threat.

Over the last five years, my lab group has been looking at Alexandrium across Long Island, also in Connecticut. And you can see here in this map in the red are areas where we found paralytic shellfish poisoning at levels about a thousand cells -- excuse me -- Alexandrium, the density's above a thousand cells per milliliter, which is in fact the density that could cause a paralytic shellfish poisoning event. And if you're not familiar with it, within Northport and Huntington Bay during six of the past seven years, there's been nearly 10,000 acres of shellfish beds closed to shellfishing because those shellfish have been contaminated with saxitoxin because of blooms with this organism Alexandrium. In some cases the shellfish that have been retrieved and analyzed and had up to a milligram of saxitoxin per hundred grams of shellfish. That would be considered by the FDA a lethal amount. And, therefore, it's good that we've got robust monitoring to open and close these shellfish beds as needed we these blooms.

The trend over the last seven year with PSP has been disturbing. This graph shows you the areas of shellfish beds in Suffolk County that have been closed due to PSP. Importantly, like many of these events, we never had had a PSP event on Long Island before 2005. And you can see it progressively, as the years have progressed, we've had more and more of our shellfish beds closed because they've been contaminated with PSP, with the peak year being this Spring, where we had more than 12,000 acres of Suffolk County shellfish beds close due to PSP.

There is another harmful algal bloom that's a human health in our marine waters known as dinophysis that's been detected recently. I'll cover very briefly. It's toxic because it makes this compound okadaic acid. And also in Northport where we've been seeing these blooms of PSP, we found this organism at enormously high density, frankly. And these are the highest density dinophysis ever recorded in the East Coast of North America; not just the United States. Just because you see cells, doesn't mean they're necessarily toxic, but we've worked with Merrells Marine Biotoxin Laboratory in Charleston, South Carolina. And in harvesting shellfish in this area, we have found that not only is the toxin present, but it is being transferred into shellfish at levels that are above the USFDA action level per shellfish bed closures. And presently we're working closely with NOAA and with the New York State DEC to better understand how they should be and we should collectively be responding to this threat.

Now, these first two blooms I've mentioned, both are very serious human health threats. And the FDA indicates or mandates that the New York State DEC monitor toxins in shellfish in order for those shellfish to be consumed in New York State. But I'm going to mention now very briefly three other harmful algal blooms that are not monitored by the DEC and, in fact, were it not for the efforts of Suffolk County Department of Health Services, they really would not be monitored at all here in Suffolk County.

The first I'm going to mention is brown tide. This has been around the longest of all these events. Goes back to 1985. And you can see the water here quite dense, quite brown, a billion of these cells per liter. It's had a serious impact on Long Island ecosystems and it continues to be an issue. I'm showing you here the blooms that have occurred on the South Shore over the last five years. I didn't put in 2012, but we had another very intense bloom in 2012. And most recently these blooms have been affecting our South Shore waters, Great South Bay, Moriches Bay, and Shinnecock Bay.

Unfortunately blooms were responsible for the collapse of Long Island's scallop fishery. The figure you see there are the landing where scallops meats, which were hundreds of thousands of pounds per year through the 1960's, '70's and '80's. With the onset of brown tides in the Peconic Estuary in 1985, this fishery collapsed. It subsequently was determined that this species that makes up the brown tide is acutely toxic to scallops. And, therefore, that was the cause of the collapse in this industry.

The collective economic impact in Suffolk County since that time has been over \$100 million. Because at the time this was actually the largest economic industry on eastern Long Island. These blooms were also detrimental to eelgrass beds. The figure here shows the change in the distribution of eelgrass beds following the first brown tide blooms. Many of these eelgrass beds have not recovered. And eelgrass are a vital habitat for many of our coastal bays and estuaries.

I'd just like to briefly mention that since these blooms started in 1985, Suffolk County Department of Health Services has been actually monitoring and collecting data regarding these blooms. And it's actually been instrumental for scientists around the globe understanding what are the causes of brown tides. This is a data set that is really unparalleled when you look around the country, around the world, it really is robust with regards to space and time and has allowed scientists to really understand what are the causes of these brown tides. And it continues to be a very important asset to scientists for assessing and understanding the health of our bays and estuaries.

Another harmful algal bloom that's actually happening right now in the Peconic Estuary is known as *cochlo dinium polykrikoides* and this aerial photograph is a very nice view from the Peconic Estuary looking south in the Shinnecock Bay and the Atlantic Ocean, beautiful blue water we all want to see. But unfortunately during the late summer the last seven years the waters look more like this. And so this is a bloom caused by this {dinophyalate} *cochlo dinium polykrikoides* that forms these aggregations at tens of thousands of cells per milliliter. And, again, this is harmful algal blooms that showed up suddenly in 2004, had never been seen previously and has come back every single year.

And I mention the County's robust monitoring program. And you can see the water. This is something everyone would notice if it was around before that. So it was a new event in 2004 and it's never left. It comes -- happens every year. And our Bays are looking like this when these blooms occur again, these dense aggregations with tens of thousands of cells per milliliter. This is not a human health threat but rather it is a threat to our fisheries. This particular species is considered {igfield} toxic meaning that it can kill fish very rapidly.

Over the last several years the most common incidents of fish kills have been in things called *powmits* that are shown here. These are commonly used in Shinnecock Bay and the Peconic Estuary to catch schooling fish. Fishermen during these blooms will go to recover their nets in the morning and find that all the fish that they had captured were dead because the fish could not escape one of those dense aggregation of blooms. And the pictures below that are from our Marine Lab at the Stony Brook/South Hampton Facility where it would have fish in captivity. We circulate water from the Bay. If that circulating system brings in Bay water, it can very rapidly bloom to a fishkill. And we had an event just I believe ten days ago in the Peconic Estuary where there was a fish kill with hundreds of fish that had died because of a very dense occurrence of this bloom in a creek on the northern extent of Flanders Bay.

And just to confirm, we actually have isolated this organism in the lab and conducted experiments. And this experiment here shows if you were to isolate these sheepshead minnows and exposed them to bloom water, how long the fish live. And you can see if you don't dilute that bloom water, the fish do not last more than 30 minutes. And we saw a similar, a little bit longer, maybe two hour time to death for fish in that fish kill just two weeks ago in the Peconic Estuary, ten days, ago, excuse me.

Currently I'm being supported by Suffolk County Department of Health Service to investigate these blooms and we're specifically trying to better understand what the impacts of these blooms are on fish population in Suffolk County. And we're also trying to understand the root causes of these blooms in the hopes that once we understand these causes, we can taken preventive measures to mitigate the bloom events.

The last harmful algal blooms I'll mention occurs actually in fresh waters, not in marine systems and they're caused by a group of algae known as cyanobacteria. I'm just showing you two examples of the cells here, microcystis and anabaena that are common. Fresh water toxic cyanobacteria and below them are the toxin they synthesize. Microcystin which is a hepato toxin meaning that it can target the human liver and anatoxin A, which is a neurotoxin. Its original name was actually Fast Death Factor so you can get a sense of -- it's a serious neurotoxin.

These toxin and cyanobacteria blooms are common in freshwater systems and they've been expanding globally. They are most common in lakes that are poorly flushed or lakes that receive high nutrient loads. Toxic cynobacteria was first reported and discovered on Long Island in 2004. And shortly after that time I had conducted a survey of the lakes across Suffolk County. The results are shown here. These are the levels of microcystin. This is a toxin made by that algae microcystin.

And to put these levels in perspective, the World Health Organization declares four micrograms per liter or lower a low recreational health risk. And you can see across the County there are several lakes that are above that level. The World Health Organization considers 20 micrograms per liter a moderate health risk. And you can see you even have systems that fall into that range. And I should mention these are averages. So some lakes are very high levels.

I've been working with Suffolk County this year and previous years to look at the threat of these toxic cyanobacteria blooms in Suffolk County's bathing beaches. So while the County's been looking at pathogenic bacteria, we've been looking at toxic cyanobacteria to ensure that the levels are lower in bathing beaches that Suffolk County residents might be utilizing. And similarly we're looking into what are the causes of these events as well.

So just to wrap up, these harmful algal blooms can be harmful to humans, animals, economy and ecosystems. They're an increasingly common phenomena here in Suffolk County. And we're conducting research to both assess the threat level and understand the root causes. I didn't put any more on that, but I'd be happy to answer any questions.

CHAIRWOMAN HAHN:

Thank you very much. Do we have any questions for the Doctor? This is the thing we voted on last week that -- last meeting that prompted me to invite the Doctor here. So, I'll let you begin, Legislator D'Amaro.

LEG. D'AMARO:

Thank you very much for your presentation; it's very impressive. And obviously you're working on some very sophisticated type of monitoring for -- to identify all of these different types of bacteria, I guess they are?

DR. GOBLER:

Algae and bacteria.

LEG. D'AMARO:

Algae and bacteria. My questioning came up a couple of weeks ago with respect to the funding from Suffolk County. So, who are you with? Who do you represent?

DR. GOBLER:

I'm a professor at Stony Brook University.

LEG. D'AMARO:

Okay, my alma mater, by the way.

DR. GOBLER:

Okay.

LEG. D'AMARO:

So you contract with Suffolk County to do some of the things that you identified here today.

DR. GOBLER:

That's correct.

LEG. D'AMARO:

And how long have you been doing that with the County?

DR. GOBLER:

I would say on and off for the past, I believe, six years. But it's not -- it has not been a consistent basis.

LEG. D'AMARO:

Yeah. You know, my questioning was really -- I was looking for basic information because we're in tough dire fiscal straits.

DR. GOBLER:

Yes, I understand that.

LEG. D'AMARO:

As across the whole country.

DR. GOBLER:

Yep.

LEG. D'AMARO:

And I knew even Stony Brook is probably experiencing the same problems. And so, you know, we just want to be a little careful when we go ahead and keep authorizing studies of this type that we're making some type of progress. Is there any encouraging news? Do we know what the causes are, what can be done to mitigate these very, very harmful effects from this type of bacteria or algae? And I just didn't seem to get any answers at the time. So you perhaps, and I appreciate you being here, could tell me if we have yet -- have we reached a point where we've done the monitoring, we've identified the problem. What's the next step after that?

DR. GOBLER:

Yes. So good question. And it really would depend on the particular bloom. But we have over the years working with the County made significant progress in identifying cause of these blooms. I didn't address that in this presentation, but I can briefly say that in nearly every case, there's a very strong link between nutrient loading from land and the occurrence of these events. And, again, it depends on the individual event. But just to give you an example, the study in Northport we've been able to identify that the nitrogen source -- that the blooms there that are causing this PSP, paralytic shellfish poisoning --

LEG. D'AMARO:

Right.

DR. GOBLER:

-- are being promoted by nitrogen. And the nitrogen's coming from a waste water source. And as I'm sure you likely know, in Suffolk County we have more than 70 percent of the residents on -- not connected to sewage treatment plants, but rather on septic tank and cesspools. So these sort of findings can then lead to managerial actions.

LEG. D'AMARO:

I appreciate that. I need to understand that. Okay? Because, you know, you're using some words that I think all of us are very interested in, because we do have this ongoing goal with dealing with our sewer systems and we realize that most of Suffolk County is still septic system. So are you saying, and again, I'm not a scientist so I'll talk in layman's terms, is there a direct correlation or can you directly trace back some of these harmful effects to the fact that Suffolk County is so widely using septic systems as opposed to being seweraged?

DR. GOBLER:

Yes.

LEG. D'AMARO:

Okay.

DR. GOBLER:

There's been studies done on most of these harmful algal blooms. Again, I think, even -- let's see here. This is a slide I didn't show you, but what I'm citing here is there are studies that have been done to look at the links of nitrogen loading these harmful algal blooms. And, as you can see, at least in the case of these four, we have done the research to make these very strong connections. And you'll note the timeline that these blooms are becoming more intense. And we're aware, the nitrogen levels in our groundwater that's entering our bays and estuaries are building up with time, so.

LEG. D'AMARO:

So those four -- what are those? Type of organisms or --

DR. GOBLER:

These are each -- these are four different harmful algal blooms and --

LEG. D'AMARO:

Okay, blooms. Are -- more and more present in our waters, these have been studied and can be tied or correlated to the fact that we're using septic systems and it's seeping into our groundwater and probably then into our waterways somehow. And what you're saying is that we're seeing more and more of this. And have all four of those identified blooms had an impact on fish? Shellfish or on humans?

DR. GOBLER:

Well, all of the above, but not for each one. So that is the two on the one extreme left and right are a threat to fish and shellfish respectively; whereas the two in the middle are a threat to human health.

LEG. D'AMARO:

Yeah, which one wiped out the scallop industry?

DR. GOBLER:

That's the brown tide, the one on the far right.

LEG. D'AMARO:

And that last occurred in 2011?

DR. GOBLER:

2012 we had one occur on the South Shore between May through July.

LEG. D'AMARO:

Okay. And that was responsible for wiping out the scallop industry on Long Island which was our largest industry at the time.

DR. GOBLER:

It was the largest bay scallop fishery on the East Coast, yeah.

LEG. D'AMARO:

Okay, right. Thank you. And that happened in 1985?

DR. GOBLER:

The first brown tide occurred in '85 and occurred in consecutive years, yeah.

LEG. D'AMARO:

So here we are now in 2012 and we've been studying these different types of causes and we seem to have -- at least the appearance to me is that you have a handle on what's causing some of this.

DR. GOBLER:

Yes.

LEG. D'AMARO:

So, other than sewerage Suffolk County, what else can we do to try and reverse this or stop the trend that we're seeing more and more of this?

DR. GOBLER:

Well, beyond the -- the nitrogen makes things worse and more intense. But in other cases, it's a matter of understanding where the sea population is coming from that's causing these blooms, for example. In many cases there's one particular location where the blooms will start and they'll spread out. Some of the organisms that form these blooms, their life cycle -- well, it's complicated.

LEG. D'AMARO:

Sure.

DR. GOBLER:

And the blooms start out as actually little seeds at the bottom of the Bay. So another focus of research is if you can find out where the seed population is, you can actually begin to target that seed population. That's what we're doing in the case of both PSP events and these cochlodinium events on the Eastern End of Long Island.

LEG. D'AMARO:

So you can start to -- you look at the very early signs where it may occur; is that what you're saying? And then you target those areas?

DR. GOBLER:

Right. And the first steps are finding those seed populations. And in fact thanks for support from

Suffolk County in the last year we actually were able to first -- for the first time ever identify that at least one of these events -- actually -- or one of these organisms makes the seed populations. That actually wasn't even known before 2012, frankly.

LEG. D'AMARO:

Okay, so that's progress, then.

DR. GOBLER:

Yes, sir.

LEG. D'AMARO:

Yeah. All right. And so do you feel, then, with the ongoing research that you're doing and monitoring that you're doing, that you can get to a point where you can begin to reverse that trend?

DR. GOBLER:

Yes. Because there's also -- there's cutting nitrogen loads, but another approach that can be taken, again, we're looking into is we've lost a lot of our shellfish that would filter the water, keep the water clean. And that's actually possibly a second root cause here. So if we can rebuild shellfish docks again in targeted locations --

LEG. D'AMARO:

Right. That kind of compounded the problem.

DR. GOBLER:

Yes.

LEG. D'AMARO:

I would guess. The whole filtration system.

DR. GOBLER:

Exactly. It's like having a fish tank with a filter.

LEG. D'AMARO:

Yeah, right.

DR. GOBLER:

Turns green.

LEG. D'AMARO:

And so you see that progress being made. And is there any particular location in Suffolk County where you trace back these harmful effects?

DR. GOBLER:

It really depends on the particular organism.

LEG. D'AMARO:

Okay.

DR. GOBLER:

But again --

LEG. D'AMARO:

But for each organism that you've identified and studied -- and the reason why I ask that question is because if it's due to nitrogen levels and the fact that we have septic systems, you know, we're

looking at right now what our priority area should be. And I'm not so sure -- I don't know to what extent we took into account this type of information. So is there -- can you say with any meaning that, okay, this particular -- like red tide, for example, or PSP, whatever it may be, is trace -- is based on years of observation in certain areas and then traceable back to certain causes within the County?

DR. GOBLER:

Yeah. Because the -- hand in hand with the excessive nitrogen is core flushing of the water. So there is not enough tidal flushing. So if the areas that are poorly tidal flushed can be matched to the areas of high nitro loads, that's generally where we find these events. And, you need, you need to make remedial -- take remedial measures; that would be a key place to do that, if your consideration was effect on surface marine waters.

LEG. D'AMARO:

How insufficient is your funding to do the battle that you would really like to do to try and reverse the trend?

DR. GOBLER:

More support is definitely useful. You know, I mean if we had -- the more support, the more people you have more, the more data that can be --

LEG. D'AMARO:

But don't you get frustrated after years and years where you've come so far in your research and you're identifying causes now, and you can tell me some of the things that might be traceable with some scientific certainty, I guess, you know, in order to take the next step, I would assume could be very expensive to do that.

DR. GOBLER:

Yes. I don't need to -- particularly, you know, if we're talking sewerage Suffolk County, I'm sure you're familiar with the general range of the --

LEG. D'AMARO:

Well, short of that --

DR. GOBLER:

Yeah, but --

LEG. D'AMARO:

-- like you had mentioned identifying the initial stages --

DR. GOBLER:

Yep.

LEG. D'AMARO:

And perhaps mitigation measures that we could do.

DR. GOBLER:

Yep.

LEG. D'AMARO:

So does your mission for the County include making those types of recommendations and presenting them to the Health Department?

DR. GOBLER:

Yes.

LEG. D'AMARO:

And that's being done.

DR. GOBLER:

Yes, on a -- like you said, on a scale; not necessarily the ultimate scale but yes.

LEG. D'AMARO:

Right. Not Countywide. And have we had any success?

DR. GOBLER:

With mitigating these events, you're saying?

LEG. D'AMARO:

Yeah.

DR. GOBLER:

Not yet I'd say.

LEG. D'AMARO:

But you're optimistic?

DR. GOBLER:

I am optimistic. It's going to take a very large effort, but, you know, and in some case, there's more research needed to better understand, you know, I guess, for example putting out the seed populations.

LEG. D'AMARO:

Yes. Okay. Thank you.

DR. GOBLER:

You're welcome.

MR. DAWYDIAK

Madam Chair, if I may just expand on that, just one moment, Walter Dawydiak, again, for the Health Department. I just wanted to clarify to -- supplement some of the answers to Legislator D'Amaro's questions. They were all very, very good questions.

First on the state of the science, we're very fortunate to have Dr. Gobler, a world class researcher in our own backyard to help support our efforts. I will say that there are certainly a growing and mounting body of evidence linking eutrophication and nitrogen to some of these harmful algal blooms. Biological systems are complicated and other factors such as climate change and other biological issues come into play. I could tell you that, to my knowledge, the State Department of Environmental Conservation and the Environmental Protection Agency have not offered any final opinions as to the causes and solutions to this harmful algal bloom. We're working together to that effect.

Now the two processes that you should know about are the Peconic Estuary Program and the County Onsite Wastewater Project. The Peconic Estuary Program has not really systematically revisited this issue to look at the state of the science and management in a holistic way since the Management Plan in 2001. This is a priority for us in the Program Office, to work with Dr. Gobler and the agencies, these stakeholders and citizens to evaluate this and come up with an updated strategy and

bring to bear the resources that we need to address this problem.

You may recall that back in the 1990's there was a Capital Project called Brown Tide that resulted in a million and a half dollars of federal funding going to investigate management and manage the brown tide. That answered a lot of the questions about the role of organic nitrogen and kicking off a brown tide and the destabilization of a grazing community in terms of limiting brown tide. So a lot of what we know has been the result of these efforts. This is something that we hope within the next year to come up with a refined strategy and position, this systematic way, to help leverage additional resources to solve this problem.

The other issue has to do with the wastewater issue. And you correctly cite, Legislator D'Amaro, that some of the large sewerage studies are not going to solve the problem on a Countywide basis. The County Comprehensive Water Resources Management Plan found in a nutshell that we've done a good job protecting drinking water, which is our core public health mission. We've done not so great a job protecting ecological integrity. The standard for drinking water, again, is ten. Surface waters need point five, which is 20 times lower. And we have groundwater on average, which is three to four parts per million, which is almost ten times the level needed for a healthy ecosystem.

We're embarking up on a Quarter Percent Project to look at innovative and alternative onsite treatment systems, not necessarily to meet 10 parts per million but the removal of at least 50 percent of the nitrogen. And within about a year we hope to have answers of what some regional solutions could be, what they're going to cost, what's going to happen if we do nothing to our groundwater and our surface water and what's going to happen if we implement some of these regional and subregional changes. So, that, again, is a process which has been set in motion. It's been supported by this work. It will complement it that we hope will result in answers in the foreseeable future.

LEG. D'AMARO:

I'm glad to hear that you're drawing on work that's being done. Did I hear you say on-site systems? What did you mean by that?

MR. DAWYDIAK:

About 70 percent of the population --

LEG. D'AMARO:

Right.

MR. DAWYDIAK

-- is not served by sewers right now. One system, which has been approved for 1,000 to 15,000 gallons per day is called a Nitrex. That would cost about \$35,000 for an individual homeowner with about a thousand a year operation and maintenance. That bill would run into the billions if we implemented that regionally. We've been told that there are less costly solutions to reduce nitrogen to a lower scale. We need to look at those and test those systematically and come up an Impact Assessment to see what those are going to do to surface waters to help to solve the problem. The hope is to come up with some kind of systematic regional plan which is founded and supported by the best possible science so that we can leverage federal and state buy-in, because it's just unlikely that we as a County can do this on our own.

LEG. D'AMARO:

Right. It's the same for putting in sewers.

MR. DAWYDIAK:

Absolutely.

LEG. D'AMARO:

So what's the timeline on something like that?

MR. DAWYDIAK

Timeline is that we're hoping to appropriate the money in the foreseeable future of this year. The program is right now on an 18 to 24 month timeline. We're hoping to accelerate that if resources permit internally in the Health Department. So hopefully by the end of 2013.

LEG. D'AMARO:

Okay. Thank you.

CHAIRWOMAN HAHN:

I'm going to take the liberty of asking a couple of questions myself. I didn't want to start here but because you just mentioned the Nitrex System and what you did, Walter, I'm going to start with that. Okay, we know drinking water standards is ten parts per million. Surface water standards point five parts per million.

MR. DAWYDIAK:

That's a rounded off number. It varies by water body, point 45, point 5. The point 5 was a number that's rooted back in the 1970's and hasn't changed a whole lot.

CHAIRWOMAN HAHN:

So, really we need to be getting towards that point five parts per million and whatever we're going to, like, encourage.

MR. DAWYDIAK:

Yeah. The performance standard in groundwater is one of those technical issues we need to grapple with. You don't need to hit point 5 in groundwater. Two might be sufficient with denitrification biological update and flushing to get close enough.

CHAIRWOMAN HAHN:

So -- but there's a really nice map in here that shows Suffolk County, shows the red dot -- near Huntington Harbor with a PSP DSP, out on the East End and on the South Shore in the Great South Bay, in your Comprehensive Water Resources Management Plan and the County On-site Wastewater Project, clearly there would be priority areas whereby we would need to target this so we wouldn't have to get all of the 70 percent of Suffolk County's septic systems turned over immediately. And we would have priority areas. And those areas that are closest to Where these brown tides, red tides, and everything else, HAB are occurring, might be where we would want to start. But we would want to get closer to that point 5. Maybe inland we can get closer to somewhere below, you know, for groundwater recharge. But really when we're talking about spending County dollars to somehow incentivize these new upgraded systems, we really want to maximize the latest technology we have to get us what is the known standard for ecosystems.

MR. DAWYDIAK:

Yeah, like you said, all your points are very well taken. You're right on the money at the end of the day. We need a map with the highest priority areas. Those are typically going to be areas with pre-existing lots which they'll conform to current density standards for unsewered development and those that contribute groundwater to the most impacted embayments.

CHAIRWOMAN HAHN:

And then you also need to understand the soil composition, how long it takes to get to surface waters travel time, but also what's in the soil, the density, what it might take out, different types of compositions may do a better job in filtering than others. And as we all know how Long Island was formed, that's going to vary incredibly all over Suffolk County. But your Department has that kind

of information to --

MR. DAWYDIAK:

We have very sophisticated models and we know the areas and the contributing time. Nitrogen is a fairly conservative substance barring sedimentary denitrification, which is a whole different series of processes. Once nitrogen goes out every septic tank into the groundwater, it's going to stay there and reach the surface water.

CHAIRWOMAN HAHN:

Okay. So do these organisms, and that's what it is, right, the micro algae, do they die off completely in the winter?

DR. GOBLER:

It depends on the species. So some of them I mentioned seed populations.

CHAIRWOMAN HAHN:

Yes.

DR. GOBLER:

Actually as soon as the bloom ends, they form these cysts or seeds and actually just go to the bottom and sit and wait 'til next year.

CHAIRWOMAN HAHN:

Maybe this is a dumb question. Are they like invasive species, the micro algae?

DR. GOBLER:

In some cases people feel that may be the case.

CHAIRWOMAN HAHN:

And where do they find them naturally? And are there predators for them there? Am I using the right --

DR. GOBLER:

Yeah.

CHAIRWOMAN HAHN:

-- terminology?

DR. GOBLER:

They all should have natural predators. In some cases we get the high densities because there's not a lot of those natural predators. So, yeah. And some of them do -- as to overwintering, some of them -- when the blooms are overwintering, they're around but just very little levels.

CHAIRWOMAN HAHN:

So does water temperature, because I vaguely remember reading, you know, the warmer the water, the more intense these blooms are. I don't know -- I can't remember you saying that today, but does that affect like -- just the warming that we're seeing in some ocean temperatures?

DR. GOBLER:

It really depends on the individual species. That is they all have their optimal temperature. So some of them -- in some cases if it gets really warm, and it just shifts in the time of year when they show up, they'll show up earlier in the year. In other cases, you're right, warmer temperatures will make them more intense. But in most cases they have an optimal temperature and, therefore, then they show up earlier in the year.

CHAIRWOMAN HAHN:

So, do you have a sense of which may be invasive, which might have natural predators? I don't want to -- if anyone read the children's book -- I've referred to this book so many times, I need to find it -- The King, The Mice and the Cheese, the King had a mice problem, brought a cat, sending out a cat problem, da, da, da all the way down to bringing mice to get rid of the elephants. But, you know -- (laughter)

DR. GOBLER:

In some of these cases, for example, the two -- the PSP and DSP, there were monitoring programs back in the '70's. And that detected the cells there. So the situation in many -- at least in those cases is that the cells have been around, but the conditions there for -- but at much lower levels. And, therefore, the only assumption -- the conclusion is that the environment has changed in the last 30 years to make our waters more conducive for the cells to proliferate to a higher density.

CHAIRWOMAN HAHN:

So do you think -- if it's tied to nitrogen and nitrogen -- nitrogen loading, and over the years the nitrogen loading has slowly grown greater and greater, greater because the population has grown greater and greater and greater, that we killed off a predator that --

DR. GOBLER:

Not necessarily. That is -- many -- most of the predators -- many of the predators wouldn't necessarily be sensitive to the nitrogen. But there is something in science known as a feedback loop, whereas you have more brown tide, the brown tide's toxic to the shellfish, you lose your shellfish, the shellfish would have naturally filtered the brown tide. And now the brown tides can get more intense. And also with fewer shellfish, other types of these algal blooms can pop up. So that's the one type of predator we have lost. That's the filter feeding bivalves.

CHAIRWOMAN HAHN:

But that was because of the tide? So it's kind of -- question of how that --

DR. GOBLER:

Partly. It depends on the case. On the East End the scallops, that's certainly the case. In the South Shore we do know there is an overharvesting of the hard clam fishery from the late '70's to the early '80's. And then following that the brown tides took off.

CHAIRWOMAN HAHN:

Got it. Okay. I think that was everything I had. Legislator Anker?

LEG. ANKER:

And as always, thank you for coming here and presenting your presentation. You know, it sounds like almost like a disease. You know, the cells multiply, the plankton multiplied. And we have a problem. It's usually due to the -- the balance in the environment is wrong. We do know, we found, thanks to the research, that we do need to work on our sewer system. And we need to work on our pesticides issue, because, of course, those -- the pesticides going on the lawns create higher nutrients. And we know that.

So with that in mind and having, you know, our Vector Control here, and as I -- as we transition from one presentation to your presentation, do you have a concern -- and not to pit each other against, but do you have a concern with the amount of aerial spraying or the briquettes, herbicide briquettes that are being placed in our wetlands, that it could be hindering the healing of our waters. What are your thoughts?

DR. GOBLER:

So just to clarify the one point, the -- it would be fertilizers that contain the nitrogen that are

promoting the blooms; whereas the amount of nitrogen in the past -- there's certainly nitrogen and some pesticide compounds, but that wouldn't -- that's not contributing tremendously to the overall nitrogen load. So there's definitely a separation there.

There hasn't been a lot of research into how the pesticides would affect the harmful algal blooms so it's hard to directly comment. You know, the testimony we heard here indicated that it wasn't in effect on the marsh life. And if that's the case, then it'd be hard to make a link to this, harmful algal blooms.

But, you know, we're dealing in this case with microorganisms and there's less research on that. And there's other -- the predators in the water of these micro algae are known as old plankton and they're very tiny. And there's been some research, but I'm not familiar with all of them. And, you know, your point's well taken. In the case of the clams, if you lose your clams, the ecosystem shifts. And if there are -- similar things could happen in the plankton as well so -- but I'm not aware of direct links between pesticide use and these harmful algal blooms.

LEG. ANKER:

Could you do research on that or could you find out if there has been research done on that?

DR. GOBLER:

Yes, certainly it wouldn't be a tremendous amount of work to look into the research on, for example, the effects of these particular compounds and things like ciliates, protozoan grazers that would typically eat these harmful algal blooms.

LEG. ANKER:

I know my daughter, when she was in fourth grade, she's now 20, she wrote a science project on the effects of pesticides. And, you know, she said, "mom, did you know a lobster is actually part of the roach family?" Can you comment on that?

DR. GOBLER:

I think they're both arthropods. So, yeah, yeah.

LEG. ROMAINE:

Have roach for dinner?

LEG. ANKER:

But, I mean, you know, again if we're using pesticides to kill roaches, you know, is it affecting lobsters? That's a question.

DR. GOBLER:

Right. It's a little out of my field or purview so I couldn't --

LEG. ANKER:

Okay. And, again, I think it's important we consider the entire environment. And also we've got to consider the risk and benefit factor. I know we're trying to protect our residents here in Suffolk County, but, you know, you look at the overall perspective and as we're trying to save people from, say, West Nile Disease, or Lyme's Disease or other diseases that are out there that we're finding, we also make a disturbance in the natural balance of our environment, creating even, you know, more issues or creating issues where people go out and eat toxic clams or oysters that could die. So, you know, we have to get a full understanding of how one issue, one department affects the other. And we appreciate all the time and effort. And we are so fortunate to have Stony Brook and Brookhaven National Lab and Cold Spring Harbor and so many of these other educational research institutions --

CHAIRWOMAN HAHN:

Cornell.

LEG. ANKER:

Cornell, yes, absolutely, helping us understand that. So, again, I just wanted to thank you for coming here and presenting.

CHAIRWOMAN HAHN:

Thank you. Legislator Gregory.

LEG. GREGORY:

Thank you, Madam Chair. There are a lot of great questions that were asked. I just have one simple question. I think in your charts you said -- particularly as it relates to brown tide beginning in 1985, we started to see an issue. What was the difference from then 'til now to prior to 19 -- is it just simply there was an increase in development or what?

DR. GOBLER:

Well, with all these events, again, if there is a link to nitrogen, one difference would be there's higher -- higher loads of nitrogen going from groundwater into our coastal systems now than there was then. And then -- so that -- that's the, you know, the simplest explanation to all of it. And there's lots of intricacies beyond that as well. 1985 happened to be, I believe, a drought year, which was followed -- preceded by an extremely wet year and, therefore, the year before put a lot of nitrogen in the system that decayed and then -- septic conditions are perfectly in that particular year for the brown tide.

LEG. GREGORY:

Okay. And one last question. I know you're -- you're on the research side, but has your research really transgressed to the, I guess, policy sides? Is there any outreach to the local Towns and Villages on your findings? If it met zoning or, you know, some type of Local Laws, Town Laws?

DR. GOBLER:

Certainly I give a lot of public presentations, particularly on the eastern Long Island. I've probably given at least a dozen over the last four mosquitoes or so. The presentations have been invited by the Town of Southampton and East Hampton as presentations are shown on their public access television. And then I'm hopeful that the information can be used to inform public policy. But, as a scientist I'm -- I mis -- I stop at giving information out there and then hand it off to individuals like yourself to run with it.

LEG. GREGORY:

Okay. Thank you for your time.

CHAIRWOMAN HAHN:

Legislator Romaine? No? Okay.

LEG. ROMAINE:

I would simply say I followed all of your research through my friend, Citizens Campaign for the Environment and a number of others, the Bay Keeper, who have kept me apprised of some of the developments. And I will tell you, we may not know it, but I truly think that we are facing a crisis with our waterways. Whenever you flush a toilet and it's not going to a sewer or an alternative on -- a site, wastewater treatment like a Nitrex, you have a problem. Because you're putting, you know, 40, 50 milligrams per liter of nitrogen into the groundwater. And let me tell you, it's only a matter of time. It's travel time.

If you're in the middle of the Island, it may take 20 years. But it's going to hit the Bay. It's going

to hit the Sound, depending on where the divide is -- you live. My problem is I've watched our bays now, particularly our southern bays, Great South Bay, Moriches Bay, Shinnecock Bay, be declared impaired waters. I've watched these brown tides affect them. I've watched the tide now threatening Peconic Bay, which is relatively pristine by comparison because there's less development. And I know unless we develop a better system of handling waste nitrogen, we are going to lose this battle.

I'm going to take a community that I represented for a period of time that I know very, very well: Mastic/Shirley, Mastic Beach, you built on a lot of small lots. And when you build on small lots and you put up a house, you're going to put two things on that lot: A well and a cesspool. And it was only a matter of time before the people in that community were drinking either their neighbor's cesspool or their cesspool.

1980's -- 1980 to 1985 I served as the first Director of Community Development for the Town of Brookhaven. We spent a ton of money. We made a special appeal to Washington. We got extra funds to install public water mains in that area. But that did not avenge the nitrogen that would eventually go into Forge River, Great South Bay, even Moriches Bay. And that is part of the problem. And there's other communities similar to that on the South Shore.

Unless we develop a system, and contrary to my good friend Wayne Horsley, we are not going to sewer this County. We just do not have the resources to sewer this County, nor would it be appropriate. But we better have better onsite wastewater treatment systems. I'm happy to see that the Health Department has approved systems like Nitrex, which can get it down to five milligrams per liter of nitrogen, if I'm not mistaken. Is that the standard, Walter, that they were able to achieve?

MR. DAWYDIAK:

Better performing systems were down to around three parts per million.

LEG. ROMAINE:

Which is really good and then the Best system also, but there are systems out there like Nitrex and Best and others that we have to think about doing. The problem is the expense. But when you compare that expense per lot to sewers, they actually might be cheap. But unless we move, unless we act, we're not going to be able to reclaim our Bays. And that's my greatest concern, that we're giving these organisms the nutrients that they need and nitrogen to plague our bays and our waterways and change Long Island irreparably. And I see similar things in the Sound that are getting me concerned.

So, I'm just going to leave it there. But I'm going to say that this Legislature, we may be in a budget crisis, because that's right in front of our nose, but what we may not see is out in the distance the danger that's coming to our environment and our ecology, that it will be expensive to resolve but we're ignoring it because of the expense. But it's going to have far more devastating impact on this County in my view in the long run.

CHAIRWOMAN HAHN:

Thank you.

LEG. ROMAINE:

And that if we don't do a strategy now, we are going to fail in this effort. And that's why I considered this absolutely critical. Thank you, Doctor.

CHAIRWOMAN HAHN:

Thank you, Legislator Romaine. Thank you very much for being here and for all the time you spent here today to educate us.

INTRODUCTORY RESOLUTIONS

Okay, we're going to get to the agenda and I would like to take -- I would like to make a motion to take 1711 out of order, because we have some individuals waiting here in the audience to discuss Introductory Resolution number 1711. So I'm going to make a motion to take that out of order, seconded by Legislator Anker. On the motion to take 1711 out order, all those in favor? Opposed? Abstentions? So **1711** is in front of us. Introductory --

LEG. ROMAINE:

Motion to approve.

CHAIRWOMAN HAHN:

I'll make the -- motion to approve. And the resolution is **Amending the Adopted 2012 Operating Budget to transfer funds from Fund 477 Water Quality Protection, amending the 2012 Capital Budget and Program, and appropriating funds in connection with Suffolk County Eelgrass Restoration Initiative (CP 7180). (Co. Exec.)** And so we have a motion and I'll make the second. And on the motion, Director Lansdale, did you want to bring some individuals forward? We're ready to go? Yeah, I think you got -- you probably have support here, but you're here. So we're giving you the respect of just telling us a little bit about the project. And I know that I -- Legislator Gregory and I went out to -- where were we? Southold? Cedar Beach. And we heard lots of good stuff. But, if you can -- Frank, hi.

MR. CASTELLI:

Yeah, hi, hi. Thank you. This project was initially funded by Quarter Percent Water Quality funding back in 2008. It was initiated during 2008. This second stage was recommended by the Water Quality Review Committee last July; July 2011. And we are now coming to the Legislature to appropriate that money out of the Quarter Percent Water Quality Fund.

Chris Pickerell is here from Cornell Cooperative Extension. He's the Project Manager for this project. And I'd just like to add that this -- this project has been very successful. And some of the methods that Chris and his staff have developed have been recognized all over the world as being very productive in restoration of eelgrass, which as we've heard a little bit about today, is one of the important habitats for marine environment. If there are any specific questions on the program, I'm sure Chris would be happy to answer.

LEG. D'AMARO:

Okay. Thank you. Our Chairperson has stepped out for a moment. This is appropriating an additional 105,000 for, I guess, an existing contract that we have with Cornell on this particular -- what is it, Suffolk County Eelgrass Restoration Initiative?

MR. CASTELLI:

Additional 105,000 for an additional two years of this effort. They will -- the current contract between Cornell Cooperative Extension and the County has ended -- ended at the end of 2011. After this money, if and when it is appropriated, it would necessitate the execution of additional -- a new contract.

LEG. D'AMARO:

So this would be a new contract, but basically continuing the contract that we had in the past?

MR. CASTELLI:

Yes, exactly.

LEG. D'AMARO:
Same initiative?

MR. CASTELLI:
Yes.

LEG. D'AMARO:
And so for how long have we had this Eelgrass Restoration Initiative ongoing?

MR. CASTELLI:
The first project started in 2008. In 2008.

LEG. D'AMARO:
Okay. So 2008. And what's been the total funding provided since 2008, do you know?

MR. CASTELLI:
The initial amount was 315,000. That was appropriated in 2008. And we're asking for an additional 105,000 to continue for another two years.

LEG. D'AMARO:
All right. And can you just describe to me, so if we appropriate these funds today, we're up to about 400 and change over five years or six years? And just can you explain to me exactly what the goal of the initiative is and if we're close to meeting that goal?

MR. CASTELLI:
I think that would be best answered by Chris.

LEG. D'AMARO:
Sure. Thanks. Good afternoon. Thank you.

MR. PICKERELL:
Good afternoon. My name is Chris Pickerell. I'm from Cornell Cooperative Extension.

MS. ORTIZ:
You have to keep your finger on the button.

MR. PICKERELL:
Okay. It's good to go? Okay, excellent. Sorry about that. Yes, this started in 2008. It was a three-year project. At that point we ran 105,000 per year. Now we're suggesting that over two years to spread out the money a little bit further. The goals of the initial project, the three-year project, was 9 acres or 9.75 acres. Over that three years we did achieve that goal. We had to work in all three estuaries starting in --

LEG. D'AMARO:
You mean the restoration of the eelgrass?

MR. PICKERELL:
Restoration of eelgrass habitat, correct. So --

LEG. D'AMARO:
Over nine acres?

MR. PICKERELL:
Yes.

LEG. D'AMARO:

Where was that?

MR. PICKERELL:

That was in Shinnecock Bay. And then -- it was Shinnecock Bay and Long Island Sound.

LEG. D'AMARO:

Okay.

MR. PICKERELL:

As well as in Peconic Estuary.

LEG. D'AMARO:

Was that kind of like a pilot program to see if you could be successful in regenerating the eelgrass?

MR. PICKERELL:

I wouldn't call it a pilot program. We had done some work prior to that to guarantee that we'd have some success. But the nature of this work is that you have to check each year new planting sites. We do test plantings in the Spring, look for survival over the summer, if it makes it through the warm mosquitoes of July and August, we have enough light. Then we will scale up that planting over the following season. So it's kind of a piggyback approach each year. It's kind of adaptively managed until next year. So there were pilot plantings within that, but we used sound science to get to the goal that we proposed. And as Frank had pointed out, some of the methods we developed as part of that project were then adopted for use in Portugal, in Germany, in Chesapeake Bay and in San Francisco Bay.

LEG. D'AMARO:

That's great. So of the nine acres that you focussed on, was that the total or was there more than that?

MR. PICKERELL:

That was the -- we actually planted larger areas, but you always have some failure. It's the nature of the beast basically.

LEG. D'AMARO:

Yeah.

MR. PICKERELL:

So you plant and then you expect to get some losses over time.

LEG. D'AMARO:

Right. Okay, so the further appropriation in the new contract would then be spread out over two years. And what's your intention with respect to those funds?

MR. PICKERELL:

Three acres over that time.

LEG. D'AMARO:

Three acres. And so we would have a total of 12 acres of eelgrass restoration. And can you tell me what the benefit of doing that is?

MR. PICKERELL:

The benefit of that, I think you've heard some of that already today, but has to do with the primary habitat for fish and shellfish in local waters. So basically a bay without eelgrass is like a forest

without trees. It's very simple. Much of our Bay bottom is unvegetated entirely. So you talk to the guys who grow the scallops and do the scallop restoration, they're looking for habitat for those scallops to hide within, to grow within and to avoid being consumed by predators. So we're trying to reverse that trend.

LEG. D'AMARO:

Were you present for the last presentation?

MR. PICKERELL:

I was.

LEG. D'AMARO:

Yeah, I mean all of that is also a threat to the eelgrass as well.

MR. PICKERELL:

It is. And we've actually -- the initial eelgrass work, funded through the Peconic Estuary Program -- began in '97. That was a monitoring effort to track the loss of eelgrass in response to the brown tide. You heard it occurred in '85. So since that time we've seen a gradual decline in eelgrass in many areas, but there are areas where we've found based on the research that are still suitable for the growth of eelgrass. We're focussing on those areas that do not have the repeated blooms of the HAB's as you've seen.

LEG. D'AMARO:

Yeah, that makes sense. You don't want to wipe out your progress.

MR. PICKERELL:

Exactly, exactly.

LEG. D'AMARO:

Okay, very good. Thank you for appearing today. I appreciate it.

MR. PICKERELL:

Thank you.

LEG. D'AMARO:

Madam Chair, thank you.

CHAIRWOMAN HAHN:

Thank you. Were there any other questions? Okay. We have a motion -- okay, we have a statement. Go ahead, Legislator Gregory.

LEG. GREGORY:

Chris, it was a pleasure when Legislator Hahn and myself went out there, actually saw the work that you're doing, very impressive and look forward to supporting.

MR. PICKERELL:

Thank you very much.

CHAIRWOMAN HAHN:

Okay. So we have a motion and a second on 1711. All those in favor? Opposed? Abstentions?
1711 is approved. (VOTE: 5-0-0-0)

TABLED RESOLUTIONS

Okay, here we go. Tabled resolutions. **Introductory Resolution 1365, Authorizing planning steps for the acquisition of land under the Suffolk County Drinking Water Protection Program, as amended by Local Law No. 24-2007 - Fish Thicket Preserve property - Town of Brookhaven (SCTM Nos. 0200-895.00-04.00-015.001, 0200-895.00-04.00-014.001, 0200-895.00-04.00-014.002, 0200-895.00-04.00-006.000, 0200-895.00-04.00-007.000, 0200-895.00-04.00-008.000 and 0200-895.00-04.00-009.000) (Calarco)** I'll make a motion to approve. 1365.

LEG. ROMAINE:

Fish Thicket Preserve.

LEG. GREGORY:

Motion to table.

CHAIRWOMAN HAHN:

Motion to table.

LEG. D'AMARO:

Yeah, I'll second the motion to table for discussion purposes. What was the rating on this? Are we on 1365? It's a low rating.

CHAIRWOMAN HAHN:

1365.

DIRECTOR LANSDALE:

Yeah, eight points initially. And then we received just recently a resolution from the Town of Brookhaven. And the resolution is to -- to help manage the property, adding another five points. I have an updated rating sheet here.

CHAIRWOMAN HAHN:

Which would give it a total of 12?

LEG. ROMAINE:

Thirteen.

DIRECTOR LANSDALE:

Thirteen.

CHAIRWOMAN HAHN:

Thirteen. (Laughter) My math. Thirteen. I'm probably hungry already. Thirteen out of a hundred. Now, I have a question. On the rating form here, Legislator Calarco, did it get points for all the surrounding Town and County property? Unfortunately I have to find the rating form for this.

LEG. ROMAINE:

I will tell you as you drive on Woodside Avenue, in that area of -- I guess it's Medford/East Patchogue, you see a nice sign that says "Fish Thicket Preserve." And I assume that's by the Town of Brookhaven. So they do have a preserve there.

CHAIRWOMAN HAHN:

So it says -- on the rating form under C, number one, site is adjacent or near to other County parkland. Now, there is County parkland. It's not adjacent. I'm just kind of wondering what does "near" mean. Approximately 300 feet. So, that's probably not 300 feet. That's why why it didn't

get -- those seven points.

DIRECTOR LANSDALE:

So the County is, if I may --

CHAIRWOMAN HAHN:

Sure.

DIRECTOR LANSDALE:

The County has focused its acquisitions in the area -- an area to the east of this property. The Town predominantly has acquired properties in and around this area.

CHAIRWOMAN HAHN:

Okay. So our Fish Thicket Preserve area that the County is focussing on is more than 300 feet to the east of this?

DIRECTOR LANSDALE:

That's right. And we're actually focused on not Fish Thicket but Swan River.

CHAIRWOMAN HAHN:

Which is that little blue up in the corner? Is that -- could that be where Swan River is or --

LEG. ROMAINE:

It's south of Sunrise Highway and to the west of where we're talking about.

DIRECTOR LANSDALE:

It's a quarter mile west.

CHAIRWOMAN HAHN:

Okay.

DIRECTOR LANSDALE:

Yeah.

CHAIRWOMAN HAHN:

But there's a little bit of blue wetlands up there. Is that not Swan -- any relation to Swan River?

DIRECTOR LANSDALE:

No, it's not.

CHAIRWOMAN HAHN:

Okay. I'm going to withdraw my motion to approve. And we have a motion to table and a second. Any more discussion? All those in favor of tabling? Opposed?

LEG. ROMAINE:

Opposed.

CHAIRWOMAN HAHN:

Abstentions? **1365 is tabled. (VOTE: 4-1-0-0)**

Introductory Resolution 1368, Donation and dedication of certain land now owned by Ciro and Nancy Noto to the County of Suffolk (SCTM No. 0209-018.00-01.00-009.000). (Browning)

LEG. GREGORY:

Motion to approve.

CHAIRWOMAN HAHN:

Motion to approve. I'll second that motion to approve. All those in favor? Opposed? Abstentions? **1358 is approved. (VOTE: 5-0-0-0)**

Introductory Resolution 1396, Authorizing planning steps for the acquisition of land under the Suffolk County Drinking Water Protection Program, as amended by Local Law No. 24-2007 - Mikros Psari, LLC property - Town of Brookhaven - (SCTM No. 0200-903.00-01.00-012.002) (Browning)

LEG. GREGORY:

Motion to table.

CHAIRWOMAN HAHN:

Motion to table. I'll second. All those in favor? Opposed? Abstentions? **1396 is tabled. (VOTE: 5-0-0-0)**

Introductory Resolution 1490, Authorizing the acquisition of land under the New Suffolk County Drinking Water Protection Program (effective December 1, 2007) - Open Space component - for the Rams Head Investors, LLC property - Lake Montauk - Town of East Hampton (SCTM No. 0300-012.00-02.00-003.000) (Schneiderman) Yes, this is the same one we keep coming back to. There's a motion to --

LEG. D'AMARO:

I'm going to offer a motion to approve just based on the discussion that we had last time. I know that it was represented here that this was a buildable lot. We're going to do, I think, a little more research into that seeing we're separate status.

DIRECTOR LANSDALE:

Right. I had a conversation earlier today with the Director of Real Estate. She indicated that she has requested that information; however, it's not available at this time for this meeting.

CHAIRWOMAN HAHN:

Okay. We have a motion to approve. We don't have a second. I'll make a motion to table.

LEG. GREGORY:

I'll second.

CHAIRWOMAN HAHN:

Seconded by Legislator Gregory, yeah, to table. All those in favor? Opposed?

LEG. ROMAINE:

Opposed.

LEG. D'AMARO:

Opposed.

CHAIRWOMAN HAHN:

Abstentions? **1490 is tabled. (VOTE: 3-2-0-0)**

Introductory Resolution 1562, Authorizing planning steps for the Acquisition of Development Rights under the Suffolk County Drinking Water Protection Program, as

amended by Local Law No. 24-2007 - February 2012 - Foster Farm property - Town of Southampton (SCTM No. 0908-009.00-01.00-003.000 p/o) (Co. Exec.) I'll make a motion to approve.

LEG. ROMAINE:

Second.

CHAIRWOMAN HAHN:

Did we get a binding letter?

DIRECTOR LANSDALE:

Yes, I have a copy here to distribute to members.

LEG. D'AMARO:

What was the rating?

CHAIRWOMAN HAHN:

Can you remind us of the rating on this one? Out of 25, correct?

DIRECTOR LANSDALE:

The parcel received a 5.5 out of 25 on the Suffolk County Rating Sheet -- the Farmland Rating Sheet. Usually scores of ten or higher are used as our standard minimum threshold.

CHAIRWOMAN HAHN:

Was the 5.5 before or after the letter was received?

DIRECTOR LANSDALE:

That was before.

LEG. ROMAINE:

That would change it. And is one of the reasons that it rated low was because of the price?

DIRECTOR LANSDALE:

Yes, that's -- as we discussed last week, one of the reasons why -- at our last meeting, one of the reasons why this property and others in the Town of Southampton and the Village of Southampton received such a low rating is because of the high value of this property.

LEG. ROMAINE:

Obviously that may be one of the -- you want to preserve it because it's probably -- that whole area is under threat of development. This is the last farmland left, why not. Would this letter give it a -- how many points would this letter add to that rating?

DIRECTOR LANSDALE:

Under (E) adjustments on the rating sheet, (E) 4, other positive -- (E) 3 is anticipated partnership with a municipality, it would give it one additional point.

LEG. ROMAINE:

So not a lot.

CHAIRWOMAN HAHN:

And how many points is it penalized because of the high cost?

LEG. ROMAINE:

Two, I think.

DIRECTOR LANSDALE:

Two points.

CHAIRWOMAN HAHN:

So it really doesn't get to 10 even giving it back its penalization.

DIRECTOR LANSDALE:

The other challenges, this is not in a farm belt in Suffolk County, meaning that there are no purchase of preserved farmland in and around the area. And that's another challenge.

CHAIRWOMAN HAHN:

Is the Department recommending it?

DIRECTOR LANSDALE:

The Farmland Committee recommended it with a contingency that there be a partnership with the Town of Southampton on this. This was part of the annual review period and part of the discussion earlier in January with the Farmland Committee. They did recommend it.

CHAIRWOMAN HAHN:

Does the Department have an opinion?

DIRECTOR LANSDALE:

Yes. The Department recommends it as well.

CHAIRWOMAN HAHN:

Thank you. Any questions? So what do we have now? We have a motion to approve. And do we have a second?

MS. ORTIZ:

Yes.

CHAIRWOMAN HAHN:

Okay. We just have a motion to approve and a second. No table.

LEG. D'AMARO:

Just on that motion, very quickly, so we have a binding letter. I mean, we have a letter from the Town that the Town Board has approved going 50/50 on the acquisition of the development rights?

DIRECTOR LANSDALE:

Yes, there is a pretty clear caveat in here that if, you know, the County does not support this acquisition, they're not going to. And if there are funds available, they will -- at the Town level they will go 50/50.

LEG. D'AMARO:

But even with that recommendation -- even with that commitment, it's not meeting -- what's the score? It's less than ten? It has --

DIRECTOR LANSDALE:

Yeah, it's 5.5 right now. So it will be 6.5 with this --

LEG. D'AMARO:

6.5. And it has a four-acre cutout on it as well, or 3.9 acre exclusion area. But it was recommended by the -- you said it's not in a farm belt?

DIRECTOR LANSDALE:

Yes.

LEG. D'AMARO:

So, it's surrounded by development, I would assume, is what you mean?

DIRECTOR LANSDALE:

Yes.

CHAIRWOMAN HAHN:

It looks like there are farms --

LEG. D'AMARO:

So --

CHAIRWOMAN HAHN:

What are those properties?

DIRECTOR LANSDALE:

There is a farm, but it's not protected farmland.

CHAIRWOMAN HAHN:

Okay.

LEG. D'AMARO:

So what's the basis of the Department recommending this acquisition if it doesn't meet the threshold that we normally look for on the rating form, it's not in a farm belt, as you stated? So what's the basis of the recommendation other than the fact that the Farmland Committee approved it?

DIRECTOR LANSDALE:

The -- this farm has historically grown vegetable crops on its property, so not sod. So currently they're growing -- the basis of our recommendation is that they're growing vegetable crops, which are important to the future of food security of the County. And, also, I think that we need to look at the rating sheet and look to update it because I think it negatively impacts farms just like this, where they're -- they're not in an area with primarily preserved farmland. I think that we need to look and expand areas where we can begin to preserve farmland and create additional farm belts in Suffolk County.

LEG. D'AMARO:

All right. I appreciate that answer, because looking at the tax map, which is just limited information, it seems that it's pretty much surrounded by -- or at least more than 50 percent surrounded by -- it looks like residential homes. Is that a fair assessment? Just looking at the tax map --

DIRECTOR LANSDALE:

Yes.

LEG. D'AMARO:

-- that I have. So, you know, my thinking is that we might want to not acquire something like this, because it's really not part of a farming area, so to speak, within the County. It's surrounded by development. You know, I just wonder whether or not -- you're saying change the policy and change the rating form to give more points for this type of situation, where you want to have a farm preserved, say, in the middle of development? I mean, is that a desirable direction to want to go? And how would the surrounding neighbors feel about that?

DIRECTOR LANSDALE:

What I was speaking towards -- to is more the -- on the rating sheet, it looks at areas that have large clusters of preserved farmland. So I wasn't speaking specifically towards the point of preserving land in residential areas. I don't think that that's -- that's a wise -- to your point.

LEG. D'AMARO:

Yeah, but I think rating form, what it's saying, in effect, is that you want to create these farm belts and you want to give -- you want to encourage more acquisition of development rights in those areas that are being consistently farmed, or more surface area is being farmed.

DIRECTOR LANSDALE:

(Shaking head in the affirmative)

LEG. D'AMARO:

And it seems to me that this farm here -- based on the development that I see around it, it might even be a golf course around it, too, that it's almost out of place.

CHAIRWOMAN HAHN:

I don't know. To me it looks like there's a lot of farms around it. Sure, there's a lot of houses, too, but it's almost equal.

LEG. ROMAINE:

Yeah, there's farms around it.

LEG. D'AMARO:

Yeah, I said about 50 percent.

CHAIRWOMAN HAHN:

Yeah, yeah, you did, you did.

LEG. D'AMARO:

Well, in any event I don't -- I think that we should stick to the rating form that we have. I don't think it would be fair to all the other folks that got turned down if we're going to start making these types of exceptions. If you want to change the form, we should talk about that but I'm not going to support this.

CHAIRWOMAN HAHN:

Legislator Romaine.

LEG. ROMAINE:

I definitely think that we should change the form. And let me make an argument for, particularly, row crops in Suffolk County. And that argument is being made by someone a lot more important than I could ever be and that's Mother Weather. Because if you look at the weather of this country, we are in one of the most severe droughts that we have ever seen. And food security is going to become a huge issue. And if we can be in an area that isn't suffering from the drought, more food self-sufficient, that is going to speak very much to the food prices that our constituents pay.

Quite, frankly, because of the drought that has affected a good two-thirds of this nation, food prices are going to go up. If we can supplement food that normally is brought in from other areas, by encouraging row crops, particularly vegetable crops, in Suffolk County, any farm that specializes in that, that wants to preserve itself, I think is worthwhile because this drought is probably just a precursor of things to come, particularly if global warming has any validity. And I am gravely concerned about the issue of food security in the United States and here in the metropolitan area. And here we have an opportunity to keep encouraging -- particularly row crop farming.

So I'm going to be in favor of this for vastly different reasons. Because I think it's something that our rating form should reflect because, quite frankly, if we have an adequate food supply from our local farmers, we can keep consumer prices down for vegetables and fruits and things of this nature that we can grow locally. It's something we should take into careful consideration. Thank you.

CHAIRWOMAN HAHN:

Is there anything we can do to -- this is planning steps so can we tie -- keeping it row crop? Is there any way to do that? I know the Farmland Committee's been thinking about these things, but, you know, to give it -- you know, if there's any way to tie some sort of life -- I don't know -- is there anything that can be done to keep it as a row crop farm?

DIRECTOR LANSDALE:

That would be -- have to be considered in the ongoing update to Chapter 8. And that could be an issue that could be further discussed and explored.

CHAIRWOMAN HAHN:

DuWayne. Legislator Gregory, I'm sorry.

LEG. GREGORY:

That's okay. Thank you.

Yeah, I originally was going to support this thinking that the partnership, now that there is a partnership with the Town, that that would increase the points -- the rating above what the recommended level is. But it's only a point. I thought it was more than that. I thought it was three points. So, I, you know, I -- you know, I understand that you, Director, you may want to change the form but I think we should go with the form that we have now and then, you know, when we make the changes, you know, that's, you know, treat everyone equally.

DIRECTOR LANSDALE:

Of course.

LEG. GREGORY:

This is only going to be a six-and-a-half out of 25. We just turned down another one that was -- that had higher points. So, you know, I can't support this. Thank you.

CHAIRWOMAN HAHN:

Okay. So we have -- do we have a -- what do we have?

MS. ORTIZ:

Motion to approve.

CHAIRWOMAN HAHN:

We have a motion to approve. Do we have a second? We have a second so --

LEG. GREGORY:

I'll make a motion to table.

LEG. D'AMARO:

Second.

CHAIRWOMAN HAHN:

There's a motion to table by Legislator Gregory, seconded by Legislator D'Amaro. All those in favor of tabling? Opposed?

LEG. ROMAINE:

Opposed.

CHAIRWOMAN HAHN:

Abstentions? It's tabled. (VOTE: 4-1-0-0)

IR 1565, Authorizing planning steps for the Acquisition of Development Rights under the Suffolk County Drinking Water Protection Program, as amended by Local Law No. 24-2007 - February 2012 - Edward and Helen Corrigan Farm property - Town of Southampton (SCTM Nos. 0900-158.00-02.00-033.00 and 0904-001.00-03.00-085.001) (Co. Exec.) Motion to table.

LEG. D'AMARO:

Second.

CHAIRWOMAN HAHN:

Seconded by Legislator D'Amaro. Tell me about the Town's interest on this one.

DIRECTOR LANSDALE:

The Town has not provided a binding letter of support for this -- for this partnership, an acquisition.

CHAIRWOMAN HAHN:

Any other questions? There's a motion to table and a second. All those in favor? Opposed?

LEG. ROMAINE:

Opposed.

CHAIRWOMAN HAHN:

Abstentions? **1565 is tabled.** (VOTE: 4-1-0-0)

We did 1711. We did 1749.

And we are on **1759, Authorizing planning steps for the acquisition of Farmland Development Rights under the Suffolk County Drinking Water Protection Program, as amended by Local Law No. 24-2007 - Lohwasser Nursery property Town of Brookhaven (SCTM Nos. 0200-675.00-02.00-021.001 and 0200-675.00-02.00-021.002). (Romaine)**

LEG. D'AMARO:

Motion to table.

LEG. ROMAINE:

Actually I was going to make the motion to table because I think it has to be tabled because it's got to go in front of the Farmland Committee. This was submitted before that Farmland Committee has reviewed it. So --

LEG. D'AMARO:

That was the basis of my motion.

LEG. ROMAINE:

Right.

LEG. D'AMARO:

So I'll second your motion, Legislator.

LEG. ROMAINE:

Thank you. Let me make the motion since I'm the sponsor. Motion to table.

CHAIRWOMAN HAHN:

Motion to table, seconded by Legislator D'Amaro.

LEG. D'AMARO:

I apologize. I didn't see your name on it.

CHAIRWOMAN HAHN:

All those in favor of tabling? All those opposed? Abstentions? **1759 is tabled. (VOTE: 5-0-0-0)**

We did 1772.

And now we are onto **1774, Making a SEQRA determination in connection with the proposed Sewer District No. 7 - Medford (Woodside) Plant Upgrade, Town of Brookhaven. (Pres. Off.)** SEQRA determination. I'll make a motion -- motion to put on the Consent Calendar, seconded by Legislator Gregory. All those in favor? Opposed? Abstentions? **1774 is approved. (VOTE: 5-0-0-0)**

1775, Making a SEQRA determination in connection with the proposed Sewer District No. 14 - Parkland, sludge thickening, Town of Islip (Pres. Off.) Same motion, same second, same vote. **1775 is approved. (VOTE: 5-0-0-0)**

1776, Making a SEQRA determination in connection with the proposed Sewer District No. 20 - William Floyd, replacement of main pumping station, Town of Brookhaven. (Pres. Off.) Same motion, same second, same vote. **(VOTE: 5-0-0-0)**

Introductory Resolution 1786, Accepting grant funds in connection with the transfer of Development Rights Study. (Co. Exec.) I will make a motion to approve.

LEG. D'AMARO:

Second.

CHAIRWOMAN HAHN:

Seconded by Legislator D'Amaro. All those in favor? Opposed? Abstentions? **1786 is approved. (VOTE: 5-0-0-0)**

Introductory Resolution 1798, Making a SEQRA determination in connection with the Proposed Construction of Sidewalks on Various County Roads. (Pres. Off.) I'll make a motion and to put it on the Consent Calendar. To approve and put on the Consent Calendar. Seconded by Legislator D'Amaro. All those in favor? Opposed? Abstentions? **1798 is approved. (VOTE: 5-0-0-0)**

Introductory Resolution 1814, Appropriating funds in connection with Brownfields Program, former Blue Point Laundry site (CP 8223) (Calarco) I'll make a motion to approve, seconded by Legislator D'Amaro. All those in favor? Opposed? Abstentions? **1814 is approved. (VOTE: 5-0-0-0)**

And that is the end of our agenda. Motion to adjourn by Legislator Romaine. All those in favor? Opposed? Abstentions? We are adjourned. Thank you.

THE MEETING CONCLUDED AT 4:51 PM
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