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# *Task Force Meeting*

of

## ASSEMBLY COASTAL NEW JERSEY EVACUATION TASK FORCE

*"The Task Force will meet to assess current emergency plans  
for a coordinated evacuation of coastal communities"*

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**LOCATION:** St. Francis Community Center  
Long Beach Township, New Jersey

**DATE:** October 9, 2007  
10:00 a.m.

**MEMBERS OF TASK FORCE PRESENT:**

Assemblyman Jeff Van Drew, Chair  
Assemblyman Brian E. Rumpf, Vice Chair  
Wayne R. Rupert  
Joseph Sever  
Joe Simmons



**ALSO PRESENT:**

Thomas M. Kelly  
Kristin A. Brunner  
*Office of Legislative Services  
Task Force Aides*

R. Thurman Barnes  
*Assembly Majority  
Task Force Aide*

Jerry Traino  
*Assembly Republican  
Task Force Aide*

***Meeting Recorded and Transcribed by  
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Hearing Unit, State House Annex, PO 068, Trenton, New Jersey***

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**ASSEMBLYMAN JEFF VAN DREW (Chair):** I'd like to call this meeting of the Assembly Coastal New Jersey Evacuation Task Force to order.

Please rise for the flag salute.

(participants recite the Pledge of Allegiance)

Roll call, please.

**MR. KELLY (Task Force Aide):** Joseph Simmons.

**MR. SIMMONS:** Here.

**MR. KELLY:** Joe Sever.

**MR. SEVER:** Here.

**MR. KELLY:** Wayne Rupert.

**MR. RUPERT:** Here.

**MR. KELLY:** Vice Chairman Rumpf.

**ASSEMBLYMAN RUMPF:** Present.

**MR. KELLY:** Chairman Van Drew.

**ASSEMBLYMAN VAN DREW:** I am here.

I would like to thank all of you for being here.

This is, I guess, our fourth--

**MR. KELLY:** Yes.

**ASSEMBLYMAN VAN DREW:** This is our fourth meeting of the Coastal Evacuation Task Force. And I think all of us realize that this is a bipartisan, nonpartisan issue. We realize that it's a serious issue. If there is anything that government is responsible for, it is the health, safety, and welfare of its constituents, of the individuals that live within the State of New Jersey.

This is serious business. And the more that we have heard, the more that we have learned -- the more that we have understood about the issue. I guess there are two very important points to make. One, that a great deal of good work has been done, and in many ways we are prepared. And that we have many good individuals who are working on the team to make sure that if, God forbid, that emergency does come, we are prepared as much as possible.

But quite frankly, secondly, we've also learned -- which I think many of us knew intuitively, and some of us knew factually -- that the reality is that, in many ways we are not, that we have infrastructure needs that are not met; that we still have a greater need for more communication and interaction among various entities at the Federal, State, county, and local level; and that certainly we need to ensure that as, God forbid, one of these emergencies do come forward, that we are as prepared as we can be.

The goal of this Task Force is to have short-range and long-range recommendations. The short-range are what I call the *most doable* recommendations. What is it that we can do as a State, and communities, our counties, our municipalities to ensure that we are as prepared as possible. Whether it is short-range goals such as lane reversals leaving particular communities, causeways, bridges, etc.; or short-range recommendations to better enhance communication among various entities, we have gone through an entire list.

At the end of this process, there will be recommendations that will be made, and they will be specific. And again, as I said before, they'll be both short-range and long-range. The long-range will be more towards the goals of: What do we need to improve infrastructure in the State of

New Jersey? Many of us have seen the cost figures attached to what we need to do in this state and, actually, in this country to improve the infrastructures that we have, much less to create new infrastructure. This is certainly something that is not going to happen overnight, but something that we absolutely need to do.

With that, we welcome questions and ideas. We hope to have a candid and frank conversation about this as we move forward. This is not the last of meetings. For those who don't know, this Task Force is comprised of the eight counties. It starts at Middlesex and works its way all the way down to Cape May, those counties that are the most vulnerable. I am repeating myself when I say -- we've said it at the last meetings -- that many of our counties are extremely vulnerable. For those who are further south, to understand that-- For example, Cape May County is the sixth most vulnerable place in the entire United States of America. Again, this is serious business, and we do welcome your input, and we are glad that you are here.

Somebody I know who cares deeply about this issue and has worked on it in the past is Len Connors, who is here, from our Legislature.

And I know that you have a very busy schedule as well. And we would like you to come forward. And I know you have a statement to make.

**SENATOR LEONARD T. CONNORS JR.:** (speaking from audience) Thank you, Mr. Chairman. The Assemblyman (indiscernible)--

**HEARING REPORTER:** Excuse me, Mr. Chairman.

ASSEMBLYMAN VAN DREW: Yes, can you please come forward and speak? They yell at me, Len. You have to come and speak in front of the microphone.

SENATOR CONNORS: Well now, Mr. Chairman, you have the whole 9th District here with Assemblyman Rumpf. (laughter)

ASSEMBLYMAN VAN DREW: Yes, we do. It's good to have you all here.

SENATOR CONNORS: Thank you.

**A S S E M B L Y M A N C H R I S T O P H E R J. C O N N O R S:**  
Thank you, Mr. Chairman, and welcome to Ocean County, in particular St. Francis Center.

We'd like to thank the host of the venue here today. They made arrangements so that we could all meet today to discuss this very important issue.

I would like to begin by thanking the members of the Task Force for the opportunity to testify at today's committee hearing.

The chaos and tragedy that ensued from the natural disasters created by hurricanes Katrina and Rita, which devastated the Gulf Coast, brought to light for an entire nation the dire consequences that can occur when large numbers of people cannot be safely evacuated in a timely manner.

Committed to ensuring that New Jersey would be prepared for such a situation, I, along with Assemblyman Rumpf -- Vice Chairman of this Task Force -- and Senator Connors, contacted the State Office of Emergency Management, as well as legislators and freeholder boards representing New Jersey's coastal counties, in an effort to build a unified

coalition to coordinate an examination of existing evacuation plans for coastal areas. Through the support of these public officials, this goal was realized through the passage of legislation, which created this Task Force.

And in that light I'd like to thank you also, Mr. Chairman, for your sponsorship of the legislation, along with Assemblyman Rumpf and myself. Your stewardship was greatly appreciated. And I think it's going to be very important to the best interest of the people of the State of New Jersey.

Having served at both the local and State levels of government, I know for a fact that New Jersey has no shortage of capable emergency responders and coordinators to develop effective evacuation plans. That said, it is incumbent upon the State to see that an examination is made of all coastal county evacuation plans to identify any deficiencies -- especially those beyond the ability of municipalities and counties to address -- such as needed transportation infrastructure improvements. If it is ultimately determined that these roadways, as currently constructed, are inadequate and insufficient to effectuate a mass evacuation, the State must begin preparations to see that infrastructure upgrades become priorities for this part of New Jersey.

As a lifelong resident of Ocean County, I can plainly state that a clear day alone is enough to bring about miles-long traffic jams on the Garden State Parkway and Route 9. In addition, traffic increases dramatically on local roads as a result of motorists seeking any avenue to avoid sitting in their cars for long periods of time.

The Route 72 bridge, which most of you crossed to get to this hearing, has been labeled as *structurally deficient* for years. It serves as the

only means of leaving the island, other than by boat. And as everyone knows, LBI is a tourist destination for hundreds of thousands of vacationers every Summer.

Our discussion here today brings back vivid memories of the 1962 storm which hit the island. In plain view, houses could be seen half submerged under water, some floating by in the ocean, as massive flooding covered every section of the island. From that moment on, I have known that New Jersey's coastline is not invulnerable to the destructive effects of a hurricane or other form of natural disaster.

That said, everyone in this room knows mass evacuations can be required for catastrophic events other than weather-related phenomenon. Let's not forget that only several months ago, a wildfire that started at the Warren Grove Gunnery Range required the evacuation of more than 6,000 people from southern Ocean County. Despite evacuating only a small segment of the county, miles-long traffic tie-ups were seen on nearly every road that carried residents out of the area away from possible danger. It's frightening to imagine what might have occurred had there been a need to evacuate even more people. This incident, in and of itself, exposed the inadequacies of the roadways used for evacuation purposes as being unable to handle a high volume of traffic, particularly in a time of emergency.

This brings me to another important point. Ocean County's population has grown at a tremendous pace over the past decade, placing an even greater strain on its transportation infrastructure. It is essential that emergency preparedness strategies and the State's capital infrastructure plan begin reflecting this population shift.

I am confident that this Task Force -- drawing upon the knowledge and experience of its members, and those who have provided expert testimony -- will ensure that all factors are considered in the viability of evacuation plans established for coastal counties in its final report. And you may rest assured that I, along with my 9th District colleagues, pledge to advocate for advancement of proposals introduced in the Legislature based on recommendations by this Task Force to improve these evacuation plans as a matter of public safety.

Chairman and members of the Task Force, I want to thank you for the opportunity to be here today. And I wish to thank all of you for the hard work that you'll endure for the best interest of the people of the State of New Jersey, and particularly our district, the 9th District.

ASSEMBLYMAN VAN DREW: Thank you, Assemblyman. Thank you for your leadership and the leadership of your legislative team on this issue. I know that you pushed very hard, and you were sponsors of this legislation and were prime sponsors of it. And we do appreciate your work and advocacy on it.

One question, out of curiosity, as somebody who also comes from a coastal area: What does your population, ballpark, increase at the height of the season -- you know, your year-round to what it increases to at the very height? Do you have any sense of that?

SENATOR CONNORS: Well, we estimate that it's probably, in the summertime, on a busy weekend -- would probably be in excess of 350,000 to 450,000 just in one day. It could very well be even higher.

ASSEMBLYMAN VAN DREW: I know that in Cape May we go from -- literally from 100,000 -- we have a smaller town in Cape May

County -- but from about 100,000 -- actually at the very height we could be up to 700,000, which is--

SENATOR CONNORS: Well, when I mentioned 350,000 to 450,000, that only -- I only was estimating Long Beach Island.

ASSEMBLYMAN VAN DREW: The tourists?

SENATOR CONNORS: Now, if we take the portion of the county, from Point Pleasant to Seaside Park, that would probably be double. It would probably be up around 900,000 -- 750,000 to 900,000. It's a tremendous amount of population in that area.

ASSEMBLYMAN VAN DREW: Assemblyman Rumpf, did you have any--

ASSEMBLYMAN RUMPF: In addition to that million that lives here on a regular, full-time basis, that's the added influx as a result of the tourist season. Literally, the island -- 400,000, plus whatever the resident population might be, with one means of ingress and egress.

SENATOR CONNORS: One thing that should be considered, Mr. Chairman, is the fact that we shouldn't just think of the coast as along the beach areas or along the bay areas. We have a unique situation with the barrier islands here. But the mainland is growing tremendously. Stafford Township is just growing in leaps and bounds. All of those folks, for the most part, would have to be evacuated in any kind of a real severe storm, such as Katrina.

As a witness to 1962, and all of the hurricanes -- Hazel, Agnes, Debbie-- I've been here in every one of them and stayed on the island here, probably none more devastating than the '62 storm. It was extremely difficult. You couldn't even get off the island if you wanted to. The only

way to get off would be hazardous -- in a boat or via helicopter. In fact, they were dropping food supplies to my municipality, Surf City, in '62. And people were being put up in a firehouse that had a reasonable chance of survival. Water in the streets on this boulevard -- we were riding in outboard motors -- small outboard motors -- we were riding up and down right along this boulevard, here, to give you an idea. And that was a subtropical depression. That wasn't even a hurricane. It was the coordinates of the moon and the phase of the tides -- spring tide. And it just lagged offshore for about -- for three days.

And so were we to witness one where there were extremely high winds of 150 miles-an-hour, we would be in very, very serious shape, not only here on the island, but also on the mainland. It would be devastating, especially in the backlash of it.

ASSEMBLYMAN VAN DREW: Very good.

ASSEMBLYMAN CONNORS: Mr. Chairman, if I could just underscore, in terms of the infrastructure needs-- And, of course, most of the people in this room are already aware of it, and I'm sure you are as well. But given the magnitude of people that we have in Ocean County during the peaks of the Summer -- and even during the off-season -- we enjoy two-lane roads going each way until we hit Route 72 west of Stafford Township, where it goes to two lanes. It's a lane one way, each way. Even with two lanes going the same way in an emergency status, it would be inadequate to move large numbers of people. You complicate that with the two lanes of Route 70 and two lanes of Route 9, we have a very serious circumstance in this part of the state. And in order to effectuate the removal of people in a short period of time-- And as the Senator indicated, the March '62 storm

came literally without warning. So we may not have the luxury of a 12-hour advanced notice that hurricane trackers can often provide. And sometimes it might be even a shorter period of time, as we witnessed during the gunnery range fire in the townships of Stafford and Barnegat.

So that's one of the things that had been very much on our minds when we began to consider this circumstance after Katrina and Rita -- was the ability to effectuate the movement of a large number of people in a very short period of time. And knowing that all of New Jersey competes, as you know, with limited capital resources, it was necessary to review these plans in connection with those limited resources, so that we could establish a priority in this state. This is a health and safety issue, and being able to get people out of harm's way when necessary. And so that was the notion when we first embarked on this plan.

And we want to also underscore and reiterate: Our emergency management coordinators up and down the coast are doing an outstanding job in designing plans to move people. But they have to play with the hand that's dealt to them, and they do so knowing what the limitations are. Those plans that we have are wonderful plans, and they're the best plans that we can have, given the circumstances that we have. But hopefully one of the things that will emerge from this Task Force is a recognition that we have a serious infrastructure need that has to be accommodated, and accommodated sooner than later, given that the average term of a capital project in the State of New Jersey, from design to finish, is about six or seven years. We need these infrastructure improvements yesterday.

Thanks again, Mr. Chairman.

Thank you, members of the committee.

ASSEMBLYMAN VAN DREW: I agree.

And if you all have any recommendations -- the three of you -- please get that to Mr. Kelly, as far as the actual infrastructure needs. We can include that in the report.

And as far as priorities, you're absolutely right. One of the things that we've heard over and over again at prior meetings is, if there ever was a Cat 3 storm that came through -- and the devastation it would create if it hit the entire coast. Remember, as much as we believe we should be the priority, Manhattan, northern New Jersey, refineries, those types of areas, in reality, are going to be the priority. And to some degree, we may be forgotten about a little bit. So I've said this before, God takes care of those who take care of themselves; which is very appropriate, I guess, in this hall. We've got to try to do the best we can to make sure we are as prepared as possible. So we welcome that input.

ASSEMBLYMAN CONNORS: We're thankful you're on the team.

Thank you.

SENATOR CONNORS: Thank you.

ASSEMBLYMAN VAN DREW: Thank you.

Next we have Dr. David Robinson, from the Office of the New Jersey State Climatologist, from Rutgers University, my alma mater and, I imagine, a few others here as well.

Welcome, Dr. Robinson.

**DAVID A. ROBINSON, Ph.D.:** Thanks.

Good morning, Assemblyman Van Drew, Assemblyman Rumpf, and the rest of the committee, and everyone here. It is a pleasure to speak before you.

I had some good audio visuals, but the wrong cables were in the bag. So I'm just going to have to wing it. I don't know how a professor can do this without AV equipment, but I will give it a shot.

ASSEMBLYMAN VAN DREW: I think it's a tradition. It's okay.

DR. ROBINSON: Give it a shot.

But the take-home point -- doesn't need to see slides to get your imagination going about these coastal storms. So I titled my presentation this morning *Appreciating Coastal Storms*.

The two gentlemen who were just up covered the human geography realm of things well, in terms of infrastructure, population.

I should note that in addition to being a New Jersey State Climatologist -- which is an appointed position, indirectly via gubernatorial decree to the Dean of the School of Environmental and Biological Sciences at Rutgers -- I'm also the Chairman of the Rutgers University Geography Department, which is the nexus between studying humans and their environment, and the mutual interactions they each have upon the other entity.

So they've covered the human side. I wanted to give a little broad perspective, as a climatologist, to the storm side of the issue, the natural side of the issue. And we're talking about, if you will, two flavors of coastal storms here. It's not just hurricanes and tropical storms, it's the

nor'easters. I had a great introduction. I could have lined them up beforehand, and they wouldn't have done it any better.

So we're talking about 12 months a year. We're not talking about just during the height of the hurricane season. We're talking January to December -- the threat exists for a meaningful, potent, coastal storm. They differ. The tropical storms, as you well know, come out of the tropical Atlantic: the Caribbean, the Gulf of Mexico. They can take a variety of paths to New Jersey. Sometimes they go inland to our south, and they bring with them heavy rains, some wind along the coast. But oftentimes, the problems are inland, in terms of flooding. Quite often, they'll go off the New Jersey coast.

As they travel up along the coast, they begin to get caught in what we call the *mid-latitude westerlies* -- kind of curve off to the East. That can spare the coast of New Jersey a direct hit. Long Island has been visited by Belle, and Gloria, and the hurricane of 1938, for instance. Or they can curve even further out to sea. However, you can't dismiss those of having a major impact on the New Jersey shore. The hurricane of 1944 is probably the best example in somewhat recent memory. Gloria came up in '95, Bob was a little further offshore in '91, and that goes on and on, in terms of the tropical storms in hurricanes.

ASSEMBLYMAN VAN DREW: One question, real quickly.

DR. ROBINSON: Yes.

ASSEMBLYMAN VAN DREW: Which created more devastation along the coast of New Jersey, the hurricane of '44 or the nor'easter of '62?

DR. ROBINSON: From what I've read, learned, and as a little child saw the Summer after the '62 storm, it was the '62 storm. And I'll talk a little bit about the difference between the two storms and why that could be of greater magnitude than, say, the '44 storm.

Now, on a rare occasion, it appears that a hurricane can make direct landfall in New Jersey. It's very difficult because of those westerlies that steer them, and the Delmarva Peninsula and Cape Hatteras to the south. But there have been, apparently, several cases long ago-- I often say the good news is that they did occur, fortunately, at a time when the coast wasn't inhabited much at all, because they sent a signal that we're not immune to direct hits by major hurricanes. And I'm speaking there about hurricanes in 1788 and 1821 -- 1821 perhaps best-known. These are storms that came ashore. They might have touched the Delmarva, but they came ashore down in Cape May County and came up the eastern side of New Jersey, bringing destruction and death from Philadelphia up to New York, and New Jersey being all parts in between.

We have anecdotal evidence from those times. Some of it is debated. But for certain, these are major storms. Were they a Category 2 or Category 3? We didn't have anemometers, we didn't have satellites, we didn't have radar at that time to know. But these were devastating storms.

In subsequent years, there have been others nearby. The hurricane of '38, for instance, passed just a glancing blow on the New Jersey coast. It went dead-on into Long Island and southeastern New England, killing over 600 people. And the reason I bring that up is, it's the time factor. That storm was moving at a forward speed of perhaps 40 to 50 miles an hour. So we're talking about having better lead time than in the

past because of satellites, and radar, and better forecasts. But these storms tend -- these major storms tend to barrel up the East Coast. The good news is, they're in and out quickly. The bad news is, they can maintain their strength from areas further south as they quickly come up along the mid-Atlantic coast.

So I've listed a few of those storms. But I wanted to touch a little bit on the nor'easters, the coastal storms that come up during the cooler part of the year. While not having the devastating effects, at their greatest strength, of a direct strike of a hurricane, they can wreck all kinds of destruction along the New Jersey coast. The '62 storm has already been mentioned. There was the '92 storm in December that was a weaker sister, if you will, of the '62 storm.

And what's notable about these storms is their duration. The '62 storm came with the moon in the right phase. But also it, if you will, parked itself offshore for several days. And high tide came in on the strong northeasterly winds, filled up the bay, came up on the beach side. And by the time that water ran out to sea, the next high tide was in. And then a little bit more was left behind. And then the next high tide came in. So the first one covered the beach, the next one the berm, the next one things were coming up from the bayside, and Long Beach Island was under water. And up by Harvey Cedars -- was actually breached at one point.

I can make some slides available, but there are books, there are videos that have covered this. I don't think I need to stress the enormity of that situation any more here than those who spoke before me.

So that's where we have a difference between the two storms. The tropical storms tend to come in and get out of here quickly. The nor'easters hang on at times -- the most destructive ones -- day after day.

So those are the effects along the coast. But if we're talking about evacuation, you have to recognize what may be happening inland as well. And you only have to look to Floyd in 1999 to see. But the coast escaped the worst of it in that situation, and inland the flooding was immense. We just saw a nor'easter in April -- the largest April rainstorm on record in New Jersey -- in a cool part of the year.

Now, you put that heavy rain inland, in concert with strong surf and winds along the coast, and that's going to interfere with evacuation plans. Nor'easters could be devastating along the coast, and you may be dealing with heavy snows inland as you try to evacuate people. Now, I realize the population is less during the Winter season, but that would face challenges not just along the coast -- but we have to think statewide, when we're talking about evacuation plans from the coast.

So I don't want to overstay my welcome here, but I just wanted to sum up a couple of things. First of all, going back to tropical storms to sum things up: a few things we need to be concerned of there. One is their intensity, of course. The other is their forward speed, which I noted can be awfully fast coming up the coast. Third is the location of landfall. We have been talking about storms that generally stay off to our east or come inland to our south. But a direct impact would be accompanied by a storm surge, particularly to the right side of that landfall. And it could bring unimaginable devastation to those areas that were hit most strongly by the surge. It's not the wind that kills people in these storms, it's the storm

surge. It's the coastal flooding that kills people in these types of events. So it's the storm surge, and coastal and inland flooding -- are concerns -- and, of course, winds. The wind danger along the coast, as well-- Again, inland we've got forests. We're more forested in New Jersey than we've been in 200 years. A lot of those trees might come down and block evacuation routes. We've talked about what's under you, in terms of the water. But the winds could knock down trees.

Now, going back to the mid-latitude storms to sum up: Again, we're talking about an issue of intensity and an issue of forward speed -- or the lack thereof -- coastal and inland flooding; and some wind; and, of course, snow fall. So I guess you could say, with the tropical storms, you really have to appreciate the lead time. You need to have enough lead time. Whereas, the mid-latitude cyclones, the nor'easter, it's more a matter of the duration, how long they're going to go on.

What about-- And in terms of the forecasting on a day-to-day-- Gary Szatkowski is here from the National Weather Service. I'll let him speak to the forecasting in the short-term.

But just taking a little look on the climatological side, into the future, there's been a lot of discussion in recent years about whether global climate change is going to affect the number, the intensity, the path, locations of future storms. The World Meteorological Organization has come out with a statement saying, "Well, the jury is still out, if you will." But there are some signs that storm intensity may be increasing. And in the future, as coastal temperatures -- coastal water temperatures and, just, ocean water temperatures increase, it could spawn more storms, could direct them into new locations.

I'm not here saying, "Run for the hills." This is all research-in-progress. As I said -- prefaced this: the jury is still out. But these are the types of things we're going to have to look towards as the Earth warms. New Jersey is warming, the world is warming. Humans are having an impact on that warming. And so the future -- we're going to have to keep a careful eye on what happens in terms of the intensity and frequency of tropical storms, as well as these nor'easters.

So I guess, to sum up: In the State Climate Office, we like to keep a watchful eye on things. Just this morning, I was up in Harvey Cedars visiting one of our weather network sites. I'm not going to spend a long time talking about that. But we do have a statewide weather network, where, at any given time, we're pulling in upwards of 150 reports on an hourly basis. In some cases it's rainfall in the Passaic basin. We have a number of stations up and down the New Jersey coast, operated through the Office of the State Climatologist, but also linking in with stations operated by the U.S. Geological Survey, the National Weather Service, the New Jersey Department of Transportation. We are an equal opportunity borrower, if you will, of that information. We bring it into a uniform format and display it in charts, graphs, and tables for all to access.

Mention was made of the fire back in mid-May of this year. The Forest Service is using our information -- very simple Web pages that can be read out in the field. And I've heard several testimonials on how that helped them to fight the fire: knowing which way the winds were blowing, knowing radiation conditions, fuel moisture conditions, and so on and so forth. And ultimately, fortunately, when the rains came in a day or two later to help finally extinguish the fire--

So this is the type of information we're gathering in the State Climate Office that we hope will be of use to the state as the years go on. And we will, just as sure as we saw storms in the past, continue to see them well into the future.

So I think I will end my remarks there.

ASSEMBLYMAN VAN DREW: Okay. Thank you, doctor.

DR. ROBINSON: Thank you.

ASSEMBLYMAN VAN DREW: A couple quick questions.

DR. ROBINSON: Sure.

ASSEMBLYMAN VAN DREW: You said we're more forested in New Jersey than we have been in the last 200 years. Is that because of less farming, because of more open space? Do you have any sense of that?

DR. ROBINSON: Yes. I will take you to a lecture in my Jersey Geography course I'm teaching right now.

The Pinelands were flattened -- with trees for building, to make charcoal for the iron smelters there; up in the Highlands, the smelting. So, in some cases, it was the Highlands that were cleared first. Then the valleys were cleared for forest -- deforested for farming. And 100 to 150 years ago, the landscape was quite open around the state. With the development, movement of humans, suburbanization throughout the state, forests were regrowing, have regrown. Suburban areas have been, if you will, reforested. And there are a lot more forests around the state now than there were in the past. And what frightens me is that a lot of these trees are getting older, that sit in our suburban communities, and are vulnerable to strong winds. So, again, you talk to-- The talk was about dealing with what might be going on aside from the coast. These are some of the problems that might

exist inland, should we get hit with a major wind storm. So it's a mixed bag of concerns that go from the coast to our cities.

ASSEMBLYMAN VAN DREW: Interesting.

And, secondly, something we've done in the other counties we've been in -- Atlantic, Cumberland, Cape May -- is to just get a general sense, so people realize in actual, graphic terms -- and this may or may not be something that you can or want to do -- exactly what it would look like. And the standard we've used is, if a Category 3 storm did hit -- Long Beach Island, Barnegat Township itself, those areas. Give us just a sense of what you believe it would look like -- a full Cat 3.

DR. ROBINSON: A direct landfall of a Cat 3 could have storm surge flooding well exceeding 10 feet. It could even be 20 feet. It varies on the angle of which the storms hit and the geometry of the near-shore environment. But we could be talking about total overwash of whatever barrier island region, or even non-barrier region up the coast a little bit -- just totally overtopped with 10 to 20 feet of water. You could have-- You would have sustained winds of 115 to, perhaps, 120 miles an hour, with higher gusts. That helps whip up waves on top of the storm surge. Those strong winds would abate as you went inland, rather quickly. However, 100-mile-an-hour or 75-mile-an-hour winds could wreck all kinds of havoc inland.

Virtual, total destruction, I would imagine. And, again, I can't speak-- I'm not an engineer. But when you're talking about the power -- the weight and the power of a 10- to 20-foot storm surge -- you're talking about those areas in the vicinity of that surge undergoing almost total devastation.

I might add, depending on the size of the storm and the angle of which it hits the coast, it would not be the entire coast. It could be one section of the coast. We've seen that with -- down in Charleston, with Hugo, back in the late '80s. It was one area that gets it the worst. Many areas adjacent to it get severe flooding. But it's usually just a small area. It could even be the northern part of Long Beach Island versus the southern part of Long Beach Island.

ASSEMBLYMAN VAN DREW: Any sense what is the most vulnerable area in Long Beach Island, generally? Or it really is just a variable?

DR. ROBINSON: It's a variable. I mean, the entire island is certainly vulnerable, as is any area that has very little in the way of elevation.

ASSEMBLYMAN VAN DREW: Assemblyman Rumpf.

ASSEMBLYMAN RUMPF: Just a few questions, if I may.

I understand the difference between the hurricanes that we're so fearful about and the nor'easters or other types of storms of that nature. I know the important distinction that you mentioned is the duration of that nor'easter. And that is going to be the impact that we have to be concerned about. What is the lead time, however, for that kind of nor'easter that we experienced in '92, and then going back to '62?

DR. ROBINSON: Perhaps Gary could speak better to it than I. However, we've come a long way. You can go to the storm of '93 that came up the coast, and many storms now. The models -- the forecasting models are seeing these storms before they even develop. They're finding the impulse coming off the Pacific, coming across the country, and prone to

redevelop off the coast to our south, and come up the coast. So we literally have days of warning at times. But the devil is in the details. Once the storm forms off the coast, you have to know some idea of the steering winds in the atmosphere -- whether it's going to push it through quickly enough. But between the forecast models -- these are numerical equations in some very high-tech, sophisticated computers. You've got satellite imagery, you have balloons up sampling the upper-level winds. You have a variety of different means. And then once the storm develops, and it's close enough to the shore, you can have radar to keep track of it.

So we do have better lead time than ever with both tropical storms and nor'easters. But again, once they develop just a slight change in path, steering currents can make a difference on whether a storm -- tropical storm comes right up the coast, or slams into the coast, veers a little offshore; or whether a nor'easter comes through in one or two tidal cycles instead of parking off the coast for multiple cycles.

ASSEMBLYMAN RUMPF: That was my next question. How reliable is the forecasting for the duration of the coastal nor'easters once it's here?

DR. ROBINSON: Again, I would defer to my meteorologist colleagues. And I can often say I can say good things about these forecasts, because I'm not a meteorologist. So it doesn't look like I'm patting myself on the back.

But you could generally get an idea that things are going to be plodding along rather than moving through pretty quickly, given all of the data that comes in -- that goes into these models -- and the output of these

models. So you can get a better idea -- certainly better today than we had in '92, let alone in '62.

ASSEMBLYMAN RUMPF: Mr. Chairman, the reason I ask these questions is: When we're talking about evacuation, if we're dealing with that nor'easter-- When it first hits us, it might not be so bad, and people might not see the floods coming. I live in a town with 41 miles -- linear miles of lagoons. After the first strike, it might look as if all is okay. But then comes day two, and suddenly the water is rising. By day three, it's breached the bulkhead, and people literally are either going to be stuck on their roofs or finding boat transportation to take them out of town. And we're not talking about Long Beach Island in that instance. We're talking about inland communities on the other side of the bay. So evacuation becomes a little more tricky, I guess, when we're dealing with that kind of storm.

DR. ROBINSON: Absolutely. And all I can say is, it's better than ever. But nature is not tamed, and we don't understand it completely. But we have a much better handle on things than in the past.

ASSEMBLYMAN VAN DREW: In that case, when you're absolutely sure you need to evacuate, it might be too late to evacuate.

ASSEMBLYMAN RUMPF: Exactly.

DR. ROBINSON: Yes.

So they each -- as I hope I pointed out-- They each have their own concerns. And they are similar in some respects, but very different in others.

ASSEMBLYMAN RUMPF: And just from the geological standpoint, would it be your assessment that anything -- any land east of

the Parkway, from Cape May all the way up to Middlesex County, I guess, would be the most vulnerable areas for either kind of storm?

DR. ROBINSON: Sure. They would be likely to feel the storm surge. We saw what Katrina did with the storm surge going multiple miles inland along a very flat coastline. And the strongest winds would be found closest to the coast. As the storm winds come inland, the trees actually help, in some respects, by serving as little frictional effects on the winds, as they fall down, perhaps. But the winds would slack as you go inland. But if you hit the coast with 115-mile-an-hour winds, they may slacken, but they're still going to be quite strong -- the other side of the Parkway, the other side of the Turnpike for that matter.

ASSEMBLYMAN VAN DREW: Wayne?

MR. RUPERT: I would certainly agree with your assessment of the coastal storm -- the nor'easter. Because we've experienced a number of those. And I was involved with the '92 storm. And I think that thing was -- something like nine high tides it went through; which no hurricane would ever be here that long. And I also can recall that it was-- I think I got the call about 9:30 at night from the Atlantic City weather office, which is not there. And basically I was told, "You guys are going to get your butts kicked in about an hour." And that's just about what happened.

One of the things I think we should point out -- maybe the committee is not aware -- that as a storm goes by it's bad enough, but when the winds turn around -- especially in a hurricane -- and start from the northwest, and push all that water back over the islands, that's another thing. A lot of people -- "Oh, it's over. We can go back." And you've got more damage coming from water going back where it belongs.

I really don't have any questions. I think I-- I heard what you said, and I've experienced some of this in the past, and I know what you're getting at.

DR. ROBINSON: No, you can't dismiss the bays, either during the height of the storm, when the water just gets fed in there and can't make its way out of Barnegat Inlet before the next high tide; as well as when a blowout tide -- which it's often called that -- might occur. It might not just go out through the Barnegat Inlet, it might try to come across the barrier islands.

ASSEMBLYMAN VAN DREW: Thank you, Mr. Rupert.

Joe.

MR. SIMMONS: Yes. So, I have a question about the inherent difference between the hurricane and the nor'easter.

I had the experience, in '92-- I live on Ocean Avenue, a little bit north of here. And thinking about it in a way that -- it didn't work the way I thought about it. The waves were crashing in the street in front of my house. And I thought the water would come in gradually. Water doesn't come in gradually. You see that, just like you're at the beach on a nice day, and there's that rogue wave. So if you scale that up about 50 times, that's what happens.

So this whole idea of tidal surge, and the threat of tidal surge in a more immediate way-- Is it the hurricane, or the nor'easter, or are they about the same, or is it unknown? Which has more potential for this tidal surge, this rogue wave, this sort of -- everything seems like it's still okay, and all of a sudden, out of nowhere comes something that breaks a bulkhead or-- Is there a difference?

DR. ROBINSON: It's definitely the tropical storms, the hurricanes. They come with the rapid surge. The '38 hurricane -- people drowned under 10 feet of water in downtown Providence, Rhode Island, as the water came up the Narragansett Bay. That's what--

There are some reports that storm waters in the Battery may have gone up 13 feet -- 12 or 13 feet in an hour in the 1821 storm. I've heard that contested. But the fact is, it's the storm surge in the hurricanes that can come upon you in the matter of an hour, or two, or perhaps even less. Whereas, it's more of a gradual buildup over multiple hours, multiple tidal cycles with the nor'easters.

MR. SIMMONS: Okay. And just one more question about the difference: So you said that the jury is still out on climate change and the impact on intensity. Is there any difference in the way the nor'easters are being looked at versus the hurricanes, in terms of numbers of storms, intensity of storms?

DR. ROBINSON: Very good question. There hasn't been much attention at all paid to what might happen to mid-latitude storms -- nor'easters -- in a warming world. Most of the attention has been paid to the tropics. It's a one-hand/the other hand. These mid-latitude storms are bred off of contrast -- thermal contrast between the cold north and the warm south. And that's why we don't have as many in the Summer. Because it's mild enough in the north, and it's certainly warm to the south. But you get that thermal contrast.

Now, in the future, with the polar regions expected to warm disproportionate to the middle and lower latitudes, in terms of temperature, you might actually cut the ability of these storms to intensify as much.

However, on the other hand, we have to look-- And I'm not saying that the April storm was a function of global warming. I'm far too moderate when it comes to that. However, it was on the warmer side this Winter. A lot more water than we'd seen in the past evaporated from the warmer ocean waters. And that was-- Of the top 20 rainstorms we estimate in New Jersey history -- stem to stern rainstorms -- this came in seventh. And all the others were in the mid-Summer to early to mid-Autumn. To get that much water off of the surface of the ocean, when the ocean is at about its coolest temperature, was quite remarkable.

Again, I'm not saying that April storm was global warming. But it might give you some indication that the character of the storm we get in the Winter might change. What that means, in terms of winds and coastal flooding, I'm not sure. I'm only speaking, there, in terms of the quantity of rain that might fall.

ASSEMBLYMAN VAN DREW: Thank you.

Joe.

MR. SEVER: I have one question. What is the average number of northeast storms that we -- occur? Do you have any kind of rule of thumb?

DR. ROBINSON: That's a good question. The media loves to start playing games with that in a rough Winter. Because it's so difficult to say, "This is a nor'easter," "that"--

But you look at our storms during the November to April period. About every three to five days there's going to be a storm somewhere in the eastern part of the United States. It might be going inland, it might be coming up the coast. And I might add, even inland

storms -- storms that go through the Ohio Valley, and into the Great Lakes, and up the St. Lawrence -- can wreck havoc. There was a storm -- it was in 1950, in November -- that brought all sorts of flooding to the Delaware Bay, Raritan Bay, up along the coast. It brought 100-mile-an-hour wind gusts to New York City. And that was a storm that did not come up the coast. So there are all kinds of storms that can affect us.

So we're talking maybe five to 10 storms of greatest concern during the Winter. But all other sorts of intermediate storms -- and, of course, that can vary from year to year. So it's real tough to get a handle. First, you have to define what you're looking at, and then go back in the records and make a count.

But a good point you make here -- I think you're making here -- is, the opportunity to be affected by one of these coastal storms in the Winter far exceeds the frequency of our -- of the tropical storms that impact this area.

MR. SEVER: Thank you.

DR. ROBINSON: But it only takes one.

ASSEMBLYMAN VAN DREW: Very good.

Thank you very much, doctor. Very good.

DR. ROBINSON: Thanks very much.

ASSEMBLYMAN VAN DREW: We have Heidi Hoppe and Richard Kropp, from the USGS, who are just going to give us a quick update. They've spoken before. But I know they have some new information for us, as well -- hopefully some good information. I'm sure it's some good information.

**H E I D I L. H O P P E:** I'm Heidi Hoppe, from the US Geological Survey. I'm the Project Chief for the tide telemetry system.

And as you said, we spoke in -- I guess it was in Atlantic County -- at the first meeting. And we gave you an overview of what the system was. And then at the end of our discussion, we notified you that the funding was definitely in question.

Our funding was to run out at the end of September. The State -- New Jersey Homeland Security and Preparedness has funded us for the first quarter of the year. So currently we are funded until December 31. But as of December 31, once again, our funds do run out. We don't have anything from anyone saying that as of January 1 they will be picking that up.

Our funds are, as we had discussed in Atlantic County-- The USGS pays 50 percent. The tide program is on our co-op. So we pay 50 percent, but we need 50 percent of matching funds from a state or other agency so that we can put out that 50 percent.

Currently, we are working with the Office of Homeland Security -- I'm sorry, the Office of Emergency Management -- to try and find long-term funding. They pretty much have taken the lead on that in trying to find funding so that we can continue the system into the future.

**ASSEMBLYMAN VAN DREW:** We know, because we heard it, but for the folks in the audience -- literally, like in 90 seconds, can you give us just a very brief overview of what you do?

**MS. HOPPE:** Sure. The tide telemetry system consists of 20 tide gauges and five tide and weather stations. In addition, we also have 31 crest-stage gauges. Those gauges are all real-time. They're located in the

back bay areas. And what they do is, they collect tide data on six-minute intervals. And then they transmit that data on the hour. The data goes to the USGS and also the National Weather Service. And it's available online for the public on the hour. As the data hits our database, it's put onto the Web.

And then, in flooding situations, once we hit a specific threshold -- which is set by individual counties or the National Weather Service -- once we know that a gauge is flooding, that data, as it's collected at the six-minute intervals, hits the Web at six-minute intervals. So it's as real-time as you can get to know what's actually occurring in the back bays with the water.

ASSEMBLYMAN VAN DREW: Thank you.

And, Heidi, you should know that I'm very confident that one of the recommendations of this committee would be that there be a permanent funding source for what you do.

MS. HOPPE: That would be fantastic.

ASSEMBLYMAN VAN DREW: Obviously, we don't want to take a step backward here. We're trying to move forward.

Anybody have anything else on that? (no response)

Thank you for being here, again.

MS. HOPPE: Thank you.

ASSEMBLYMAN VAN DREW: We do have Mike Moran here, from the New Jersey Department of Transportation. He doesn't have a presentation, but he's willing to answer any questions from the actual Task Force itself.

So maybe I would ask him to come forward, just for a moment, and see if we do have any questions.

There he is.

**MICHAEL MORAN:** (speaking from audience) (indiscernible)

**ASSEMBLYMAN VAN DREW:** Hi, how are you?

Come right forward.

They get angry with us, at the Office of Legislative Services, if you actually don't sit in the chair and speak into the microphone. We get in trouble.

Right? Am I in trouble? (laughter)

That's not a good thing. I get in enough trouble on my own.

Thank you for being here. I don't know if we have any specific questions.

Does anybody?

I guess my only thought would be: Is there any process -- and you may not even be able to answer this now. Maybe you can get back to us if you don't have it. But for all of these emergency situations-- I know, for example -- which isn't really your purview, but on the New Jersey Turnpike Authority -- there's been the discussion on the Garden State Parkway of lane reversal, which--

By the way, does that extend-- That's an interesting question. I don't know if anybody has the answer to that -- if that lane reversal idea extends all the way up -- how far up the Parkway it extends. That would be one which -- I don't know if we can answer it now. But that would be one question I would have.

And how about coming out of Long Beach Island, Route 72 and so forth? What kind of policies are in place, just in this Ocean County area, as far as the Department of Transportation?

MR. MORAN: I'm the Regional Maintenance Engineer. So speaking from an operations point of view, there are two contraflows in the central part of the state. You're obviously aware of the 47-347 in the southern part of the state.

ASSEMBLYMAN VAN DREW: Yes.

MR. MORAN: But in the central -- which is where I represent, -- that includes Long Beach Island -- we have 195 and we have a 72 reversal. There is required to be a declaration to be implemented. Therefore, we fall under the State Police Office of Emergency Management for its implementation.

Every year we review the plans, every year we do--

ASSEMBLYMAN VAN DREW: Have you done table-tops with that? Any exercises?

MR. MORAN: We had one this past Spring, prior to the season. It was held at Ocean County OEM. We practiced everything.

ASSEMBLYMAN VAN DREW: And the other thought I would have, that was interesting to me-- Further south -- I know on the 47-347 area-- Actually, the New Jersey Institute of Technology -- and I know you're aware of this -- did a study and actually said, "Eh, it's not going to be all that effective, the lane reversal." So the Prosecutor's Office, and OEM down in that area -- working with some others -- have also recommended lane reversal on the Garden State Parkway. So both would be lane reversed, hypothetically. And they're still working on that, I think.

Interesting thing is: everything still bottles up. It's like a funnel. There's a point where you're just going to catch it all, and still not going to move. NJIT said that, really, with the lane reversal on 47-347 -- as I remember, it was something along the effect that it would almost end up being a large parking lot, and that there really wouldn't be the movement that we hoped there would be, and it would not be that effective.

Has there been anything done -- or do we know -- in this area, as far as how effective that lane reversal would be?

MR. MORAN: I can't answer the question for 47-347. And I guess everybody has an opinion of what would happen on 72 and 195. I think the-- Like has been testified earlier, it's going to depend on the storm. It's going to depend on: is it inland or coastal; when is the button going to get pushed, politically? These are all decisions you or I can't answer.

So the reversal itself, I believe, would be -- and OEM might be able to answer this better -- but really move people out of the flood-prone areas and get them inland, considering a coastal storm.

ASSEMBLYMAN VAN DREW: I would take Assemblyman Rumpf's lead on this, because this is, obviously, his area and his district.

But one of the recommendations might be, too, to more thoroughly evaluate how that lane reversal-- Is it going to work well? I mean, it's at least good to know if it's going to work or not.

And maybe they have. I don't know.

ASSEMBLYMAN RUMPF: I think that's an excellent idea. And perhaps one of the things our Task Force can do is invite OEM and DOT back to tell us the results of their table-top exercise, and how we might incorporate recommendations that they've learned through their

practice, if you will, into our report, in terms of what the infrastructure needs might be.

MR. MORAN: You're getting to a point -- and I guess everybody would have an opinion on this, as well -- that it's almost going to be next to impossible to pave our way out of congestion. You have to manage it. We're running out of areas.

ASSEMBLYMAN VAN DREW: That was the interesting thing on 47 and 347. When NJIT looked at it -- Institute of Technology -- it wasn't as effective, at least in their study, as they had hoped it would be. And that's why they're looking at some alternative ideas.

As difficult as it is to digest sometimes, or unpalatable, it's at least good to know: "Hey, if it's not going to really work that well, let's at least know that from the outset," which is, I know, frightening, but still better to know.

MR. MORAN: There has been discussion, back when I first became involved in this in the early '90s. Monmouth County had expressed the reversal of Route 36, around the Sandy Hook area. And we had meetings on that. The number of intersecting streets, the number of traffic signals, the number-- It just wasn't doable.

I have heard of the planning of the 195 -- excuse me, the Garden State Parkway and Turnpike. And I honestly don't know the status of that.

ASSEMBLYMAN VAN DREW: Okay.

So that-- Mr. Kelly, I would ask if we could find out for our next meeting, wherever -- we can still continue some discussion of Ocean -- just to see what the Garden -- what happened with the Garden State

Parkway here, as well as if there has been any significant studies done on the 72 reversal.

MR. MORAN: And just to answer your initial question: We are a support role to the State Police OEM. We do interact well with many agencies. We have representation at the Office of Emergency Management at different command posts during operations. And we meet regularly with the counties.

ASSEMBLYMAN VAN DREW: Very good. Thank you for being here.

Any questions?

Assemblyman Rumpf.

ASSEMBLYMAN RUMPF: Yes, if I may.

I don't mean to put you on the spot. I understand your title is Regional Maintenance Engineer. So I assume that you don't have involvement, necessarily, in capital needs that might exist for not only this area, but up and down the coast.

MR. MORAN: That's correct.

ASSEMBLYMAN RUMPF: From the perspective of being the representative of the maintenance department, however, what can you tell us about the existing infrastructure that the State has responsibility for maintaining in the event there was the need for a coastal evacuation? The need for an evacuation, obviously when we're talking about storms, means that there is going to be a lot of flooding and a lot of other related events, such as trees potentially falling across the roadway, as the gentleman just testified to.

How do you see the infrastructure holding up, as it exists today? Do you have any opinions on that?

MR. MORAN: It would strictly be an opinion. And like I said earlier, it's going to depend on the storm: what angle it comes in, is it inland or coastal. But no matter where in New Jersey you have a storm of any significance of what we're talking about today, there is, no doubt, going to be infrastructure damage; no doubt there will be flooding. I don't think anybody could plan for an evacuation route, or the like, that's not going to be impacted by flooding. I mean, we see them on minor storms, in this day and age, not to mention major storms. Trees to come down -- they're going to come down. I just can't tell you where. They'll be down. So the infrastructure will be damaged. There's no doubt about it.

ASSEMBLYMAN RUMPF: Do you have any new information that you could share with us concerning the anticipated new bridge going over to this island -- Long Beach Island?

MR. MORAN: I've heard and read probably the same things you've read. I really have to defer that to our front office or the capital program. I really don't know.

ASSEMBLYMAN RUMPF: And in terms of Route 9 being the primary north-south corrido -- with the exception, of course, of the Parkway -- from one end of the coast to the other, do you see any particularly vulnerable spots on Route 9, as we're going from Middlesex County down through Cape May County, that warrant, perhaps, more immediate attention?

MR. MORAN: Anywhere it goes from two lanes to one lane becomes a problem. That's true even in some of your east-west routes. I

don't know if I will see an expansion of that in my lifetime with the Department, with the cost of right-of-way.

Even the Parkway itself -- in the talks of adding a lane. I don't know when that's going to start. But I honestly don't know what its impact will be or how long it will take to get there.

ASSEMBLYMAN VAN DREW: And we know we've put you on the spot.

What we're going to do is, we're actually going to get some other folks from DOT as well, and just maybe do an overview, literally, from -- of all these counties involved -- where they think the need is, as far as evacuation issues, and what their plans are, short-term and long-term.

ASSEMBLYMAN RUMPF: Good idea.

MR. MORAN: No doubt that there are other people who may be able to answer your questions, as far as the long-term planning and financial aspects of it, better than I.

ASSEMBLYMAN VAN DREW: If we had money, we could do a lot of stuff, right? It's like at home.

MR. MORAN: Absolutely. It's the same thing with operations. We could do a lot more with funding.

ASSEMBLYMAN VAN DREW: Anybody else? (no response)

Thank you for being here.

If there are any other questions, we'll ask you.

Thank you.

MR. MORAN: Sure.

ASSEMBLYMAN VAN DREW: I did want to mention, too -- I didn't want to be remiss -- we have the Mayor of Long Beach Township, DiAnne Gove.

Say hello to everybody.

Thank you for being here. We appreciate your input.

**M A Y O R D i A N N E C. G O V E:** (speaking from audience) Welcome to Long Beach Township. This is a very important issue. I too was here in--

ASSEMBLYMAN VAN DREW: You have to--

Again, please come forward just for a moment if you'd like to speak.

MAYOR GOVE: Welcome to--

Do I have to sit down, too?

ASSEMBLYMAN VAN DREW: They make my life-- You can't imagine what they do to me if you don't speak right in front of the microphone.

MAYOR GOVE: Oh, thank you.

Welcome to Long Beach Township.

This is a very sensitive issue in this area. I've lived here my whole life. I, too, experienced the 1962 storm as a young girl. And I-- Listening to all the people talk about it, it brings back many memories. And not just the '62 storm -- 1976 and the hurricane. Trying to get off this island in the Summer with that hurricane was just -- why we're sitting here. Because we need to know how we're going to get people to safety, especially when we have hundreds and thousands of -- 400,000 people here in the summertime.

So this is really very important. It's something very dear to me and to all the people of not just Long Beach Township, but the entire island. And I'm hoping we'll be able to address it.

ASSEMBLYMAN VAN DREW: Thank you for being here, Mayor.

And by the way, you look much too young to have experienced the '62 storm. (laughter) So thank you for being here.

MAYOR GOVE: Thank you.

ASSEMBLYMAN VAN DREW: And we also have Melanie Alio, from the Office of Homeland Security, as well. And we appreciate her presence.

There you are.

Thank you.

Did you have anything, or you're just taking notes?

MELANIE V. ALIO: (speaking from audience) Just taking notes. Thank you.

ASSEMBLYMAN VAN DREW: Thank you.

With that, we have a couple of members of the public who wanted to speak. We're going to have them speak, we're going to take a brief luncheon break, and then we have some folks from the American Red Cross, and a couple of others as well.

So I would ask Bill Hutson to come forward, from Lorry's Island Motel, right in Beach Haven.

And Laura -- you have handwriting like I do -- Gol-- Where's Laura Gollama? (phonetic spelling) Is she here?

Okay.

Bill, thank you for being here.

**BILL HUTSON:** Thank you, sir, for allowing me to speak.

Thank you for the committee being here.

One of the issues I have is on the evacuation right now. We've got some ordinances on this island allowing homeowners to pave over, and put pavers and driveways up to 75 percent of their property. And to get people off the island-- What's happening now -- we're having more flooding. And one of the recommendations I'd like to recommend to your committee is that the ordinances on this island be rolled back from the current, approximately 75 percent impervious coverage, back to a more reasonable number so that the Boulevard isn't flooding as much -- to be able to evacuate people.

Also proposed in Long Beach Township is an ordinance to give 100 percent impervious coverage to businesses. And that lines your boulevard. And I think that needs also to be made a more reasonable number.

That's basically what I wanted to speak about and bring to your attention -- that as we try to evacuate this island, we're causing ourselves more flooding problems before the storm even happens.

**ASSEMBLYMAN VAN DREW:** Okay. Well, I appreciate your input on that.

We will, I guess-- Home rule, certainly--

**MR. HUTSON:** I understand that.

**ASSEMBLYMAN VAN DREW:** --is the State of New Jersey. However, we will entertain the idea of a recommendation that

municipalities certainly thoroughly review the amount of impervious cover that they do allow because of the potential flooding situation it creates.

I was just discussing with Assemblyman Rumpf whether-- I know that-- Again, I'm very familiar, because I live in a coastal community, as well. So much is controlled by CAFRA. And most of the municipalities actually have relatively strict impervious coverage rules, by and large, especially in the newer communities that are offshore that have larger availability of land. So we will recommend that that's certainly reviewed.

Assemblyman Rumpf, do you have any thoughts on that?

ASSEMBLYMAN RUMPF: No, I think those were excellent points to make, when you're dealing with ordinary flooding. My concern would be -- obviously we're dealing with the extraordinary on this committee, in terms of the need to evacuate. I think it's an important element to look at, certainly. But my fear is, when you're talking about a 20-foot-high wall of water coming towards you, it gets kind of lost in the mix.

MR. HUTSON: Right.

I just wanted to make a comment. Every little bit helps. And when we're trying to evacuate, it is our only route out.

ASSEMBLYMAN RUMPF: Sure.

ASSEMBLYMAN VAN DREW: Well, we appreciate you being here.

Thank you.

MR. HUTSON: Thank you.

ASSEMBLYMAN VAN DREW: Is there any other--

Very good.

I guess Laura is not here. She was here for a little while. Maybe she is going to come back.

Is she here?

**L A U R A G O E G E L M A N:** (speaking from audience) Are you speaking of Laura (indiscernible)?

ASSEMBLYMAN VAN DREW: Yes.

MS. GOEGELMAN: (indiscernible)

ASSEMBLYMAN VAN DREW: Please come--  
She's coming.

Would you please have a seat, and make yourself comfortable, and state your name and where you're from, and tell us what you think?

MS. GOEGELMAN: Okay.

I'm Laura Goegelman. I'm from 123 South 3rd Street, Surf City, New Jersey.

And I don't know if everybody can remember the big storm of 1992. People couldn't get on the island to find out how much damage was done to their homes because of the nor'easter. We get it all the time.

Since the library was put up when we bought our lots-- Now, I'm representing one, two, three, four -- five people on our street. That's all we got. People across-- She lost her husband. She is 79. The one on the other corner, same thing. The one on the corner -- her house has been there for 50 years. So you can imagine your foundation being this (indicating) low, and the water coming up to your knees. I'm five-foot-seven. And it's because of the library. We begged, "Why?" They said nothing was going to be put up there. They put the library-- They didn't do enough drainage.

Ship Bottom put a complete parking area with only one sewer drain. And that thing floods, and everything comes over to all of us. We get on the phone. Here comes the wave; honest to God, waves. I've got pictures of it. I didn't bring them in, because I had to help somebody -- take her to a doctor. I've got somebody else that I'm taking to a doctor. I'm very active here in the church.

But, anyway, what can be done about-- We call the police department, "Please, please --" I'm a police officer's wife -- "take your traffic and put it in front of the school. You let the trucks come, the waves come, they slap--" Foundation -- I had \$13,000 worth of damage underneath. Now the government makes you make -- do the raised ranch. But it still all came in. The man next door -- the same way. We're one, two, and then the poor two people across the street-- Two years ago I had to go over and get her out of her house, and then bring her to mine. She was soaking wet, and she is 98 years old.

You know, it's-- Maybe somebody could look into this and--

ASSEMBLYMAN VAN DREW: Well, we--

MS. GOEGELMAN: --direct traffic, or-- It took my walk -- a (indiscernible) walk right out of my driveway and put it right out into the one-way street.

ASSEMBLYMAN VAN DREW: We appreciate you being here and certainly have taken notes, as far as that. This is such a-- This is the big overview for the entire region. But certainly we appreciate your input.

MS. GOEGELMAN: It is. It's not only our street. All Long Beach Island streets-- We're not-- We don't stand alone. Okay? And we just feel that they should do something for the people who have been here

and are in the check-out zone. We're going to check out pretty soon.  
(laughter) And then the house is going to be (indiscernible).

ASSEMBLYMAN VAN DREW: One of the areas that you bring up that's very important, and we discussed, I believe, when we were in Atlantic County, was making sure -- and I know Richard Cañas is working on this -- that county-by-county, those who have special needs--

MS. GOEGELMAN: What's his name?

ASSEMBLYMAN VAN DREW: He's the Director of Homeland Security for the State.

MS. GOEGELMAN: Okay.

ASSEMBLYMAN VAN DREW: To ensure that those people who have special needs, county-by-county -- we're really trying to tabulate where they are, what they would need, how we would get them out. That's part of the evacuation plan.

MS. GOEGELMAN: Yes.

ASSEMBLYMAN VAN DREW: The senior citizens, the disabled-- We've even got -- which I'm totally digressing -- but even to the point -- at some point, this committee is going to deal -- what do people do with their pets? Because if people think they can't take their pets out -- who they often love just as much as a human being -- they're not going to leave, which endangers them as well.

So we are dealing with all those issues. And I thank you for bringing that to my attention.

MS. GOEGELMAN: Now, I wanted to ask you one other question that really is coming up when we go to different affairs here on the island, and off the island in Village Harbor. What are they doing about this

so-called *new* bridge they're going to build to evacuate everybody off this island? Okay?

ASSEMBLYMAN VAN DREW: Thank you very much.

MS. GOEGELMAN: In four years?

ASSEMBLYMAN VAN DREW: I'm not going to give--

MS. GOEGELMAN: Is there a deadline set to start the ball rolling, or something, so I can go back, and we get together, and say, "Okay. I went to the meeting for you. Now, here is what they said."

ASSEMBLYMAN VAN DREW: We are going to move as quick as we can.

You know what I learned, a long time in government? Never make a promise you can't keep. (laughter) The promise is, this committee is going to work as hard as it can.

MS. GOEGELMAN: I've dealt with the government plenty. Thank you.

ASSEMBLYMAN VAN DREW: And I know we have--

We're going to have one more person speak quickly before lunch, and then we will take the lunch break.

We have Leslie Houston, here, who is the Deputy Police Chief of the Long Beach Township Police, and the Emergency Management Coordinator.

Please come forward. Thank you for being here.

**DEPUTY CHIEF LESLIE A. HOUSTON:** Thank you for having this forum available.

I had no intention of speaking, but given the opportunity, I felt it was important to redirect our efforts on the concerns that the Long Beach Township officials, including myself, have with our evacuation routes.

Limited resources, limited infrastructure-- The coordinators that we work with, and the under sheriffs here at the county -- we have the best plans that we can put on paper, the best plans that we can try to implement. But with a limited infrastructure, it's very difficult to think that our plans are going to work successfully, and save lives, and protect property when we don't have enough roadways.

The flooding and the historical stories are all important. History repeats itself. My concern is that the history will repeat itself during my lifetime, and my concern is for our communities here. Long Beach Boulevard, as you know, is our main thoroughfare to get people off the island. The Causeway Bridge is our main and only egress/ingress to get off the island. Stafford Township, as you've indicated, is growing leaps and bounds. Their infrastructure is limited. We saw that during the recent forest fire. Add to that several hundred thousand people, times maybe five -- 500,000, 600,000. My concern is: If we go west and we go north, and a storm of a serious nature is involving the Delaware River Gap, as well -- on the Delaware River -- Pennsylvania people are coming east, we're going west. We're going to have one big nest of people like almost trapped rats.

ASSEMBLYMAN VAN DREW: The whole island -- and you may or may not be able to answer this -- the whole island -- the population of all the municipalities together, approximately in the off-season and then approximately at the height of the season -- Long Beach Island.

DEPUTY CHIEF HOUSTON: The estimates that we use -- some of them are just from the 2000 census for Long Beach Township. You're talking maybe 5,000 in the Winter -- but that doesn't include people who are coming here to work. Island-wise, I would say maybe 10,000 to 12,000 year-round, and at the peak 600,000 on the Fourth of July weekend, Chowder Fest weekend, 18-Mile Run. Any of these activities could be damaged with unforeseen forecast for a storm.

Again, the focus is getting the people off the island and getting into a place of safe refuge. The resources that we have are there, but we can't always use them if we're inundated with floodwaters. I know our different municipal governments are doing their best to maintain plans and insure us with the education we need and the availability to do exercises. And we do practice our plan. But it's not going to do anything if we don't have the roadways available, if the bridge is not repaired or replaced in the future. All that type of construction, when it takes place-- The worst-case scenario is a three- or four-day nor'easter during construction phases. If we could control the weather, we wouldn't be here. I understand that.

I would just like this committee, in this hearing, to know that the emergency management coordinators on the island work well together. We work with our mainland communities, our county communities, our State representatives that are here from Emergency Management. But we need a powerful source to get funding in place, to get the infrastructure up-to-date, to control the number of people we have in a safe manner.

And speaking for myself, personally-- I find myself to say, when a storm comes, I'm going to be the last person out, closing the door behind me. And I want to know that we're going to have something to

come back to. But we need some assistance in getting the infrastructure up in place.

ASSEMBLYMAN VAN DREW: Which is-- There's no question you're right. And it is going to be the greatest challenge in reality.

So what we would very much welcome from you -- and get it to Mr. Kelly -- is, again, as we've said all along with this Task Force -- is some short-term recommendations, which I know are the hardest because they are within the given constraints that you have with the limited infrastructure. And it's the same up and down the entire coast. It is a problem. Because of environmental regulations, because of fiscal issues, it is -- I don't have to tell you -- extremely difficult to get these things done.

But short-term, within those constraints, whatever you would recommend we would welcome. And then longer term, what you think you need; as well as infrastructure -- which I think we kind of know, but we'd really appreciate your input on that anyway. If you could get that to Mr. Kelly in a timely way--

DEPUTY CHIEF HOUSTON: I will do that.

ASSEMBLYMAN VAN DREW: --we would appreciate that.

DEPUTY CHIEF HOUSTON: One final note I think that we haven't talked about is the outreach for education on this. We all know -- those of us who live here -- that you may have to evacuate during a clear day, a sunny day, a bright day. And the visitors don't necessarily always know that. We do our best for resource outreach like this. But I think a very stronger campaign throughout the State of New Jersey is in order for the education to start in the schools. Let the schools, and the students in schools, bring the messages back to their parents. That's the conduit.

That's going to hit your year-round residents. Do projects in the schools to create evacuation kits, preparation kits. I see that as a resource that has been limitedly tapped. We worked a program here in Long Beach Township, through our superintendent of the grade schools, and it was very successful. I think, statewide, that is something that we need to address as well.

ASSEMBLYMAN VAN DREW: And I think you're right on target. And that is definitely going to be one of our short-term -- as a doable thing. And shame on us if we don't get it done. Because one of the issues we're going to have with the limited infrastructure is, you have to be able to get people out earlier than might seem intuitively appropriate to them. They're not going to feel like they should leave yet. And somehow we have to get them that information and make them listen, which is really going to be a difficult task. Because we, thank God, haven't had too many types of those storms.

So anything we can do along those lines-- That is absolutely going to be one of our recommendations. And maybe we can do something there.

Assemblyman Rumpf.

ASSEMBLYMAN RUMPF: Yes.

I thank you for bringing the local perspective home, in terms of your being an emergency management coordinator.

For the 5,000 year-round people that populate Long Beach Township, what shelter would you direct those people to?

DEPUTY CHIEF HOUSTON: It depends on the nature of the emergency. If we're dealing with a flood evacuation shelter, we have the

Stafford schools that are available. They open up. They're the designated shelters in the area. If it's something of a plant -- nuclear power plant evacuation, the direction is down to the Pinelands and to Stockton for the -- to the schools.

It's limited sheltering. A lot of shelters here on the island are not something that you would recommend. It's short-term, maybe, as a meeting post for people, before they could be evacuated. But sheltering off the island is limited. We do have some motels and hotels that are registered. And many of them have indicated they're pet-friendly. And that's a big problem in our county as well. We need pet-friendly shelters.

But limited resources would just be the Stafford schools.

ASSEMBLYMAN RUMPF: And you did speak a lot about the infrastructure needs that are so apparent. In your view, is there anything that we should be focusing on for this region, by way of--

DEPUTY CHIEF HOUSTON: Focus on for?

ASSEMBLYMAN RUMPF: Infrastructure. Is it the bridge that is your primary concern?

DEPUTY CHIEF HOUSTON: The bridge is a major concern. And of course, you know, the devastation of that one bridge out west that brings this all to light for us -- and we know that the bridge has been under study, and it has a projected plan to start being replaced. My concern is that that is done in a timely manner and to continue to give us a safe means on and off the island during that construction phase. And I think the education has to come out, the public media has to come out and promote the plan. And the public here needs to know what's going on, on a step-by-step basis, so they too can plan for their evacuations.

ASSEMBLYMAN RUMPF: And then, of course, we have all the secondary State roads: Route 72.

DEPUTY CHIEF HOUSTON: Correct.

ASSEMBLYMAN RUMPF: I'm not familiar with the plans to allow one-way traffic. But I know there are also plans to widen Route 72. And that should certainly get into our discussion.

DEPUTY CHIEF HOUSTON: I just came through 72 from Cherry Hill yesterday, and it's Pinelands on one side, Pinelands on the other side. And there's adequate shoulder lengths to exceed the two lanes that are there. Widen the shoulders, pave them-- If the State wants to maintain it as a two-lane road, one way each direction, at least the infrastructure is there to widen it, to have it be accessible if it's already widened. Make it a shoulder that's travelable.

ASSEMBLYMAN RUMPF: Okay.

ASSEMBLYMAN VAN DREW: Thank you, Assemblyman.

Anybody else?

Wayne, Joe?

MR. RUPERT: I like that idea about Route 72.

ASSEMBLYMAN VAN DREW: Joe.

MR. SEVER: I have a question for you. Evacuation times: What do you estimate your evacuation time to get off the island?

DEPUTY CHIEF HOUSTON: Again, given the time frame of whether it's during the off-season or the on-season--

MR. SEVER: Summer.

DEPUTY CHIEF HOUSTON: On-season?

MR. SEVER: Summer.

DEPUTY CHIEF HOUSTON: Summertime: I would hope that the panic would set in and people would start leaving three days before an estimated time if a hurricane comes. When a hurricane is down in the Carolinas, that's when we pretty much sit down, and make our meetings, and get on board with all the communities. No order for evacuation is done with one, single person's decision. It's done collectively, it's done cooperatively. Because our towns go into another town, they have to know they're going to be receiving those people.

So we predict it when it's down in the Carolinas. And we would say we would need 36 hours. As it gets closer, the time that we need gets greater to get people off.

ASSEMBLYMAN VAN DREW: Which is pretty similar--

MR. SEVER: Yes, it's pretty similar to my--

ASSEMBLYMAN VAN DREW: --experience in the deep south.

DEPUTY CHIEF HOUSTON: Yes.

ASSEMBLYMAN VAN DREW: It's probably similar everywhere.

It would be interesting, when we go up to Middlesex County -- how they would approach some of this.

Any other questions? (no response)

Wayne, Joe? (no response)

We appreciate your testimony. Thank you for being here.

DEPUTY CHIEF HOUSTON: Thank you very much for the opportunity.

ASSEMBLYMAN VAN DREW: Actually, they're just about ready. So while they're getting ready, I'm going to ask one more person to come forward. We have Bob Irvine, who I'm very familiar with. Yes, there he is. And I know he had a couple of minutes he wanted to present as well.

Thank you for being here.

**B O B I R V I N E:** Assemblyman Van Drew, Assemblyman Rumpf, and Task Force members, thank you for allowing me to speak.

I represent the Taxpayers Association in Long Beach Township. We have almost 500 members. And our members have concerns about the Long Beach Island evacuation plan. The only evacuation route for the residents and visitors of Long Beach Island is the Boulevard. And it consistently floods.

We have a question about the number of storm water drains and their maintenance by Ocean County. And we recommend that this Task Force review this aspect of the plan with Ocean County.

ASSEMBLYMAN VAN DREW: Thank you, Mr. Irvine.

We weren't prepared to actually go into those drains themselves. But I guess--

Assemblyman Rumpf, maybe you could follow up with that.

ASSEMBLYMAN RUMPF: I'd be more than happy to, sure.

ASSEMBLYMAN VAN DREW: He can let you know, and you two can interact afterwards. That's certainly an important aspect, at the beginning at least -- the beginning of any evacuation. And I think you're just backing up pretty much what everybody else has said.

Thank you for being here.

MR. IRVINE: Thank you.

ASSEMBLYMAN VAN DREW: You're welcome.

We are going to start right-- Lunch is going to be very brief. We're going to be actually eating as we're moving forward. We're going to take a five minute break for everybody to obtain their lunch, go back to their seats, eat while they listen. We might be chewing a little bit up here, if you can forgive us for that.

So we'll start in five minutes with Jason Kingsley, from the American Red Cross.

We are adjourned.

**(RECESS):**

**AFTER RECESS:**

ASSEMBLYMAN VAN DREW: We'll start with Mr. Jason Kingsley, from the American Red Cross.

**J A S O N K I N G S L E Y:** As you said, my name is Jason Kingsley. I'm the Response Coordinator for the Central New Jersey Chapter of the American Red Cross, which is Middlesex, Mercer, Hunterdon, and a small shred of Somerset counties. I'm also the State Relations Disaster Liaison speaking for the Red Cross as a whole in New Jersey.

So in this evacuation process, the role that the Red Cross, obviously, will have is sheltering the folks who are leaving their houses. We don't really do transportation, we don't do a lot of the evacuation work itself, except the receipt of the people as they are leaving their locations.

So we work with the local and county offices of emergency management to identify facilities ahead of time. Unfortunately, right now, a lot of facilities on the shelter lists -- both government and volunteer organizations active in disaster -- are schools. High schools: great shower facilities, lots of bathrooms, lots of rooms, big gyms. They seem ideal, but the fact is, they're still schools. If you're evacuating from the coast -- in a case like we're talking about here -- inland, these schools may not have been closed down by the same disaster that's been striking the coast. So you're trying to move populations into locations where schools are actively running. It's a difficult situation, both for us as the sponsoring agency and the schools as the receiving agencies. Otherwise, most boards of education are very cooperative with the idea of using their facilities for periods of time that school is not in session.

We complete shelter surveys and agreements; basically go in and make sure that the facility meets certain standards set by the National American Red Cross for wind levels, water levels, whether it's in or out of a hundred-year flood plain. We can designate shelters for various types of incidents. If you simply have, say, an apartment complex that bursts into flames, we can use a barrier island school, or hotels, or senior center, or anything. But if you start to move into these hurricane situations, obviously we have to move much farther inland before we're going to be able to open a shelter.

And that's one of the things that I heard mentioned here by a previous speaker -- was our shelter situation on these barrier islands, or even near these barrier islands, once you hit the mainland. We cannot open a shelter that's going to put our residents or our staff in danger. So in a

hurricane situation that's going to directly affect this particular area, we can't open up a shelter in a place that could possibly be flooded or will be most directly impacted by this wind. Because it's going to be a hazard, obviously.

So we're going to have to start talking about moving these shelters inland. And we've done this. We've started to review facilities as hurricane shelters. And we're putting that information, right now, into the National Shelter System -- which is the database shared between FEMA and the American Red Cross -- for capacities, and what types of shelters, and where they are. And then FEMA has these maps that can plot it out for various disasters.

We also obtain vendor agreements. So once someone is in our shelter, we can feed them, we can keep them in that shelter as long as it's determined by emergency management and the Red Cross that the shelter is required. We can give them information from the outside. If the fire department or office of emergency management wants to tell people about how their community is fairing, we've got places set up for public information. We can do pretty much anything that they need in that shelter for as long as it's needed, including limited health care and limited mental health care. And I'll talk about special needs in a little bit, because I know that's popped up a couple times in these two meetings.

One of the big challenges that we have is, while we have plenty of shelter space on paper, we don't have the shelter managers and the staff to operate all of these spaces. So we may have thousands of shelters, but if I don't have thousands of shelter managers, then only the ones that we have the capacity to run can be opened. We're solving some of that problem by

working with community emergency response teams, which are generally operated by offices of emergency management, through citizens' core councils. We are helping to train them as shelter managers in a number of our counties, and I know a lot of the other chapters are going to start helping to train their local CERTs to supplement our volunteer staff.

The other catch is, while we have significant volunteer presence in a lot of our chapters, particularly Jersey coast and central New Jersey, as our large geographic regions and coastal regions, a number of those people are going to be affected by disasters themselves directly. And so the percentage of people we can count on to come and assist us is questionable, depending on whether we're talking about nor'easters, tropical storms, hurricanes, or the like.

When we open a shelter, it's generally done in consultation with the Office of Emergency Management. We will not open a shelter that isn't safe, but we always will go to emergency management and say, "Here are the ones that we've identified ahead of time as being especially reasonable shelters for this kind of disaster. Where would you like us to open it?" And then we go from there. A lot of the chapters are moving toward regional shelters now. It's not that we're going to go into every municipality up the coast, or every municipality inland, and open up an individual shelter in each one. It can't be done, partly because of this reason where I'm talking about staff and managers. We're looking at opening much larger facilities. In a catastrophic disaster, we may open a giant high school -- and there are a lot of those around -- that can take people from many municipalities into this one particular facility, making it easier for the government and the Red Cross to coordinate information flow

for these people. We're simply not going to be able to open up in a lot of municipalities; so we're starting, as chapters, to talk to the places that have appropriate-sized facilities about becoming regional shelters. And it's meeting with fairly good reception, especially at the county level. Some of the municipalities are really clinging to home rule, and we're trying to talk them out of that, because we just don't have the capacity for individual municipal shelters in a catastrophic disaster.

A lot of our role is community preparedness, disaster education -- what do you do as an individual, what does your family do, do you have somebody out of the area who you can call to coordinate information -- and then teaching them about each of the hazards individually. But also talking to offices of emergency management, especially the ones with maybe part-time coordinators, or coordinators who are also two, three, four other jobs, about some of these hazards and the information that flows through the National American Red Cross.

During the storm, sheltering, feeding, liaison to government agencies, public affairs, and reporting information are going to be our key responsibilities. That's reporting information up my chain to national, of course, but it's also letting you guys know when the National Red Cross is going to be able to get here with the major resources that we have nationwide.

We are expected, as chapters, to be able to self-sustain for three to five days. You've talked several times in the last couple of days about the fact that this part of the state is probably not going to be paid much attention to, in comparison to maybe the New York area, Bergen, Hudson metro areas; and we recognize that, too. So that three to five days--

Frankly, in south New Jersey, it's probably going to be that three to five days, instead of the rapid response that some of the very heavily populated areas are going to get. Once our national response comes, we have access to hundreds of thousands of volunteers. So that won't be quite the issue. It's going to be those critical three to five days in the beginning.

Pet sheltering has been an issue recently. A lot of misinformation about the Red Cross's stance. No, we cannot take pets in a shelter, and there really isn't a lot of flexibility in that except, of course, service animals, which aren't technically pets, I guess. Service animals are welcome. No other pets can possibly come in. It is a hygiene issue; it's allergies; fear from humans to the animals, from the animals to humans; unpredictability of those animals in a shelter with people all around; and frankly, just space. Every animal that's in there is another person that may not be able to stay. And so we just can't take animals. We are, however, working very closely with county and community animal response teams, the State animal response team, to coordinate where those animal shelters are going to be in relation to the shelters we open up. And in some cases, we can even colocate in the same facility if it's big enough, but they have to be physically divided, and another agency has to be responsible for the pets. The closer those pets are to the shelters where the people are, the happier those people are going to be. A lot of folks aren't going to evacuate if their dog, or their cat, or their iguana, or whatever isn't able to come with them. So that is definitely a planning element that's going to have to be taken into consideration, or you are going to lose people who aren't willing to evacuate.

ASSEMBLYMAN VAN DREW: Has any real work been done on that? I know you've done some -- I don't mean real work -- but do you know what I mean? Are there any examples of shelters that would be prepared for that or a plan that would have that happen? I mean, I've heard it discussed in a nebulous way, you know what I mean? That, "Gee, yes, we really need to do something. That's something we're going to work on, among many entities." But I don't know of any actual, "This is what would happen. These are where the pets would go. This is--" Is there a plan for that?

MR. KINGSLEY: Probably not in any great complexity. A couple of counties are maybe a little bit ahead -- have particularly aggressive animal response teams who have made sure that people have gotten on the ball. I couldn't name for you, right now, exactly which counties. I know that Hunterdon County has a very strong animal response team. My understanding is that Ocean County has done animal planning. And then there are going to be others, but I don't want to list names, because I may miss one or be inaccurate. It has been done. It hasn't been done to the capacity that needs to be done, but it's on the way. Frankly, the job of this Task Force and the job of Emergency Management when it comes to hurricanes is so complex. I think it's a matter of prioritizing issues. And animals have now come up to the front and are being dealt with, but it's just recently. And the Federal Government is also starting to talk about these in relation to grants.

Special needs shelters: There's also some misinformation about this. The most difficult part of special needs sheltering is getting the definition of what special needs are. In some agencies, a special needs

person includes someone who is simply blind or simply deaf. In other agencies, you're not special needs until you're on a ventilator and have to be moved by somebody else. So that definition is going to be very important when agencies are talking about special needs. Essentially, if an individual is able to take care of their basic needs, day to day, at home when there is not a disaster going on, with minimal assistance, they're completely appropriate to be in a Red Cross shelter.

If you are in a wheelchair, if you're deaf, if you're blind, if these are the conditions you have, there is no problem whatsoever with being in a Red Cross shelter. If you have a complex medical condition that requires advanced care, or nursing staff, or some other level that is above what Red Cross can provide, those special needs folks are going to have to deal with, or get assistance from the offices of Emergency Management and the other special needs human services that deal with this. I know there's a State Special Needs Advisory Panel, and then certain counties have also addressed this on the county level to get shelter facilities for those folks. The Red Cross will provide cots, we will feed, we will do all kinds of things to assist that special needs shelter, but we cannot staff it as a Red Cross shelter, because we don't have the health capacity. We don't have the nurses. And when we do have the nurses, you're looking at shelters that have hundreds or even thousands of people and maybe just one or two nurses. So that's really where the Red Cross stands on special needs.

We are working at the State and county, and even occasionally at municipal level. Some of the bigger municipalities are looking at this individually, like Trenton in my region. I know Perth Amboy, Newark -- some of those folks are starting to work on the municipal level. After the

storm, we do disaster assessment, share that information with the Office of Emergency Management, and try and get folks back out of the shelters and into their homes, or into some other temporary living condition. The decision to close a shelter is based on input from the Office of Emergency Management and the Red Cross. We will not just close a shelter and dump people out onto the street. They are going to be taken care of before they leave. But at some point, we do have to close down.

The nor'easter that hit Bound Brook back here -- it was April, I believe -- the shelter went on for a very, very long time with a very high population that whole time, because the decision wasn't simply made, "Okay, you guys have three days left. Let's find something for you to go to. If you're homes aren't available, we'll find you somewhere to stay for a while." And then after the weeks, it finally did.

So that's really where the Red Cross stands right now. There is definitely a gap between the facility space and the ability to manage and run that facility space. Some of it is going to be mitigated by working with our partners. We work closely with Volunteer Organizations Active in Disaster, which is VOAD. This is a Salvation Army, and Catholic Charities, and the Red Cross, and Project Freedom, and all these other volunteer groups who have some kind of role to play to make sure that there's not so much overlap and that we're doing things efficiently and effectively.

One of the other challenges in this situation is going to be shared vendors. I have caterers, I have food contractors, and wholesalers who are willing to work with me in a disaster. Unfortunately, they almost certainly have agreed to work with some other folks, as well, and maybe a lot of other folks in some cases. So there's going to be a point where the

drain on some of these vendors is going to be so significant they can't serve any of us any more. So definitely the State planning, the coordination with VOAD at the county and the State level is going to be very important to make sure that we aren't stepping on each other's toes when worse comes to worse. Frankly, the government has the authority and the weight that, if we conflict with you folks on a vendor situation, they're going to you and then we're stuck with shelters that don't have those vendors.

So the state planning that we've been doing, I have to commend. I'm fairly new to the state -- background in emergency management. The Office of Emergency Management at the State -- each of the counties that I have dealt with, which includes Ocean, Monmouth, Middlesex, Hunterdon, Mercer, and Somerset directly, so far, they're all as on the ball as they can possibly be with all of the tasks that are supposed to be done. The Department of Human Services -- all of these agencies are working very, very hard. We need to make sure that this stays up and that the Volunteer Organizations Active in Disaster continue to be written into these plans and brought to the table to exercise training plans.

So that's what I have for you, if you have any questions.

ASSEMBLYMAN VAN DREW: Good. So, in summation, if we have this type of emergency -- a hurricane, nor'easter -- pretty much have planned out where the facilities would be. The problem would be in the short-term, having enough people to man those facilities.

MR. KINGSLEY: Right. That is the number one problem in sheltering right now. It's not the space, it's the staff.

ASSEMBLYMAN VAN DREW: Very good.

Questions?

Assemblyman Rumpf.

ASSEMBLYMAN RUMPF: No, I don't think I have anything to ask.

Thank you.

ASSEMBLYMAN VAN DREW: Mr. Rupert.

MR. RUPERT: No, just a comment on the animal sheltering. Here in Ocean County, we do have a separate organization within the Office of Emergency Management with the acronym of HELP, Help the Emergencies for Livestock and Pets. They've been very active, and they worked very hard to gather what they would need to shelter pets. I believe they've been working with the Red Cross to try to colocate as many as possible.

ASSEMBLYMAN VAN DREW: You know what would be good, Wayne. Really, if you could make that available to Mr. Kelly, and perhaps we can recommend that as a model for the rest of the counties that are involved with this, because I don't believe that every county has done that. So that would be good.

MR. RUPERT: Okay.

ASSEMBLYMAN VAN DREW: Joe.

MR. ZACH: Yes. The facilities management -- so that's a volunteer position?

MR. KINGSLEY: In about 99 cases out 100, it is.

MR. ZACH: So have you been -- is there a recruitment program? How does that work to get the word out and to try to identify people who can do that?

MR. KINGSLEY: Well, the Red Cross has a very, very long history of getting volunteers. Disaster is our mission; that is our core mission. So as people come in, the key programs that we put them into are client services, which is money for food and clothing, and that sort, for disaster victims; but also mass care, which is the sheltering and feeding, and that sort. At some point, though, volunteerism started to decline. Not just in the Northeast or New Jersey, but kind of all the way across the board it's starting to decline, as are donations to volunteer agencies. It's making it complex to get people in the numbers that we need to run these shelters. So a lot of what we're doing to address the issue is dealing with, like I said, the VOADs, the food banks, the ham radio folks -- all of these agencies that have some kind of role to bring people in.

CERT is a great program, but they also don't have quite the numbers that are going to be needed. At this point, it's going to be a struggle in a catastrophic disaster to shelter people appropriately. We do require in our shelters 20 -- in a short-term evacuation shelter -- 20-square-foot per person. In an overnight shelter, it's 40-square-foot per person. And frankly, we have to open up a lot of shelters if you're starting to talk about tens of thousands or even hundreds of thousands of people moving away. And also, we're talking to counties like Camden and Burlington, and the far end of Mercer, in Hunterdon, who aren't going to be directly impacted by the worst part of a hurricane, although Hunterdon will get the Delaware. They are still going to get major refugees, major influx of people from the coast. So definitely, while the coastal counties are very important to all of this, we have to keep in mind that those inland counties, they're going to take an awful big beating when it comes to a lot of people moving from the

coast, inland to survive this. I know that it was brought up by the guy in Cumberland County the other day. There you go.

ASSEMBLYMAN VAN DREW: This guy. (laughter)

Which will segue right to Joe -- do you have anything?

MR. SEVER: I have a couple of things here.

Could you explain to the Committee what requirements there is for somebody to become a shelter manager for the American Red Cross? What do they have to do and how long does it take for them to become certified?

MR. KINGSLEY: Sure. We don't certify anyone as a shelter manager. Obviously, different people have different capacities for management and supervision, and that sort. We have folks who have taken the shelter and mass care class, who hopefully have been a part of the staff of a shelter or two before they step up to manage the smaller shelters. But then we also have the next level of folks who have gone to Katrina, Rita, Wilma; some of the older folks who have gone into the Hugos and the big hurricanes from before then, who have operated the major shelters who can do this kind of level. In the beginning, we're going to be using less-experienced shelter managers to fill in until the real experienced ones can get here from out of the area. Frankly, we haven't had enough major weather disasters other than basic flooding in New Jersey to have really sharpened up the skills of a lot of the major disaster volunteers. So we're working on that with exercises and deploying people nationally to the large disasters.

MR. SEVER: One other question for you. When an individual comes to your shelter and, say if your home has been devastated by the storm, what kind of benefits do you provide to those people?

MR. KINGSLEY: Immediately, we don't do client services until things have started to wind down and we can start releasing people back to their homes. But the basics of what we give are generally food, clothing, and shelter in any disaster. We can also, though, in some cases replace prescriptions, critical items of clothing -- essentially anything they need to get back on their feet without being at risk once they are released from that shelter and not in the immediate hands of social agencies. We also do the public information, and we try to do advocacy with the various county and State groups.

MR. SEVER: But you don't physically, actually, give them clothing, food, and that type of thing?

MR. KINGSLEY: No. At this point, what the Red Cross has moved to -- we call them *client assistance cards*. They're MasterCard that we have access to charge up with our own accounts, basically. So if you come to me in a shelter and we determine that you need to have your food or the your clothing, or whatever else replaced, we do calculations based on what you've lost, and then we'll give you this client assistance card, MasterCard, and charge it up with the percentage, or the dollars that we've determined from your problems. So we may give you \$1,000 if you're starting to get -- kind of bad off. It may get up to 1,500. We don't generally see a lot of 2,000, 2,500s, but we may give you 1,000 or 2,000. Or if you just basically lost -- you know, "My fridge was off, and my power was off, and my food rotted," we may only give you 50 or 75, or \$100 to replace that. It's really

very contingent on what actually happened to you in your house specifically, and then we will charge your card for whatever that is. You can use it anywhere MasterCard is accepted.

ASSEMBLYMAN VAN DREW: Thank you.

MR. KINGSLEY: Okay.

ASSEMBLYMAN VAN DREW: Thank you very much.

You're going to attend the other meetings, I assume?

MR. KINGSLEY: I haven't gotten any notice of the other meetings, but--

ASSEMBLYMAN VAN DREW: They're not -- they haven't been set yet. But we will give you notice, because there may be some other questions as well. So we appreciate your being here.

MR. KINGSLEY: Sure. Okay.

ASSEMBLYMAN VAN DREW: We have one other -- we have one more person for testimony that I'm just going to ask to come forward -- Jerry Renner, from the Radiological Preparedness Council.

ASSEMBLYMAN RUMPF: I don't think he's got anything prepared. I think it's--

**J E R R Y S. R E N N E R:** (speaking from audience) Sir, I have nothing for the Committee, unless you have questions for me.

ASSEMBLYMAN VAN DREW: Okay. If you could come forward and even say that you don't have anything, that would be fine. (laughter) I know you have nothing for the Committee. I appreciate your being here, and I just wanted to see if the Committee had any questions for you, or any concerns.

So we'll start with Assemblyman Rumpf. Is there anything?

ASSEMBLYMAN RUMPF: Yes. Thank you, sir.

Can you tell me a little bit about what your function is, or the Radiological Preparedness Council?

MR. RENNER: Right. I'm a Supervising Planner with the New Jersey State Police OEM, what we call the RERP&T Unit. That stands for Radiological Emergency Response Planning and Technical Unit. I'm responsible for general supervision of all activities in Ocean County relative to the RERP plan and RERP operations.

ASSEMBLYMAN RUMPF: Okay. Obviously, here in Ocean County we have the Oyster Creek Nuclear Generating Station. We were in Cumberland County last week, at which time we were brought to the understanding that they have two nuclear power plants which impact on Cumberland County, or at least several of the towns in that portion of the county.

Let me just ask you a very general question. I don't want to go into the details that you so thoroughly examined recently in the various hearings that we've all attended or read about concerning evacuation. But in a worst-case scenario, what kind of evacuation potential would there be here in Ocean County with a problem at the plant?

MR. RENNER: You're talking about -- reference to the time involved, sir, or--

ASSEMBLYMAN RUMPF: Time and numbers, if you can give us an estimate of what impact we might have.

MR. RENNER: Okay, let me try. First of all, let me explain that you have what we call, around any nuclear power plant in America -- you have what's called the *10-mile emergency planning zone*. Okay? And in

that emergency planning zone -- it's divided up into what we call *emergency response planning areas*. These are readily recognizable areas, if you will, that the residents know, based on our outreach programs, brochures, other information that is sent to them, that they-- For example, if I live in Emergency Response Planning Area 3, I know that. Okay? If I live in 1, I'm in Lacey Township. If I live in Emergency Response Planning Area 2, I'm in Ocean Township. And so on and so forth -- there are 20 of them. Nineteen and 20 are the bay and the river and the ocean, and the other ones -- for example, Long Beach Island is ERPA 17.

So, in a radiological situation at the Oyster Creek Plant, or at any American nuclear plant, you have that emergency planning zone divided into 16 compass sectors. And of course, when we get our information from the plant, when we get our recommendation, if you will, as to what protective action the Governor should take -- because it is ultimately the Governor's call as to what protective action to take -- what we're normally dealing with is three of those compass sectors. Okay? Because if you have any potential for any radiological release off-site of any consequence, mainly it's going to be what we call the *affected sectors*, and then the two adjacent sectors are taken out, also, for safety.

Well, if I'm in Lacey Township, for example, and they say "north sector," that may not mean anything to me. But if they say, "ERPA 1 is to shelter in place; ERPA 1 is to evacuate," then that means something to me. So what we're talking about there is a population normally -- full-time population in any three of those sectors. The highest one, of course, is our northern sectors, because that's where the bulk of the population is -- would be. And I'm shooting a little bit from the hip, but probably

somewhere around 50,000 to 60,000 individuals. And of course, that's going to go up on a Summer day. And again, it's all based on met conditions: Number one, where the wind is blowing right now; and met conditions, what's going to happen later. In other words, your 24- to 36-hour weather forecast. Because another sector, if you will, may be picked up based on the fact that the wind is probably going to shift.

Okay, as far as the time estimates, there was an extensive study that was done, and we can have evacuation time estimates for each of these ERPAs and sectors, if you will. To evacuate the entire area of the EPZ would take nine hours.

ASSEMBLYMAN RUMPF: And that is sectors 1 through 7 -- 20.

MR. RENNER: One through 20, one through 20. And of course, someone -- another speaker alluded to special needs populations and things of that nature. Those are what we call *precautionary actions*, and those are done early on. You have what we call *emergency classification levels* in nuclear operations, the lowest level of which is an unusual event. That means what the name implies. If something unusual happened at the plant, it has no off-site consequences whatsoever or any potential therefore, but State and county officials are notified.

The next level up is alert. And for any of you who've played in our exercises know -- that that's where we start to ramp up. In other words, we activate the EOCs, get responders in place to do the job that their tasked to do in a radiological response. And at that point, we also do what we call a precautionary action, and that is: the county superintendent of schools, if applicable -- and it usually is -- has to make a decision on what to do with

schools. Even though maybe an evening exercise, like the one we conducted last month -- there still are after-school activities. So he has to make a decision on what to do about those. Normally, he'll close them down, and that will end it. If it's a daytime operation, he may opt to either evacuate the schools to one of the two school reception centers north of the plant -- that's Ocean County College, Toms River High School North, Toms River Intermediate North, and one other one whose name escapes me at the moment. South of the plant, the school children are evacuated to Stockton State College.

Other precautionary actions are clearance to the bay and river, because that takes so long. Even a day like today after the season, it's still-- By the time we run our marine police boats up and down the river and bay, put it out on the marine channel, and the Coast Guard sets up their plan in ERPA 20, which is actually the ocean side of the island, our estimates say it takes 3.5 hours maximum. That is, however, during the season. It's probably going to take less than that this time of year.

Also, other precautionary actions are handling of the special needs populations -- hospitals, jails -- the Ocean County Jail is in the EPZ -- mobility impaired individuals, people who are homebound or people that need some type of special help in evacuating. So that's all done early on. And of course, the idea in an evacuation for radiological emergencies is to evacuate folks before there is any release off-site. And that's based on plant conditions that our Bureau of Nuclear Engineering engineers are assessing, along with the plant engineers.

The next level up is site-area emergency. That again is pretty much what the name implies -- there is an emergency on the site that may

escalate. At this point in time, we will sound the sirens -- the three-minute blowing of the sirens. That tells the population simply to turn to their EAS -- that's the Emergency Alert System -- radio stations where we put information out to the individuals in the emergency planning zone. That's how we reach -- that's our outreach to the general population.

As a matter of normal doctrine, we will go on the air at emergency alert because we want the public to know that there is something going on at the plant, and we don't want to get into a situation where we get a charge that we were trying to hold something back.

The last and final of those four emergency classification levels is general emergency, and that is when there is definitely a potential for off-site consequences. It doesn't mean it's actually going to happen, but there is a good potential for that. And it is at that point in time that the plant, or utility if you will, is charged with making a protective action recommendation to the Governor. Coupled with that recommendation and what our Bureau of Nuclear Engineering folks come in with, we will present the Governor with the options as to what protective action decision we think he or she might -- should make. And then the decision is reached.

There are two basic decisions: You either evacuate people from the affected areas, which is the best and most likely thing to happen. Or if it's not possible to do that -- i.e., if it's a fast-breaking situation where there's already release off-site -- your option then is to shelter them in place.

I hope I've answered the question. I've certainly taken enough of your time.

ASSEMBLYMAN VAN DREW: You have. No, I certainly appreciate your being here. And I know that you weren't even prepared, but you actually were very prepared.

What we're going to do is, we're going to have an actual meeting at the ROIC in Trenton. And when we have that meeting -- I was speaking with Assemblyman Rumpf -- I think that we'd actually like to review this a little more thoroughly. So if somebody would actually be prepared at that point to make a presentation for Salem, as well as Ocean, or whatever other areas that are affected in these eight counties. Questions that I don't want you to answer right now, but-- Suppose this simultaneously -- I know I'm thinking the very worst scenario -- while we are in the middle of some sort of a very bad storm, we also have this issue as well, or the storm affects the plant, or there's an earthquake -- which again is very unusual, I know. But just all those scenarios, so that we can say that we've reviewed them thoroughly. And probably the most appropriate time and place for that would be at the ROIC in Trenton. So we'll review that at that point.

I thank you for being here today.

Our next meeting is going to be in Middlesex County, and that will be probably -- in fact, not probably, it will be in the month of November. And I look forward to seeing all of you there; and thank you all for being here today.

MR. RENNER: Thank you for asking me, sir.

ASSEMBLYMAN VAN DREW: The meeting is adjourned.

**(MEETING CONCLUDED)**