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# ***Commission Meeting***

of

## STATE BEACH EROSION COMMISSION

*“The Effects of Recent Coastal Storms on the Beaches and Dunes  
along the New Jersey Shore”*

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**LOCATION:** Belmar Municipal Building  
Belmar, New Jersey

**DATE:** March 4, 1998  
11:00 a.m.

**MEMBERS OF COMMISSION PRESENT:**

Senator Andrew R. Ciesla  
Senator Joseph M. Kyrillos Jr.  
Assemblyman John C. Gibson  
Assemblyman Reed Gusciora  
Assemblyman David W. Wolfe  
Ronald E. Hoffman  
Stephen Kempf  
George D. Klein, Ph.D.  
Norbert P. Psuty, Ph.D.



**ALSO PRESENT:**

Assemblyman James W. Holzapfel  
District 10

George J. LeBlanc  
*Office of Legislative Services*  
*Commission Aide*

David H. Brogan  
*Senate Majority*  
*Commission Aide*

***Meeting Recorded and Transcribed by***  
**The Office of Legislative Services, Public Information Office,  
Hearing Unit, State House Annex, PO 068, Trenton, New Jersey**

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**SENATOR ANDREW R. CIESLA (Chairman):** I'd like to call the meeting to order. We are under a slight time schedule in that we only have the room reserved to 1:00. As Chairman of the Beach Erosion Commission, I officially would like to call the meeting to order. We have with us a full house today and also some honored guests. Assemblyman Holzapfel, I know, who is my colleague--

You are not going to sit back there. Come on up here so that any questions that might be directed to you we might get your active participation.

I know that we have a particular individual who I'm glad is here because he is the person that we have to go to in order to ensure that we get the support that's necessary for initiatives that he has supported over the past and is the first individual that I would like to testify after I ask the panel if they have any opening remarks they would like to share with us, prior to the meeting.

Don, if you just sit right there. (indicating)

Dave, we're going to spot someplace for you to sit up here.

Let me just ask the panel if they have any opening remarks that they would like to have. Starting from my right with our public member, Steve Kempf.

MR. KEMPF: No opening comments this morning.

SENATOR CIESLA: Dr. Psuty. (no response)

Ron.

MR. HOFFMAN: No remarks.

SENATOR CIESLA: George.

DR. KLEIN: No remarks.

SENATOR CIESLA: Reed.

ASSEMBLYMAN GUSCIORA: Pass.

SENATOR CIESLA: Jack.

ASSEMBLYMAN GIBSON: Just glad to be in your beautiful area, Senator, on the work of this important Commission.

SENATOR CIESLA: These committees should go so well in Trenton.

Assemblyman Wolfe is here as a member of the Commission and has taken a chair up in the front row.

With that, I would like to welcome the Senate President who has taken time out of his very busy schedule in order to come here. We spent a little bit of time walking the beach to look at the actual replenishment project and some of the storm-related conditions that have occurred as a result of some time passing after the replenishment project.

Don DiFrancesco, the President of the Senate, a good friend of all of ours, I would like to welcome you here to Belmar, to Monmouth County. Your presence certainly underscores your commitment to shore protection, your commitment to preserving the areas that are the core of the economy of this particular area, and, Don, with that I'd like to certainly welcome you on behalf of the Commission.

**SENATE PRESIDENT DONALD T. DiFRANCESCO:**  
Thank you, Senator Ciesla and other members of the panel.

Jack, I hope to be able to get down to your part of the State to look. I've been trying to arrange that -- actually to take a look at that, too --

because the entire coastline is very important to all the people in the State of New Jersey.

And I know that--

Reed, it's good to see you.

--shore replenishment advocates, and there are many, have maintained -- you heard it today -- that the recent storms prove the value of these programs -- these replenishment programs. So I've come here to tell you that, at least from my viewpoint, that that is actually true and that I fully support continuing that program because you can see the difference. If for anyone who has been able to -- you all have and I have to a limited degree -- observe over the years the differences, you can see the difference when you have a continuing, ongoing effective program.

So I think this has to be continued. In fact, I think, as perhaps you do, too, that we ought to increase this program, we ought to enlarge it, we ought to replenish the program a little bit in terms of add funding. I was convinced early in the decade by Joe Kyrillos and the other Monmouth legislators and Andy that we ought to have a source of funds every year instead of arguing over what it should be and fighting for what it should be and not knowing if there will be money in the budget from year to year. We have now that dedicated \$15 million that I thought was kind of a home run at the time, Joe, when it happened early in the decade, maybe some five years ago. That's great and it works and it's helped.

I saw the beach, as Andy mentioned. I was able to, with all of you, see the beach myself and how it appears that properties were saved, that the boardwalk was saved from damage as a result of the program that has been in

place. I know that there have been suggestions, and I've heard a couple today, that the replenishment program is ineffectual and a waste of money. I heard that from at least one individual today and say that we ought to take a closer look because I don't think that they are right. In fact, I think they are dead wrong. I really believe that. It would be interesting to hear what people have to say, which is the purpose of this meeting.

Without this replenishment, without the added sand, storm damage, I think, would be much worse, based on what I've heard. The rising tides would cause major structural damage to property, to infrastructure, and to the boardwalk business in many areas. This program lengthens the beach life and protects the properties and businesses.

So, if you think it's a waste of money, it's important to point out that studies are done prior to selecting a site for replenishment; it's not just random, it's not political. There are studies done, there are assessments made. They are made because we don't want to waste taxpayer dollars. While we want to spend that money we talked about, we don't want to waste the money. So we determined, through assessments, what areas are in most need of replenishment and what will work. I think that our tour today points out what really works, and that doesn't mean we shouldn't continue to figure out if there are better ways and seek out better ways and more money. We should do that.

We talked about the economics over at the beach, and if I could mention for the record, because you all know this, that the economics are about \$15 billion a year in travel and tourism dollars. The shore is a source of recreational and leisure activities for residents and tourists. The tourism industry produces about 263,000 jobs, according to the statistics. The State

revenue was \$1.49 billion in 1996, the most recent year we have. So I come here to tell you that I support this program as a means to protect this valuable resource that we have along the Jersey Shore.

I also believe we have to protect the open space in our state. I know that you have heard that before. We have to preserve natural resources, the availability of recreational and conservation land. So the bill that I introduced recently, that some might think is not directly on point, provides local funding for the preservation of open space through a dedication of funds from the reality transfer fee. Monmouth County, for example, would be in line for \$3.1 million in funding annually for open space preservation. Ocean County would be in line for about \$2 million, depending on how much you collect in the reality transfer fee.

So I want to point out specifically, and I raise this for this reason, that this has nothing to do with the \$15 million that is dedicated to shore protection. That \$15 million will continue year after year and hopefully down the road will increase. I supported that legislation. I thought it was very important, and I'd like to see it in perpetuity.

Now, the proposal--

And, Jack, I think you may have a proposal to increase that. I support your effort to do that.

And I know that I'd like to work with Andy, with this Commission, with the Budget Committee, with the Governor in an effort to find ways to increase the amounts we use for shore protection. We need to do that. We need to spend more money. It is very important to our state, to our people, to our industry, to the job market, but really to our quality of life to do

that. So it is a priority and I wanted to say that. It is a top priority in New Jersey for us to protect the shore.

So, in addition to my firsthand quick view of the beach, I'd like to sit for a while and listen to what everybody has to say. Certainly, if you have any questions of me, I'd be happy to answer them. But I'm here to support shore protection.

Thank you, Senator.

SENATOR CIESLA: Thank you very much, Don. I appreciate you, again, taking the time to spend--

PRESIDENT DiFRANCESCO: In the paper today -- I guess you know about this-- The fact is Point Pleasant is basically trying to purchase, through Green Acres, or Blue Acres as you all refer to it, a beach known as Risdins Beach. Again another program that works. This is important stuff that we are doing here, and I think that's really great that the municipality and the State are moving forward to protect beaches and open space and preserve land.

SENATOR CIESLA: Assemblyman Wolfe, who is here, was a sponsor of the Blue Acres legislation and has been active in getting projects up to the table, and we are going to ask you for your help in order to get some funding directed for that particular acquisition.

Any questions of the Commission?

SENATOR KYRILLOS: A quick comment, if I could, Mr. Chairman. I know you thanked the President on behalf of your constituents in Monmouth and Ocean.

But on behalf of the others in Monmouth County, Don, let me thank you for what you have done for our efforts here. People may not realize

that -- people in this chamber and beyond that follow these issues but -- under your leadership we brought about, as you eluded to, this annual Shore Protection Fund. You set up a Coastal Resources Standing Committee of the Senate. The first time in my memory -- my short memory at least -- that we had a standing committee in the Senate just devoted to these kinds of issues. Under yours and Andy's leadership resurrected this Shore Erosion Commission, which, Andy, I think had been dormant for quite some time, 20 years.

So it's no accident that we were able to gather together our forces and then finally start investing in our beaches. I know you took some heat from other Senators and other legislators from around the state who don't understand the importance of what we are doing here, even though their constituents come here and spend time in the summer and are very thankful that they have a Spring Lake or a Sea Bright or any part of this coastline to come and visit, and stood with us and made it happen. So thanks for being here.

PRESIDENT DiFRANCESCO: Thank you, Senator. Thank you.

SENATOR CIESLA: Mr. Kempf.

MR. KEMPF: Just one quick comment.

Thank you for your comments, Senator. One of the things I'd like to bring out is that it's quite often overlooked that not only are we protecting the livelihoods and the economic benefits that we eke out of the coastline, but New Jersey also has a very strong cultural heritage based in its coastline. Many of our families, our grandparents, our great-grandparents have grown up, eked out a living from the coastline and the back bay areas, and I think it's vital that

we protect that for future generations as well. So I applaud you for those activities and for Jack's amendment to the bill.

Thank you very much.

PRESIDENT DiFRANCESCO: Thank you.

SENATOR CIESLA: Thanks, Steve.

Assemblyman Gibson.

ASSEMBLYMAN GIBSON: Mr. Chairman, I just want to say that I'm very encouraged by the Senate President's comments. I look forward to the opportunity for him to tour our area of the state and see some of the very good projects that have benefited the state with this program and also see some of the areas that still need a lot of help in order to survive as a seashore community.

So thank you for your comments today, Senate President.

PRESIDENT DiFRANCESCO: Thank you.

SENATOR CIESLA: Assemblyman Wolfe.

ASSEMBLYMAN WOLFE: Yes, Senator, I also would like to thank the Senate President for being here and for also highlighting, through your comments, not only your commitment, but your concern for shore protection, also the Blue Acres Program.

I'm very proud that the legislators who are here, Assemblyman Gibson and Gusciora and Holzapfel and I, along with our Senate colleagues, have hopefully educated the rest of the legislators not only for the coastal heritage that was just mentioned, but for the continuing need to improve what we've done. I'm glad that you mentioned Blue Acres. Right now Blue Acres is basically out of money, so many communities have taken advantage of that,

and I certainly would like to see that we get behind conditional efforts to increase that source of funding.

And, also, I certainly support Assemblyman Gibson's efforts for the shore protection efforts. I think that very often not being from the shore area many people may not see the benefit that this has. Certainly, you have highlighted, in your testimony, not only the economic, but the cultural benefits, and I want to thank you for your presence.

PRESIDENT DiFRANCESCO: Well, the concept of Blue Acres was unbelievably unique. When the bond issue passed, I know a lot of people would say we should have thought of this 20 years ago, 25 years ago, but that's the way it goes. We've got to move forward now, going into the next century, to protect open space because it is a quality-of-life issue. We certainly don't want to destroy that, we want to enhance it, and that was a good way, I thought, of helping.

ASSEMBLYMAN WOLFE: I appreciate it, thank you.

PRESIDENT DiFRANCESCO: Thanks.

SENATOR CIESLA: Reed.

ASSEMBLYMAN GUSCIORA: I just wanted to add my comment as coming from the western part of the state. I'm a fellow "bennie" that enjoys the shore, and I think this is truly a state issue, that this is a treasure for all of the people of New Jersey, and I'm glad to see other people that are equally concerned about protecting the shore for the entire state.

SENATOR CIESLA: Thank you.

Donny, why don't you come up and join us. We can sneak you in here.

I wanted to point out Mayor John Winterstella. I'm sorry to overlook you before. Good to see you. Mayor of Manasquan. Thanks for coming.

The first individual who will provide the Commission with some testimony is Bernie Moore, the Administrator for the Engineering and Construction segment of the DEP, an individual that has, for a long period of time, worked on coastal erosion issues, beach-related issues, and probably the single most informed individual with respect to the nature of the beach in the State of New Jersey.

**BERNARD J. MOORE:** Thank you, Mr. Chairman.

New Jersey and shore protection perfect together. It's the only thing that goes.

SENATOR CIESLA: Is this an old slide or a new one? (laughter)

MR. MOORE: What I'd like to do this morning is just go over a couple of very basic things. (slide presentation begins) In a normal scenario, this is what you would look at, let's say, in the summertime. A wide berm, a very gentle offshore face, a small gully on some beaches and in a sandbar offshore. That is the typical beach that we normally see in the summertime.

In the wintertime, though, it takes on a different look. Because we have some coastal storms like northeasters, the face of the beach sort of erodes away and you get a more deep, or sharp, cut along the beachfront. Most of the sand that erodes from this area goes offshore and begins to fill in the area between the sandbars and the beach area. As we approach the spring, summertime, we will revert back to the sand starting to move onshore and we will, again, regain some of that beachfront area.

Another area that I would like to touch on for a minute is we talk about engineered beaches, and what an engineered beach is, is that it is a beach that is built to a desired cross section, it has a definite elevation to it, it has a definite slope and a profile that we can measure. Over the course of a year or two years we can then take cross sections across here and we can measure the changes in the beach profile, and if there is a need to come in and renourish the beach, then we will do that.

I say that only because with the Corps projects that you have seen this morning down in Spring Lake and with the Corps projects up here in Monmouth Beach and Sea Bright, the Corps is monitoring these beaches regularly to ensure that we have the desired cross section for the protection that we want to obtain.

When a northeaster hits, almost immediately inspectors from my office go out and begin to look at the beaches and the damage that has been done. Unfortunately, we look at probably the worst-case scenario because, as a storm begins to move off, we are out there looking and measuring to determine the quantities and the damage that has been done. When we talk about a cut on the beach, this is the area that we are looking at. It is the area from the berm -- the natural berm -- down to the existing berm. And it's only during that period of time when a storm has been affecting the coastline.

A lot of the sand -- does like I say -- will come off of this berm and slope. It does just go offshore momentarily, and then, if we have some days where we have northwesterly winds or westerly winds blowing, some of that sand does come back eventually, even during the wintertime. All of our shoreline has experienced major erosion under the last two storms. We are

talking about the January 28th and the February 5th storm that hit our coastline.

This is an area down in Whale Beach. There used to be a small dune and some protection in this area that has completely eroded away. That erosion has caused the ocean to literally flow across Ocean Drive. This is extremely important to the Cape May community in Whale Beach, which is just located north of Sea Isle City and to the south of Upper Township, because it is part of their evacuation route as to how to get in and get out of this area. This road was undermined, and right now, I believe, the County of Cape May has just taken bids to go in and reconstruct the road and put up some temporary protection across this area so that the contractor can work and you can also provide some protection to the roadway. So this is what I consider to be our highest priority and our highest place of vulnerability.

This is the south end of Sea Isle City. Prior to the storm we did have some erosion in here, and the City of Sea Isle went in and put in some long guard tubes in and around this point. There is severe erosion in this particular area of Sea Isle City. As you can see, the long guard tubes did survive the second storm of February the 5th; however, the material that was placed in behind there did erode and maybe--

On this you can just see at this particular point here a little black spot. That is where an old bulkhead was hidden and has now become exposed. The facility is on piling and is not in danger at this time.

SENATOR CIESLA: Is that the ocean, or is that the bay, Bernie?

MR. MOORE: That's the bay. This is the ocean area, the inlet area, going east, and this is the back bay area.

One of the other concerns that happened in the first storm was there was some concrete slabs in the Ocean Drive approach here that collapsed, and that bridge was also closed for a period of time.

The third area of concern right now is Stone Harbor down in the center of town. This is 96th Street, I believe it is, coming in here. The area to the north has a little bit of a beach. From about 96th Street going south, down in this area in here, to about 112th Street, there is little or no beach at all. It is an old bulkhead with stone revetment in front of it. Under normal, even low tide conditions, you are getting waves hitting that bulkhead and then coming across and washing out the material that is behind the bulkhead, which eventually will undermine the bulkhead itself and cause a failure.

Down in -- I'm sorry-- The next area of concern that we have is down in Cape May State Park where it joins in with Cape May Point. This armored area in here we placed two years ago. Under this storm, the armored area stayed intact, but the dune behind it washed out and threatened to breach the area. We did have a small breach in the Cape May State Park area, which we fixed immediately, but unfortunately, it got bigger during the next storm.

We already have a contractor on board. He had started this project before the storm arrived, which is going to continue this armorment back up towards this gun emplacement. Just to give you an idea, in the '70s there was sand out here in front. You could walk from the beach right up to the gun emplacement. You cannot do that anymore.

Our fifth area of concern is down in Ocean County. The county itself in Long Beach Island held up fairly well. We do have a few trouble spots down in Brant Beach section of Long Beach Township between 49th Street

down to about 60th Street and then from 79th Street down to about 85th Street. There is a number of areas where the dune and fill had been washed out, and houses, although they are sitting on piling, have started to become undermined.

We talked about before where we have accomplished Corps projects. This is the Monmouth Beach, Sea Bright area. This is Belmar to Manasquan. This is Barnegat Light. This is Ocean City and Cape May City. I just want to show you what happens when you do have a storm and you have a protective beach. This is Ocean City, we did have erosion. We lost about four feet of sand underneath the pier there, but prior to the beachfill that was done down in the summer of '92, the high waterline was back underneath the boardwalk here.

You can look here and you can see that the beach -- there is a dune system in place. You can also almost see where that scarp line is and how the winter beach kind of sets in. We do have a lot of sand off in here. This will begin to move back. We are monitoring the area with the Corps of Engineers, and if possible, we may be back in late fall to replenish this area.

This is an area of Monmouth Beach, our trouble spot, hot spot as they call it. This is what it looked like prior to the January storm. We have two outfalls, one is here and one is back in here. I just want to show you what that looks like after the storm. This is an area where everybody said, after we put it in '94, it won't last the first winter. It's lasted more than one winter.

Here are those outfalls. This is the one furthest to the south which we did experience some erosion, but there is still plenty of sand there to absorb another storm and provide the protection that it's supposed to provide. This

is where the sand has eroded. This is just the tops of the piling for the timber cribbing for the other outfall pipe.

In the winter of '95, this area was completely washed out and eroded right after the storms. We have been back in here twice to replenish the area, and you are now beginning to see an effect of this project in renourishment and also the continuation of the beachfills down in Long Branch, which begins to feed into the system and make the system one and whole. (slide presentation ends)

That's all I have right now. If you have any questions, I'll be more than happy to answer them.

SENATOR CIESLA: Bernie, just a quick question. You talked about the thing becoming an entire system -- the shoreline becoming an entire system. Maybe you can expand on that. Is the project going at a rate that is sufficient in order to actually allow us to achieve any scientific conclusions, or is it somewhat slow and piecemeal, and is there a danger of it being deemed a failure before it's completed?

MR. MOORE: I think it is going well. Just to give you a minute of history. How this all came about and how we got into these projects with the Corps of Engineers you have to go back to the early '80s. Our Commissioner at that time -- his name escapes me -- Commissioner Huey-- (phonetic spelling) We had just come and put together our Shore Protection Master Plan for the State. The Commissioner at that time said, "Look, there has got to be a better way of doing this, let's talk to the Corps." We did. We talked to the Corps in Philadelphia and New York, and through their efforts, we were able to get the Ocean City project moving ahead of schedule before

anything else. We also were able to get the job up in Monmouth Beach moving and reauthorized. Then the water resource bill kicked in, in '86, and we were off and running.

We got stable funding in '94, which allowed us to begin this Sea Bright-Monmouth Beach project. Initially, we only thought we were going to be able to do the Sea Bright area or the Monmouth Beach area. We were able to expand that.

Right now, we are looking at doing the rest of the work in the area down in Asbury Park to Shark River in the area from Asbury Park north to Long Branch. Those are our projects. That is this area in here. We are looking at getting some of those started late this Fiscal, beginning of Fiscal '99. We are also looking down in Atlantic County. We have the project for Absecon Island, which includes Atlantic City, Ventnor, Margate, and Longport. We are doing the plans and specifications for that right now. We are also looking at plans and specifications down in the area of Avalon, Stone Harbor, and the inlet areas down there.

We have a lot of work on the table, and we are beginning to realize that the Shore Protection Program, the beachfills, do provide the protection to the area. It reduces the storm damage and protects the infrastructure, exactly what they were designed to do.

Do we need some extra dollars? I'll be the first one to say yes. I'll always look for dollars. You know that. We need to move along, and I think we can match whatever the Corps is going to give to us and proceed with that. I think we are doing a great job, and the Corps has been very helpful to us in that respect.

SENATOR CIESLA: Thank you, Bernie.

Any questions?

ASSEMBLYMAN WOLFE: I have a question on that last slide you just showed.

MR. MOORE: Yes.

ASSEMBLYMAN WOLFE: Above Manasquan and the darkened area there is a gap there. There is nothing there.

MR. MOORE: This was Deal area. We are working with Deal--

ASSEMBLYMAN WOLFE: Okay.

MR. MOORE: --and Elberon. That's scheduled for Fiscal '99.

ASSEMBLYMAN WOLFE: Good, thanks.

SENATOR CIESLA: Dr. Psuty.

DR. PSUTY: Bernie, you have identified some special areas, erosion rates, whatever. Is there a commonality of situations that sort of describes those areas? Is there something special which tends to explain the distribution of the erosion?

MR. MOORE: Well, I think if you look at Whale Beach, the area has been neglected for years, it has been an area of great controversy. Nothing has been done really since the '92 storms. Prior to the '92 storms, in '84 we put a beachfill back in that area. We didn't do anything after the '84 storm, and for more than 10 years that sand kind of lingered in there, but you kind of got to go back in and replenish the area. So really no maintenance being done in the Whale Beach area, in the Stone Harbor area, also. It's an area where little or no work has been done. Some of it is just because of lack of funds.

DR. PSUTY: I was thinking of the fact-- I know some of those places that they seem to be bearing the brunt of the downstream effect of structures and things that perhaps haven't been maintained. To me there does seem to be a situation that is repeated and would you comment on that.

MR. MOORE: Well, in the case of Stone Harbor you have a series of groins and bulkheads throughout the entire area. In the Whale Beach area, we come down through Upper Township, Strathmere, and we didn't stop. There is a gap of about 25 blocks at the north end of Sea Isle City which has no groins at all. Right offshore of that area is also the influence of the sandbar from Corsons Inlet, which now that sandbar is becoming quite large. It encompasses everything from Corsons Inlet south almost to the end of Upper Township. So when you have that sandbar offshore, you then have a concentration of energy, of course, around that sandbar which is being directed directly into the Whale Beach area. But part of it I look at is just lack of funds to carry out the projects that we need to carry out in these areas year in and year out.

SENATOR CIESLA: Assemblyman Gibson.

ASSEMBLYMAN GIBSON: Yes, I would like to respond to Dr. Psuty's question from my perspective. The first four projects that Bernie said were high-priority projects are all in Cape May County. I'm personally familiar with all of them, and I'm also a civil engineer. None of those four projects would be affected by the downstream effect where you would have long groins or something or long jetty, and then start at the beaches to the south. That's not the case.

In the case of the highest-priority project, which was Whale Beach, it was, in my opinion, with all due respect, some reluctance to grant permits even after the money was earmarked for the project, possibly on the basis that the beachfill project would generate some rateable or some building boom behind it in an area where there should not be any. The thought now is to use the Blue Acres concept -- Assemblyman Wolfe's Blue Acres concept -- and apply that to whatever private property would be willing to sell there so that we can retard, slow down, prevent any development behind a very necessary beachfill project. And I hope those permits will be issued shortly. The money has been appropriated. The money has been earmarked.

If you remember from the slide, if, in fact, that ocean was permitted to continue through there, a new inlet would have been created. The Great Bay area behind that would be very easily reached by the erosion of the ocean and we would have a new inlet, which would be a catastrophe.

Good question, Dr. Psuty, but the answer is to grant the permits for the beachfill, at least in my position.

SENATOR CIESLA: Mr. Kempf.

MR. KEMPF: Bernie, we all know that over the years our technology is not up to par as it is today and we didn't have quite the understanding. We did a lot of things piecemeal for one reason or another, and we all know that Mother Nature doesn't respect boundaries and what have you. But since the advent of the stabilized funding and our new approach as it were-- We are doing things on a more regional basis, and they seem to be providing indications of success. We see less and less damage, especially behind the beaches and what have you. Would you care to hazard a guess

that-- Let's go to the ideal world that we can have that type of a program throughout the entire state. Do you see that we would reach, I guess, what be called equilibrium and, with Feeder Beach and what have you, that the costs would actually potentially drop in time?

MR. MOORE: I think once the initial beachfills had been put in, yes, the cost for maintaining the beaches will drop. Fifteen million dollars is something that we could handle for the renourishment period. It is during the period of initial placement that the cost is extremely high.

SENATOR CIESLA: Reed Gusciora.

ASSEMBLYMAN GUSCIORA: Bernie, I was actually down in Ocean City back in the '90s, and I recall the beach line under the boardwalk, so I think it's impressive that we found a beach there. Also, in Belmar the expansion of the beach, how long is that expected to last before something else has to be done? As a follow-up, if it's not permanent, are there technologies or things down the pipe that will make things more permanent?

MR. MOORE: Okay, in the case of Ocean City the program is to renourish the area approximately every three years. That can fluctuate somewhat depending on what the monitoring of the beach indicates. Here, up in the northern part of the state, the program is to renourish the beaches again in a period of every six years. Each area that Steve was talking about before has its own individual borrow site, a borrow site that will supply the necessary sand for a period of 50 years, which was the designed life of the project. So we do have that.

Yes, we are looking at some technologies that hopefully we can either lengthen, or increase, the period, or time, for renourishment. If we can

find some technologies that can do that, we will save a tremendous amount of money even if it's only just a couple of years. Instead of going -- let's say, Ocean City -- every three years, we go every four years or five years. That will be a big savings to us over the life of the project. So we are looking at that, yes.

ASSEMBLYMAN GUSCIORA: Thank you.

SENATOR CIESLA: Okay, Bernie, thank you very much for the information.

MR. MOORE: Thank you, Mr. Chairman.

SENATOR CIESLA: We appreciate you taking the time.

I notice on the agenda we have Anthony Ciorra from the Corps of Engineers here, which is available to answer any questions that we have. However, at this time, I think I would like to call Dr. Michael Bruno, from the Davidson Laboratories at Stevens Institute, who from time to time has been instrumental in suggesting certain remedies and providing assessments that have been informative.

Michael, welcome.

**MICHAEL BRUNO, Ph.D.:** Thank you, Senator.

Always a hard act to follow, Bernie. I'm crossing off most of my points now. (laughter)

I think it's important that this Commission play a role in public education, particularly with regards to beachfills and the different projects going on right now, many of which Bernie has already mentioned. The fact is that the beachfills did work as intended, as has already been mentioned.

Mayor Winterstella can attest to that. In the absence of that beachfill, I'm sure the walkway in Manasquan would be gone.

The February 4th to February 6th storm was a major storm. It was probably the worst storm of the last five to six years, perhaps the worst since '92, but certainly the worst since the March of '93 storm. (pauses)

SENATOR CIESLA: Exercise in humility. (laughter)

DR. BRUNO: Okay, with that-- Believe me when I say that the fills worked as intended. The beaches are certainly not as wide now as they once were, but you only have to get out there and see where the waves are breaking now to understand that the sandbars are doing their job.

Many of the locations where we had beachfills over the last two years who did not have sandbars before placement the beaches had gone to an unnatural, very steep configuration which has now been replaced by, in my opinion, a more natural situation with a mild slope and a sandbar offshore which serves to trip, or dissipate, the wave energy as it comes on shore. A lot of that material will eventually make its way back up onto the beach. As we approach the summer, perhaps some of it will not, but time will tell.

I think it's also important to mention that, at least in our perspective, it is not business as usual. We are doing a lot of things with the State, ourselves at Stevens, a lot of that in cooperation with Rutgers University.

Among the different issues we are looking at is the issue of erosion hot spots. It's a new buzzword in the field of coastal engineering. I think it arises because it's only recently that we are seeing erosion hot spots. Simply put, there is now sand to be eroded along many of these areas where we have

erosion hot spots. We had water right up to bulkheads or revetments. I'm speaking of areas like Monmouth Beach. Indications are that hot spot is related to the offshore topography off of Monmouth Beach and wave focusing. It had always been a popular surfing spot for that reason.

Manasquan -- the Pompano Avenue area of Manasquan -- probably that hot spot is associated with the inlet and the inlet currents. In answer to a question that was raised earlier about reasons for some of the hot spots that we are seeing, we feel that a lot of them are associated with the presence of inlets.

We have a situation where we have needs that are in direct opposition to one another. The assurance of safe navigable inlets, in many instances, runs counter to assuring a safe or a stable beach. We have to learn to have both developed technologies and strategies to have both. There are areas in the United States where we have sand bypassing across inlets that trap sand. We need to look at technologies like that. I will mention that with the Senator's help.

Stevens will be installing, in May, a series of coastal monitoring stations along the coast of New Jersey which will provide real-time information on waves, tide, wind, pressure, beach width, and elevation, and also digital photographs of the beach and the wave conditions. That information will be directly reported to the Internet. So anyone in the public will be able to access, on an hourly basis, all of that information at locations in all four ocean counties of the state.

I guess that's all that Bernie left me. (laughter) I can answer any questions.

SENATOR CIESLA: Thanks, Mike. I'm very excited the Legislature did fund-- Dr. Bruno had mentioned that he is going to be putting in some data collection centers. It will be based on real time and that will capture information on a real-time basis and make it public. That has the potential for providing us with some information that we just simply haven't been able to capture scientifically, but have been able to kind of casually observe.

All of us know what happens out here, but no one quite has the scientific basis for it. So there is going to be four monitoring stations. They actually, I believe, are going to be installed in the surf in one fashion so that they will be suitably protected in order to capture and provide that information during storm events. So we are pretty excited about the information, what that is going to bring, Mike.

Any questions?

Assemblyman Wolfe.

ASSEMBLYMAN WOLFE: Yes, I'd like to ask the professor, the new data which you will be making available, will that provide any information on the surface of the floor, the ocean, or the beaches? Will that be available?

DR. BRUNO: Well--

ASSEMBLYMAN WOLFE: The reason I'm asking is we had some concerns expressed to us about conditions in Spring Lake where there is apparently some movement of jetty material in swimming areas. Will there be some way that can be monitored?

DR. BRUNO: Well, the combination of the information on wave characteristics and beach elevation with the digital photos there are techniques

coming out now where we will be able to try and combine those technologies and get an idea of what the bottom that lies between the instrument and the beach phase.

ASSEMBLYMAN WOLFE: Thanks.

SENATOR CIESLA: Any other questions?

Steve.

MR. KEMPF: I have one. Back to my original concept again with respect to Bernie's comments about the regionalization. How will that affect some of these hot spots? If we can work more towards, I guess, the harmony or equilibrium along the shoreline, will that help to reduce some of these typical hot spots we have as the profile reaches this more natural state, or is that the reach?

DR. BRUNO: No, the reach concept is the essential first step. For example, the filling from Manasquan Inlet up to Shark River Inlet was essential. That project would not be successful unless we did that, and any impact of those two inlets on the beach phase can then be assessed -- could only be assessed -- if there was a regional beach in between the two inlets. So now we have an opportunity to monitor those and examine what impact the inlets are having.

If you have the influence of something like some abrupt change in the offshore topography, like the Shrewsbury rocks up to the north perhaps causing wave focusing in that area, that is less-- Certainly, it's a difficult problem to examine, but it is also a more difficult problem to fix. It wouldn't be surprising, I think, to anybody in this room that beachfill by itself is not the

solution everywhere along the state. We may have to eventually go to a combination of technologies, the beachfill in association with something else.

MR. KEMPF: Thank you.

SENATOR CIESLA: Any other questions? (no response)

Before you go, Mike, bring us up to speed with any information that you might have collected regarding the offshore reefs which were installed -- the beach saver reefs. I notice, just casually again looking out at Spring Lake, there seems to be less erosion where the reef was installed on the border of Spring Lake and Belmar. How are they holding up? Are they maintaining their position on the bottom? Are they in jeopardy of not working?

DR. BRUNO: All three sites, in order of placement, Avalon, Belmar-Spring Lake, and Cape May Point -- all three structures have gone to their equilibrium, and for the last year and a half or so there has been no movement of them either vertically or horizontally, so they are stable structurally. As far as their influence, we have learned a lot about the technology. We understand now, I think better than ever, where they should be employed and where they should not be.

Avalon was an open-ended situation near an inlet. It had a very local effect, a positive effect, but elsewhere the beach behaved as if it wasn't there. At Belmar, -Spring Lake we had a positive effect, not a dramatic positive effect. That reef is very much submerged below the water surface. It is a very vibrant habitat, as a lot of divers have found out. So that was a positive unexpected impact. Cape May Point, far and away, the most successful of the installations. If we had been asked going into the three projects, we would have expected that to have been the worst given the very strong currents in the

Delaware Bay in that area, but in fact, that's exactly what it-- It isolated that beach from the strong currents that had been responsible for the erosion there. It is also the highest in elevation of all three. You can almost walk along it at low tide. The foundation preparation was better, antiscouring preparation was better. So lessons were learned in construction and placement. The Cape May Point site is a resounding success.

SENATOR CIESLA: This is a crude question, but is it better than a pile of rocks offshore?

DR. BRUNO: It's not a crude question, it's a good question. A pile of rocks would be a whole lot cheaper. It is better than a pile of rocks. It's an extremely stable design. We've been surprised at the stability, even after several major, major storm events. A pile of rocks dumped haphazardly out there would not be there any longer.

SENATOR CIESLA: Thanks for taking the time to come down from Stevens. I'm sure your students appreciated the time off. (laughter)

Next group of individuals I'd like to call up are from FEMA, the Federal Emergency Management Agency.

Is it Joe Picciano? (affirmative response)

Along with that I would like to call up the representatives of the Office of Emergency Management from New Jersey, Joe Painting.

Maybe you gentlemen can fill us in on exactly how to assess the damage of the process. And if you have any sense of perhaps -- a perspective is what we are interested in -- damage relative to storms that are experienced when beachfills are not in place and when beachfills have been in place and your feelings regarding that.

**MAJOR THOMAS P. DAVIES:** Good morning, I'm Major Tom Davies from the State Police. One of my responsibilities is the emergency management function, one of many. I'm here today representing the Office of Emergency Management to discuss our role, and that's what we were asked to do, to come here and tell you very briefly what we really do in predisaster, as well as disaster, response and then the efforts to bring money, frankly, back into the State of New Jersey to support some of these beach projects.

The first thing that we do predisaster within our office is conduct damage assessment training for county and local coordinators, a very key point, and we are well on our way to having some very qualified people at the local and county level to do the damage assessment after we have an event. We also publicize provisions and benefits to the Hazard Mitigation Program, and I'm going to speak briefly about that after these comments.

We also monitor the weather reports and alert shore communities as appropriate. We are the severe weather notification point within the State Police for the whole State government agencies with events and coastal storms being one of them. We also do precautionary staffing of the State EOC. I might add I had some very good news to speak of references -- current events that we have had, these two coastal storms, that I'll mention briefly after the presentation.

What do we do? Again, I want to reiterate that the State Office of Emergency Management is solely the coordinating agency. We work hand in glove with Bernie Moore's people and all the other allied State agencies, DOT and others, to bring things back to some assemblance of order. We

coordinate county and local initial damage assessment. That's paramount before we can even call FEMA in to do a preliminary damage assessment.

I have two teams. I call them the Rapid Deployment Teams. They go out to augment the local efforts. A lot times a local community is inundated with the emergency response function. We provide a six- to eight-man team headed up by an enlisted supervisor that goes out and actually assists the county and localities in doing the assessment of what is going on. Again a lot of time the locals are just inundated with the emergency response phase, and we think it is very appropriate to provide that support, and we have done that in the last several storms.

We then consolidate and analyze the overall impact to the event. Based upon those considerations, we request FEMA to come in and do a preliminary damage assessment, again if appropriate. Sometimes they are a stretch, but there is always the emphasis in the State of New Jersey to try to get whatever we can back into our communities, county, and State agencies.

My office is responsible for preparing the Governor's declaration request. That's a declaration process. It comes from my office based on all the information and numbers, goes down to the Deputy Chief of Staff. The Governor signs it -- last time she signed it within two hours. It goes to Bill Clinton via Lynn Canton (phonetic spelling), who is my regional director and Joe's boss. And as we are all aware, the Governor is very proactive. Two hours after we sent that last request down it was already gone.

What do we do postdisaster? With FEMA, we establish a disaster field office. We jointly inspect damages and determine eligible amounts for public assistance grants, identify and prioritize hazard and mitigation

opportunities, and prepare project packages. Again I must reiterate that's done in concert with all of the State agencies. We are just basically the coordination role in that. Administer public assistance and Hazard Mitigation Grant Programs. That's a new buzzword I'm sure Joe is going to touch on, mitigation, prevent the things before they happen. Coastal storms being one of many things that we have to deal with.

Let' talk briefly about the results of the February 4th northeaster, a joint damage assessment. There was \$3.26 million identified in Category G beach repair; \$600,000 in emergency protective dune; \$700,000 in debris removal cost; total public assistance was \$5.5 million. There were at least 150 homes eligible for FEMA individual assistance programs, as well as potential for over -- and that's a conservative figure -- \$1 million in hazard mitigation funding opportunities.

You also asked me to bring with me some of the stats. I thought December of '92 would be a good benchmark to start with when we really got involved in this from our office perspective. The event that happened January northeaster was known as Disaster 936. Back into the State of New Jersey, local, county, and State, \$1.43 million. The State chipped in a little less than a quarter of a million dollars and the municipalities, or the applicants, chipped in a like amount, \$238,000.

We then moved on to the December storm of '92 identified as 973. Fourteen million dollars in Federal funds came in. The State allocated \$4.7 million, they picked up the entire 25 percent State match. The municipalities and the other applicants had no cost in that disaster for the FEMA dollars. Then we encountered the infamous -- what we thought was the

storm of the century -- winter storm known as 1088. The coastal part of that storm, which was an add on, we were able to get \$670,000 in Federal funds. It didn't cost the State anything. In that particular event, it cost the applicants \$112,000.

We've got a grand total of \$21.3 million that has come back into the State of New Jersey just since December of '92, and overall, if you include all disasters that the State has been responsible for in dealing with FEMA and other allied Federal agencies, including Federal highway, \$94 million has come back into the State of New Jersey at the local, county, and State coffers due to disasters.

Briefly, I'm going to talk about a couple of hazard mitigation initiatives. That's the new buzzword in FEMA, and the State's picking up on that. I'm trying to get some additional staff and they will need any help. I think the Governor is already going to let us have two more bodies to get that done.

Hazard Mitigation Grant Program must benefit or be located in a presidentially declared disaster area. That's just been changed. If we have an event, mitigation monies can be used statewide. It will be based on where the real need is and won't be subjected to just localized in a particular county where the event occurs.

The funds are currently available through the State Office of Emergency Management. We have money sitting right now that's looking for a place and a home. I have the experts here to discuss that in private. If someone wants to, we can try to get that information out to everyone. There

is an effort required at the local and county level to make these things happen though.

Not to be used for equipment purchases or planning. They are the two issues under this Program, Federal money, that we cannot use them for.

Some of initiatives that the Office has on the take, and again in concert with the other State agencies: review available hazard data, compare against existing capabilities; marketing awareness of risk to a community and its infrastructure; and encourage decision-making or risk reduction initiatives and priorities. We've got to -- I don't mean to sound like James Lee Witt -- but we've got to start getting in the business of preventing disasters before they happen and not just continual disaster money, disaster money.

Some of the other initiatives under Flood Mitigation Assistance Program -- there are three types of grants under this particular Program. There is Planning Grants, there is Project Grants, there is Technical Assistance Grants. It's an annual competitive issue. We've currently just recently awarded some grants to various municipalities, and again it's based on a competitive basis.

That's administered by the State Hazard Mitigation Program. The State Police OEM is the cochair, a representative from the Governor's Office is also a cochair, that's Maggie Villain who works down in the Governor's Office. That was formed after the December '92 coastal storm. Part of their job is to develop a State Hazard Mitigation Plan, administer the Hazard Mitigation Grant and Flood Mitigation Assistance Programs, provide technical assistance in developing risk reduction strategies, programs, projects, and increase the public's awareness of natural hazards.

Now, onto the current disaster. As of yesterday -- and I'm sure most of the Commission here is aware of it -- President Clinton did declare Atlantic and Cape May County a disaster area for the northeaster. The disaster will be known as 1206. We will be meeting at 3:00 this afternoon with the various State and Federal agencies in the preliminary State, Federal meeting to discuss implementation. Most likely we were going to be located down at the Nafack Center in Atlantic County. It's a Federal site, it doesn't cost the taxpayers any extra money to use it. We don't have to rent buildings and space. So that's ongoing.

In addition to that, there is a letter that currently has been drafted, and it's just under legal review -- as I left this morning -- by the Attorney General's Office, based upon that review will be submitted down to Governor Whitman, for consideration to add on the coastal counties Ocean and Monmouth. Preliminary information was not sufficient to put them in an initial request for the declaration. Subsequent information leads us to believe that you don't get anything if you don't ask.

SENATOR CIESLA: We are with you.

MAJOR DAVIES: The Governor's Office fully supports us asking to add them on so that might even go out under the Governor's signature as early as today. That and just a brief thumbnail sketch is what my office is responsible for, and I'd be open to any questions that the Commission might have.

SENATOR CIESLA: Thank you, Major.

ASSEMBLYMAN GIBSON: Chairman.

SENATOR CIESLA: Assemblyman.

ASSEMBLYMAN GIBSON: I'm familiar with your good work, Major Davies is it?

MAJOR DAVIES: Yes, sir.

ASSEMBLYMAN GIBSON: I'm pleased to see that the letter will be going out for the other two counties as well. There was some question as to which particular storm the damage occurred in.

MAJOR DAVIES: Well, that's a good question, sir.

ASSEMBLYMAN GIBSON: Bring us up to date on that.

MAJOR DAVIES: It's going to be the second storm; however, we are going to be negotiating with FEMA later today and tomorrow -- and with all due respect to my good friend Joe -- putting a little pressure on him to consider the impact of both storms.

**JOSEPH PICCIANO:** I feel no pressure.

ASSEMBLYMAN GIBSON: Good, that's very good. I'm glad to see that.

SENATOR CIESLA: Doctor.

DR. PSUTY: I just want to compliment the Major on the emphasis of mitigation. I fully support that approach, to try to reduce the losses, as opposed to just continue throwing money at it. I would urge Joe to pick up on the fact that, in fact, this winter we've had storms beginning in October and that antecedent conditions are a very, very important part of how a particular storm affects our shore. And so I don't think you can look at an individual storm. I think you have to look at the cumulative effects. I really think you have to go back to October to really, truly evaluate what was set up by the various storms. I would certainly encourage the broader view.

I'd like to ask the Major, what sort of mitigation activities are we going to be focusing on within the state? Are there some scenarios of some particular things that we are going to try to put more emphasis on?

MAJOR DAVIES: Well, I can give you just a brief example, and I try to use plain language when I speak and what really the general public understand. You have homes built in an area where every time it rains, it floods. Well, maybe we should consider buying out those homes and making it a park in concert with some of the things that DEP currently does with their -- I guess it's the Green Acres project. So that's one of the initiatives, and I know we have one Mitigation Grant right now up in Rahway where they are actually physically buying out some properties or elevating and turning that either into a park or elevating that home out of harm's way.

So there is a whole host of things. It's a new game in town. FEMA has a lot of funds that they want to dedicate predisaster verses postdisaster, and James Lee Witt has the ear of the President, and I believe that New Jersey is going to benefit very well from some mitigation dollars. And again I tried to get two more staff members to complement the one-man mitigation unit the State of New Jersey has. So we are well on our way to doing that.

SENATOR CIESLA: Thank you, Major Davies.

Assemblyman Wolfe.

ASSEMBLYMAN WOLFE: Yes,

Major, that was very impressive in your presentation. I don't know whether to wait until the next gentleman speaks or maybe I should ask you. Several years ago, when we had one of these Commission meetings, the

Commission was told that to be eligible for funding municipalities and the counties had to have -- at that time were called -- engineered beaches. Are engineered beaches a requirement for this particular--

MR. PICCIANO: I was going to address that in my presentation.

ASSEMBLYMAN WOLFE: Good, well, I'll wait for that because I have some questions.

Thanks.

SENATOR CIESLA: Steve, did you have a question?

MR. KEMPF: Yes, just a brief one.

I am very interested in the State Hazard Mitigation Plan, and the amount of work that the mitigation group, or the one-person group, is a rather daunting task, and quite often a lot of projects are not moved a long as we would like them because of that limitation. Do you feel that potentially with the addition of two people that the conciseness and the progress of the State Mitigation Program will move along more effectively as it's anticipated?

MAJOR DAVIES: Emphatically, yes.

SENATOR CIESLA: Thank you, Steve.

Joe.

MR. PICCIANO: Thank you very much for having me here. Again, I'm very pleased to say the President did declare the two southern counties as part of a Federal declaration, making both counties eligible for assistance both for individuals and for damaged public facilities. I have some written remarks that I will read off. But before I do that, I just want to highlight a program that we're not really here to discuss, but has a significant

impact on the coastal areas of New Jersey, and that's the National Flood Insurance Program.

It should be noted in many of the communities in the declared area the coverage was up to 80 percent or 90 percent of the individuals having insurance. Another fact that is quite interesting is in 1992 we paid out more than the total amount of Federal dollars that Tom had indicated in his presentation, over a \$100 million in claims insurance. So New Jersey is participating, and participating heavily, in the National Flood Insurance Program, and you're probably the fourth or fifth state -- I have not checked the records lately -- nationally in that regard. Specifically, along the coast you probably have the highest density of coverage and per mile the highest property at risk. So we have a big piece of New Jersey, from my Agency's perspective, and a lot at risk. So we strongly endorse -- to answer your question initially -- efforts to mitigate against future losses. Where we may disagree on types and technical aspects of what mitigation is, the general direction is the right direction, that is, to secure properties and people from damage, and we appreciate that in FEMA.

I know our Director, who testified yesterday, made that very clear. The Congressman from New Jersey asked a couple of questions regarding dunes and beaches and what our Director thought of them, and the response, I think, was interesting. If you listen to C-SPAN you will probably hear a little bit more about that.

Let me just read from my remarks, and then I will answer any questions. Before I do that, the other aspect of disasters are individuals, and in those two counties that were declared-- Representatives from those areas

can do your part by letting your citizens know that if they had specific damage as individuals, they should call out toll-free number to register.

We only estimated it was maybe a couple of hundred people that may have been eligible, but if there is any doubt, they should call. Let me just give you that toll-free number. It's 1-800-462-9029. That's a one-stop registration. That would be either for FEMA assistance or for an SPA loan. So that's critical, and as officials from those two counties, it would be really helpful to get that word out, and victims who may have suffered losses who weren't insured may be eligible.

I'll try to address your question regarding engineered beaches at this point. The Federal Emergency Management does not have a beach erosion, or coastal protection, program or mission. Under the Stafford Act and declared disasters, FEMA will provide Federal assistance for eligible damaged public facilities and some not-for-profit structures. Cost to cover beach erosion resulting from events and presidentially declared disasters would be limited.

For nonengineered coastlines, coastlines under the jurisdiction of other Federal agencies, like the Corps of Engineers, on improved natural beaches and damage coastlines where there is no -- and this is key -- imminent threat, work would not be eligible for disaster assistance from the Federal Emergency Management Agency. Assistance could be available at 75 percent FEMA share and 25 percent State and local share for impacted coastlines in the following two instances.

Constructed beaches. Constructed beaches may be eligible if they meet certain specific criteria. To be eligible for other than emergency protective measures, a beach must be an improved beach -- this is the

engineered beach -- must have been designed and constructed using an analysis of sand grain size to determine the elevation and width of the berm. The beach must also have an established maintenance program with sand renourishment at no more than five years. The applicant will be required to submit supporting documentation in the form of the following information.

Before I provide that following information, it is of interest to note that I have been involved in all of the past coastal storms in New Jersey. In 1992, I believe there were one or two engineered beaches. Apparently a number of communities had gotten smart because last I counted in the assessment data I had there were 10 potential beaches that were identified as engineered beaches. It is going to be incumbent upon those communities to provide the information that demonstrates that, in fact, they are. And that's what I'm going to read out now are what those requirements are:

- copies of any studies prepared prior to construction including the analysis of sand size;

- copy of as-built plans and design specifications;

- information pertaining to maintenance of the improved beach such as the following: the established renourishment program for the beach, the quantity, cost, and source of sand placed on the improved beach by year. This information must cover the period of time since the beach was constructed or 10 years, whichever is less, and cross sections before and after each sand placement;

- poststorm cross sections of the improved beach;

- prestorm cross section of the improved beach. If such cross sections are more than one year old, a prorated historic erosion rate of sand

will be applied for the same time between the last survey and the storm to approximate the prestorm cross sections.

That basically describes what an engineered beach is. There are communities who have successfully filled those requirements, and Avalon, for example, is one and has historically, I think, was reimbursed funding for doing beaches that way. Again from our initial -- and I carefully want to state this -- assessment, there appears to be more engineered beaches at this time than there were in 1992.

The other areas that would be covered would be protection of improved property, and this would be protection that could be done on the beach to protect structures that are in imminent threat, being impacted by a very minuscule storm, a one-year event or so. Placement of sand on a beach to serve as protection -- to improve property -- from waves and flooding may be eligible. Eligible work is limited to that which would provide protection from a five-year event or the predisaster level, whichever is less. The example would be water is pounding right at a foot of a road. The community needs to put something there to prevent further damage over a short-term storm that may occur.

That is the disaster eligibility for the beaches and dunes from a FEMA perspective. In a nondisaster environment, the State of New Jersey, as the Major pointed out, administers two FEMA-funded programs that allow for Mitigation Grants that must meet benefit, cost, environmental, and mitigation standards. The Programs are the Flood Mitigation Assistance Program -- and I won't go into detail -- and it has a Mitigation Grant Program, both of which again the Major had talked about.

For the Flood Mitigation Assistance Program, it was really rewarding to see communities like Rahway come in with elevation projects. I will say nationally, in the projects I've worked on, FEMA's interest is in the acquisition and relocation of structures, the elevation of structures. We applaud approaches like Blue Acres and Green Acres. We think that is the way to go for future mitigation. We prefer not being in the hard, structured solution. The Director made that clear yesterday in his testimony, and that has been FEMA's direction over the last few years.

Regarding our operation. We should be operational in Atlantic County by Friday with an office working with the State. We will have community relations people, public affairs people, our engineering teams -- we are going to use a technical contractor out of Washington to help with the specific areas involved with erosion. We will be available to handle any inquiries and be more than pleased to meet with any officials who would like to discuss our policies and anything regarding them.

Thank you very much.

SENATOR CIESLA: Joe, thank you very much.

Assemblyman Gibson.

ASSEMBLYMAN GIBSON: Through you, Mr. Chairman, I wonder if Mr. Picciano would share the criteria that he read to us. We do have Major Davies's outlines, but--

MR. PICCIANO: Yes, I've provided an outline.

ASSEMBLYMAN GIBSON: Thank you, Mr. Picciano.

Then I have one question. The private individuals who have suffered damage in their homes that either are currently registered or will be

registered by way of calling this number, they are eligible for loans, or are they eligible for some grants? What are they eligible for?

MR. PICCIANO: It depends. When they register what happens is there is first a test to see-- If this was a more significant event, there would be people who are still out of their homes. The first level of eligibility is regardless of an income test. Anybody would be eligible either for three months of temporary housing or to do immediate home repair so they can possibly move in, and FEMA would pick that up at 100 percent. I do not believe, though, there are many people in that situation at this point.

When they call up and register, the information taken will be made first to determine if they are eligible for an SPA loan or not. If they are eligible for an SPA loan, their application will be referred to SPA. If they are not, they can be eligible for a grant up to maybe \$5000, depending on the degree of damage, for some assistance.

In addition, by registering they register for any Federal program that would be available as a result of this disaster. So it's sort of one-stop call, and if there is any issues at all, they should call up if they have any questions or thoughts.

ASSEMBLYMAN GIBSON: Thank you very much.

MAJOR DAVIES: I'm going to get copies made of the press release that went out from FEMA Headquarters. It's a three-page document that succinctly states some of those issues Joe just reiterated.

ASSEMBLYMAN GIBSON: Thank you.

SENATOR CIESLA: Thank you, Major.

Doctor.

DR. PSUTY: Joe, do you incorporate dunes in your concept of beaches, or is that a separate entity? Are dunes a component of mitigation, and can they be part of a mitigation approach independent of the beach?

MR. PICCIANO: What historically we have done, in New Jersey on a number of occasions, we have approved projects that stabilize dunes out of our Hazard Mitigation Grant Program, for example, grass, fencing, programs that will again stabilize a dune and secure it in place, and there are a number of communities that are taking advantage of this.

In addition, along the coast, we have funded -- again, I want to compliment the State of New Jersey, who has been really proactive in promoting this -- educational programs, public awareness programs in regards to how and the best way to protect and secure beaches. One of the, I consider, the best nonstructural solutions would include dune fencing, grass planting, and that would be an eligible item under the Hazard Mitigation Grant Program.

SENATOR CIESLA: Assemblyman Wolfe.

ASSEMBLYMAN WOLFE: Yes, I want to thank you for you information, especially regarding the engineered beach. I was concerned in that because, obviously, there has been an increase, as you have indicated. Ten still seems rather insignificant. That's not your problem. I think that's perhaps the legislators' problem, and we have to work more closely with the county officials because certainly that is a criteria for eligibility, and God, I hope there is not a situation where we need that help. I think we have some more work we have to do in New Jersey, and thank you for bringing that to our attention.

MR. KEMPF: A brief question. What is the percentage now for Hazard Mitigation Grant based on a PA? It used to be 10 percent of the disasters that-- What is that now, Joe?

MR. PICCIANO: It's presently for every dollar that FEMA spends, we'll spend another 15 cents on mitigation. So it's at 15 cents at this point with a 25 percent match requirement.

MR. KEMPF: You eluded, just briefly, to some statements made by the national Director yesterday with respect to beach replenishment, or is it more general comments?

MR. PICCIANO: The Congressman asked some specific questions about dunes and beaches, and he sort of gave the same answer I did, where the Agency would prefer nonstructured solutions as opposed to building. He compared some coastal construction as very similar to levy situations in the Midwest protecting structures, and in a lot of cases it is necessary because of the way the infrastructure exists. But again he emphasized that the Agency would prefer that we were involved in the purchase of properties, relocation, and acquisition, but understands that in cases where it is necessary, it is something that we have to pursue.

MR. KEMPF: Thank you.

SENATOR CIESLA: Done, Steve? (affirmative response)

Okay, thank you, gentlemen. I appreciate the information. It was very informative.

Two witnesses that are left I am first going to ask Suzanne Walters, who is a resident of Stone Harbor that--

ASSEMBLYMAN GIBSON: Mayor.

SENATOR CIESLA: The mayor and resident. It's a condition.

**MAYOR SUZANNE M. WALTERS:** I want to thank you very much for allowing me the time and for being here at this conference. I am the Mayor of the Borough of Stone Harbor, and I have a handout that has some drawings and some photocopied photographs to give you an idea. As Bernie mentioned earlier, we were hit very hard by the two northeasters, one in late January and in early February. They dealt considerable havoc to our beaches and to our motto of The Seashore At Its Best.

Because of the loss of four to five feet of beach elevation, particularly in the center of our town, there is no recreational beach at high tide between 100th Street and 111th Street and very little beach even at low tide. Given the natural transport of sand along the shore over a year's time -- northbound during the summer and southbound during the winter -- sand will slowly reaccrete to these beaches until the next northeaster or hurricane, but it's not likely to reform to the same dimensions as existed prior to the storms.

While damage to the recreational beach is critical to a seashore resort community, so is the implication of beach and dune loss to the protection of private property and community infrastructure. Stone Harbor enjoys a multifaceted system of protection against the forces of the sea. Beginning with the beach phase, our protective system consists of four parts: beach face and berm to help dissipate wave energy; dune to further dissipate the wave energy and provide a source of sand replenishment; stone revetment to take the brunt of high-energy waves and protect the bulkhead; and finally the bulkhead to provide a final bulwark against the wave energy and to offer some protection against property inundation in a normal storm event.

As any one of these four components are damaged, then the strength of the whole system is weakened. I have a diagram that explains that concept. (indicating) The beach face and the berm provide the first line of defense followed by the dune, the revetment, and then the bulkhead. Our beaches before the 1998 storm had this general configuration. In the center of town, however, between 100th Street and 111th Street, there was no dune, the stone revetment was exposed, and the beach was generally lower in elevation, as depicted on the sketch in Page 2.

Between 100th Street and 111th Street there was little beach, if any, at high tide. As a result of the 1998 northeasters, we have lost between 50 percent and 60 percent of the dunes in the northern and southern sections of the town and the beach elevation has been severely eroded.

Again, looking at the central part of the town, the current beach profile -- there is a drawing there -- there is no beach at high tide and very little beach at low tide. Some of this loss will be restored naturally, but not to the level of protection previously enjoyed. The United States Army Corps of Engineers has observed in their 1997 feasibility study for Seven Mile Island that "the present condition of the beaches and dunes in Stone Harbor are inadequate to protect the Borough against a major storm event." The 1998 twin northeasters have validated this observation. Construction of the Corps of Engineers Beach Restoration Project for Stone Harbor was needed before the 1998 storms, it's critical now.

A bit of historical perspective is germane here, and there is a photograph on Page 3 which was taken approximately in 1950. It shows 102nd Street in the center of the picture. The beachfront property on the

northeast corner is still there. There is a bulkhead and the high tide line on the beach, and you can notice that there is no revetment on the beach at this location.

The next photo was taken at the same location in February of 1998. You'll notice that the tide is at the low end and there is a remnant of the 1950 bulkhead that's visible fronting the current revetment. The low tide line is about as far from the old bulkhead in the photo as it was in the high tide line in the 1950 photo. The current bulkhead is set back 20 feet from the 1950 bulkhead line.

The low tide dry beach at 102nd Street has historically been 100 to 125 feet wider than the high tide dry beach. This comparison of photographs suggests a loss of about 150 feet in beach width at this location. Further, there is no possibility to reestablish a dune line here, unless it is widened as proposed by the Corps of Engineers.

In January, I wrote to all Stone Harbor property owners living in 34 states requesting that they write to their congressional delegation seeking funding support for the Corps of Engineers projects for these beaches. Some of you did receive a copy of the letter that I wrote to the property owners along with sample letters that we suggest that they write and a brochure which explains the entire project to them.

I again wrote to the property owners this week apprising them of the damage caused by the two northeasters and advising them that the Borough will be going to bond \$2 million Beach Replenishment Project in the area between 98th Street and 111th Street, which are in imminent danger.

It is paramount that the State of New Jersey support legislatively and financially the Borough of Stone Harbor's efforts to prevent further damage to property and to a tourist-based economy in which we both rely heavily.

Thank you.

SENATOR CIESLA: Thank you, Mayor.

Let me compliment you on your comprehensive testimony and your marketing skills as well. You certainly are able to succinctly convey your point and the need, and you certainly have our assurance that we will do whatever we can in order to help expedite this matter.

MAYOR WALTERS: Right.

SENATOR CIESLA: I know the Assemblyman has been your champion since probably the initial efforts that you have put forward, so we will certainly promise to help any way that we can. I compliment you again on your job.

MAYOR WALTERS: Thank you.

SENATOR CIESLA: Any questions?

Assemblyman.

ASSEMBLYMAN GIBSON: Mr. Chairman, let me just simply further attest to what the Mayor's testimony has been, congratulating her for making a long trip up here. I know she has her town very much at heart. She is working very hard to make sure Stone Harbor is ready for this summer season. It's a great effort that she is biting the bullet along with her council and the entire communities.

So I congratulate you.

MAYOR WALTERS: Thank you very much.

SENATOR CIESLA: Thank you, Mayor.

MAYOR WALTERS: Thank you.

SENATOR CIESLA: Also, on behalf of the Borough of Allenhurst, Peter Avakian is here to provide some testimony to the Commission.

**PETER R. AVAKIAN:** Thank you, Senator.

SENATOR CIESLA: Welcome, Peter.

MR. AVAKIAN: First of all, my name is Peter Avakian. I am the Borough Engineer in the Borough of Allenhurst. With me today is the Borough Administrator, Vito Gadaleta. I've worked for virtually my entire professional life with an eye on coastal engineering. Our firm represents a number of coastal communities. I also served as the New Jersey Society of Professional Engineers President for the last year and had the opportunity to meet with Assemblyman Gibson on the floor, and I'm proud that he is on your Commission as a licensed professional engineer as well.

But I'm here today as requested by the Mayor, Mayor Joe Coyne, of the Borough of Allenhurst. The storms we are referring to-- A series of storms rendered a severe sand loss in the Borough of Allenhurst. Allenhurst, for perspective, is located five towns north of us here in Belmar. It's in Monmouth County. The area of sand loss was represented on the Army Corps of Engineers plan, and I provided that to Mr. Moore today.

The quantity of sand loss was extreme, and as I indicated in this report, we measure depths of loss between 2 feet and 4 and a half feet along the 1650-foot frontage of the Borough of Allenhurst. The volume of sand lost really did startle us when we calculated it. We calculated the total to be

36,000 cubic yards of sand loss in a very small community with a population of 800 residents. I know the population doesn't correlate to the volume of sand loss; unfortunately, it would be easier for us to make calculations that way.

But the material does correlate to the volume of sand proposed to be placed on the beach with the Army Corps Project, which is scheduled for Fiscal Year 1999. The volume lost, 36,000 cubic yards, represents almost 75 percent of the proposed volume to be placed on the beach with the Army Corps Project. So we are talking now of 175 percent of sand to be placed where the project is to begin today.

The cost we estimated for the replacement of the sand from these storms would exceed \$250,000 for the Borough or another agency to go and replace that sand. This does not include the cost for repair of other damaged facilities, including beachfront cabanas. In addition to the sand replacement, the low sand profile that exists on the beach now leaves adjacent Borough and private properties very vulnerable.

We did a very quick assessment of the beachfront property value in the Borough. From north to south, 1650-foot residential, municipal, private properties exceed \$6.1 million in costs in this very small residential community. The beachfront is separated from the residential areas with a 15-foot-high concrete retaining wall. Normally there is about a 10-foot drop from the top of the retaining wall to the sand beach. With the 4-and-a-half-foot, the most extreme, sand loss, we now have almost a 15-foot drop, which almost exposes the concrete footing of this retaining wall.

Because of that, the Borough is extremely vulnerable right now to potential damage. They are also very concerned because exposed piling on the beach, which is common in a storm event like this, has rendered the beaches virtually unusable and -- the prime revenue-generating source, our beachfront, represents about 25 percent of our municipal revenue -- would severely impact our ability to generate income.

I really came here before you based on your comment of the effects of this recent storm. We really appreciate the opportunity to be before you even with this brief presentation. If there is any additional information that you would want, we can certainly make it available to you. But we really are a little separate, we are not farther down south in the declared area. We are in Monmouth County. Hopefully Monmouth County would be declared as well. We have been in contact with New Jersey Office of Emergency Management and FEMA and appreciate this time today.

SENATOR CIESLA: And we will emphasize your condition to Major Tom Davies in his presentation to hopefully have Monmouth County included so that we can some remedial action taken as well.

Any questions? (no response)

Okay, thank you very much, Peter.

MR. AVAKIAN: Thank you.

SENATOR CIESLA: Our last witness today. A person who is usually long, but today has to be a little bit shorter because we are running out of time. A tireless advocate on behalf of the coast, our lobbyist for the shore, Kenny Smith.

**KENNETH J. SMITH:** Thanks, Mr. Chairman. Thank you for holding the hearing today. I would just like to echo your commendation of Stone Harbor. They have done tremendous work over the last two years, under Mayor Walters, in promoting the protection of their beach.

Just two things before I start very quickly. We've heard talk about dunes today and how wonderful it is to stabilize dunes. Dunes need a beach. Dunes generally need-- The rule of thumb is 100 feet of beach; maybe you can get away with a little less, but if you don't put the beach in, all your stabilizing is going to wash out with the next storm.

I would also like to say that the FEMA criteria for emergency verses permanent work had been around for at least 10 years. FEMA has been to us many times. If any town doesn't know what that's all about, they haven't been paying attention. Joe Picciano and his staff have been up front with everybody about the rules. Some towns have listened. Avalon sure listened, and they did just what they were supposed to do, and other towns haven't. That's going to make the difference in what they get.

You have my written testimony and my apologies that it came out as a press release. It's not addressed to the Beach Erosion Commission. I'm just running helter-skelter these days. (laughter)

Just a couple of points. The Federal Program obviously must continue. We've got some problems with that this year in that we've only got \$3.5 million for the State of New Jersey. The Clinton policy of "no new projects, no new construction starts, no new studies" has been extended, and, in fact, the renourishments -- three of them -- for Cape May, Ocean City -- excuse me, two renourishments are cut way down: from \$800,000 for Ocean

City down to \$150,000; from \$2 million for Cape May down to \$60,000. And the Sandy Hook to Barnegat Project is cut down to \$3,300,000 from an \$18 million project.

So with all the studies and everything we are about \$23 million out of the money. We all know the routine, we've been doing it for four years now. We go back in-- But we need the State's support, and if we get you some resolutions, we would certainly like to see the Senate and house adopt them. The Senate did last year, and we'll try to get to you early and get one to the house that can go to Congress.

I belong to the Maritime Advisory Council. We have a budget request manual, which we didn't do last year, but we've done every year for the last 10 and it works very well. All the shore protection projects are in there. This is organized under the Department of Commerce. But we will need your support.

Two suggestions, and I'll throw them out. I think the State fund should double to \$30 million. I understand that \$25 million is the figure that is being talked about in legislation. I support it completely. But I'm afraid that we are going to be back here next year or within two years asking for more money, and I would rather increase that so that we have money for State projects and for the Federal cost share.

We've got projects: \$52 million estimated for Townsends Inlet, \$54 million for Absecon Island, maybe \$40 million for Long Beach Island plus renourishments, plus, plus, plus. We are going, over the next five years, to have to have a substantial increase in that fund. I would also-- And then

renourishment would be hopefully incremental so that we could possibly reduce that fund.

I would also like to see a poststorm damage repair contingency fund of about \$10 million so that we don't get caught because FEMA, quite frankly, is not going to be a lot of help to many communities here. We have a lot of problems we need to address quickly after a storm. That program would also include permanent borrow sites that we can go to quickly and access that. I'm talking about a \$25 million total increase in the fund. In 1992 was when it was put in and it's about time. I think that will carry us for at least the next five years.

There should be an economic analysis done of the benefits verses cost of beach restoration projects. Macro and maybe a couple of micro studies along the coast are very important so that we can analyze just what these projects mean.

That's about it. I throw these figures out to you. I think that the Beach Erosion Commission-- I'd love to see you meet more often. I would love to see more awareness and more coordination at the State level. We are at a critical juncture at the coast now. We have got to keep this Federal Program alive. The worst thing that could happen would be that we secure all the money on the Federal level and then the State, as has happened in long past, says, "Well, sorry, we just don't have the money; we can't cost share." That would be a disaster for us.

So we need to think, at least in five-year segments in planning, as to what we are going to need. I think Bernie is putting together a cost estimate as we speak, I think for the next ten years.

SENATOR CIESLA: He is because we had requested that. Our fear is that the \$15 million is going to be completely used by the Federal match and there won't be anything left for State purposes.

Ken, obviously, you know you have our support in trying to increase this fund. One of the things that is important is public awareness, public support. Coastal issues tend to be viewed as only issues important to the coast and not to the state. So, to the extent that we can get resolutions of support from throughout the state, not just the coastal communities, it certainly enhances our ability to be able to leverage that support from the entire Legislature.

Any questions?

Steve.

MR. KEMPF: I agree with Ken on two points. First of all, I certainly share his thinking on being at a critical juncture. If we let one end or the other slip today, it's no different than what we did many years ago when we tried to do things on a local-fixed process. So it is very important that we keep up this activity and keep the programs going as we are.

The other one I was debating whether I should address this with Mr. Picciano when he was here, but Ken brought it up. It's not so much a question, Ken. I think you probably will concur with my comments. One of the things I've had difficulty with over the years, both with having been with the Federal government and later, is that we seem to be getting a rather short shrift from Federal Emergency Management Agency and the thinking with the bureaucrats back at national headquarters.

FEMA has spent, I'm told, millions of dollars shake-proofing buildings and doing everything else along earthquake faults, but not requiring people to move away from them. We see currently that because of the floods there have been a lot of mudslides and things of that nature. I hear precious little about anything doing to change people's living habits in those areas and very much the same with few exceptions in riveting areas. Yet, we are constantly hearing about we should move off of the shore because it's inherently dangerous.

From my minding and having lived here all my life, I don't see it any more dangerous; in fact, I would rather live here: I know when a storm is coming; I don't know when an earthquake is going to happen. I think that perhaps -- I'm not sure of the mechanism, Senator -- but perhaps through this Commission we want to address that issue with the upper leadership of FEMA to see if we can bring that discussion to better understanding as to what it means to New Jersey's coastline.

MR. SMITH: You bet. Through you, Mr. Chairman, it's nonsense. The views that have been expressed by Dick Crimm (phonetic spelling) and some of the other officials at FEMA are really bad. They want no Federal participation in shore protection at all. The stated goal is a 50 percent reduction in losses within 25 years. I think it's 25 years.

DR. PSUTY: No, it's not 25 years. It's less than that.

MR. SMITH: Okay, that's right, it's been in place for a while.

If that's the only goal, then we might as well get rid of San Francisco and the Midwest. Where are you going to go? There is an assumption of risk everywhere, and my concern here is that if we don't keep

the programs going, then we are rolling the dice with Mother Nature and we are going to end up with a chaotic Band-Aid type of beach protection. The State will never be able to afford the kind of projects without that Federal participation that are being done now. Yes, FEMA should be taken to task for that because they will go and protect everybody else, and when it comes to a spot where most of the country lives, or recreates, well, that's something else. "Move them back. Get them out of there."

MR. KEMPF: Thank you.

MR. SMITH: Thank you.

SENATOR CIESLA: Thank you very much.

Thank you, Ken.

We have time for one public comment even though we are past our time.

I'm going to have to ask you to come forward and state your name for the record please and speak into the recording microphone.

**C L E M J A C O B S O N:** Clem Jacobson. I reside in Monmouth Beach.

Thank you for the opportunity to talk to you and the Commission. I see Dr. Norbert Psuty here, who spent four hours with me on what I consider my expertise second to none in the world from North Long Branch into Sandy Hook. I have been opposed to what the Corps of Engineers has done since day one. In 1988 I prepared a videotape from North Long Branch all the way into Sandy Hook. I advocated that there were three major flood areas. Beach replenishment was not the problem. Flooding was the problem over the seawall. We never had any beaches opposite the north beach seawall in 55

years. Now we have more beach there than there is in the whole world, and I've done a lot of traveling.

Now, because of what they have done, there is more flooding in back of my home and in the low lying areas of the Bay Shore, Highlands, Monmouth Beach, Sea Bright, and North Long Branch. I look out my window -- I live in the worst flood area along that strip. I had advocated that have we used wooden cores, six inches across, 150 feet out, 5 feet above mean high water, there would be enough beach built up along that seawall north of (indiscernible) to Sandy Hook to effectively -- with the two barricades of rocks, which are used all over the world.

Typical example, if you have been through the Panama Canal on the east side, there is a one-mile rock wall -- minimum one-mile rock wall. It's devastated by storms, it stands majestically there. The ships go into the lower part of the harbor, drop anchor, and wait their turn. That same concept would have stopped the major damage done on Ocean Avenue in 1992 when we had that storm.

Dr. Psuty spent four hours with me one evening because he got wind that I had some ideas on what should have been done before this horrendous sand replenishment took place there. For every cubic yard of sand, we displaced 200 gallons of water. We are now talking about billions of gallons of water which cannot raise up to the seawall and splash over because you have a 10-foot above mean low tide sand barrier, so, therefore, if you have a 4-foot elevation as a result of an east wind, it's academic, the gravitational forces and the direction of the flow that that water has to go into Sandy Hook Bay and along the Bay Shore line and down to where I live in Monmouth

Beach -- a three-hour difference -- that has caused more flooding and erosion problems than I ever saw in the 72 years I lived on that beachfront.

Gentlemen, I went to a lot of trouble. I sent a videotape to the former Governor Florio, and I said it was nonsense to waste State and taxpayers' money on the wall opposite my home. I videotaped from one end to the other and I said it was totally asinine -- it's as good a word as any -- to have the State engineers say this has to be refurbished. Guess what? The TNM engineers, after I sent this tape to the Governor-- The TNM engineers represented Monmouth Beach. They said, "No rock would be replaced on the top of the wall, but there would be a few dropped on the other side of the wall." But our State Engineer, Bernie Moore, gave them -- I forget their name in Long Branch -- permission to tear the top of the wall apart at no extra cost was the consideration. Guess what? If any of you want to go see how the wall should have been done see what Joe Source (phonetic spelling) from Truro, Massachusetts, did behind the bowler (phonetic spelling) installations, which is about a half of a mile in length. He did it to specifications, 10 to 12 feet.

When the crane got on top of the wall to tear that section apart alone -- and I'm sure you don't know this. I measured the extremity of those threads. They were 17 feet 6 inches on a specification that called for no wider than a 12-foot plateau. Now, you can imagine how many hundreds of thousands of dollars worth of rocks went into that wall without any engineer saying a word.

I know an awful lot more about what I'm saying, and if I can be of any help to you in the future, I would be happy to come and meet with you.

Thank you.

SENATOR CIESLA: Thank you for your alternative comments.

We appreciate them.

This meeting is adjourned.

**(MEETING CONCLUDED)**