Task Force Meeting

of

ASSEMBLY COASTAL NEW JERSEY EVACUATION TASK FORCE

"Meeting to assess current emergency plans for a coordinated evacuation of coastal communities"

LOCATION: Office of Emergency Management
Cumberland County
Bridgeton, New Jersey

DATE: October 4, 2007
1:30 p.m.

MEMBERS OF TASK FORCE PRESENT:

Assemblyman Jeff Van Drew, Chair
Assemblyman Brian E. Rumpf, Vice Chair
Vincent Jones
Wayne R. Rupert
Joseph Sever
Rory Zach

ALSO PRESENT:

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

Christopher Jones
Assembly Majority
Task Force Aide

Jerry Traino
Assembly Republican
Task Force Aide

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

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

APPENDIX (continued):

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

Please rise for the flag salute.

(participants recite the Pledge of Allegiance)

ASSEMBLYMAN VAN DREW: We'll have a roll call please.

MR. KELLY (Task Force Aide): Rory Zach.

MR. ZACH: Here.

MR. KELLY: Joseph Sever.

MR. SEVER: Here.

MR. KELLY: Assemblyman Van Drew.

ASSEMBLYMAN VAN DREW: I am here.

MR. KELLY: Assemblyman Rumpf.

ASSEMBLYMAN RUMPF: Present.

MR. KELLY: Wayne Rupert.

MR. RUPERT: Here.

MR. KELLY: And Vincent Jones.

MR. JONES: Here.

ASSEMBLYMAN VAN DREW: Very good.

MR. KELLY: Very good.

ASSEMBLYMAN VAN DREW: Thank you all for being here.

This is, I guess, our third meeting. We had an organizational meeting. We had a meeting in Atlantic County. We're having this meeting as well. We also did have a meeting in Cape May County. For those that don't know -- and I believe most of you do -- this Evacuation Task Force deals with the eight most vulnerable -- eight southern New Jersey counties. It does include Middlesex County. It was established by legislation that I

sponsored along with Assemblyman Rumpf and Assemblyman Conners. The idea behind it is we want to make sure that we insure that we have as safe an evacuation and as effective evacuation as possible. We absolutely do not want to repeat what happened during Hurricane Katrina.

And what we have learned, over the past meetings that we've had, has been a great deal. And to summarize it very quickly and succinctly is that, as good as we're doing -- and we're doing an awful lot that is good and is right -- we also need to do better. For those that don't know, many parts of our region are very vulnerable, particularly the coastal counties.

The County of Cape May is the sixth most vulnerable area in the state -- oh, I'm sorry, not in the state -- the sixth most vulnerable area in the United States of America. And for those -- many of the folks here are not from Cape May County, but vacation or visit or have family there -- to understand the depth of vulnerability there is to understand that during a Category 3 storm that the entire county -- just about the entire county, if not the entire county -- would be under water, and the ocean and the bay would meet. It would be devastating to our region, whether it's Atlantic County and the coastal barrier islands, or any of the other areas that are included.

It's also important to know, what we learned is there is going to be prioritization, and that the city of New York and many of the urban areas in northern New Jersey -- because of the density of population, the needs that they have and the vulnerabilities they have, because of some of the facilities that are there -- in some ways, they're going to get first priority. And, you know, I said at that last meeting that "God takes care of those

who take care of themselves." To some degree, we need to take care of ourselves and make sure that we have our act together.

Cumberland County is key in this. Cumberland County has vulnerability because of the storm, but not nearly as much as some of the other areas that I mentioned. But Cumberland County is key because everybody is going to be exiting and evacuating to Cumberland County. It is where people are going to be going, most especially from Cape May, and to some degree from Atlantic and other areas as well. Whether we're here to determine what type of facilities are going to be here for those people that do evacuate here -- will the infrastructure be able to take care of and be able to deal with the number of vehicles and the number of individuals who will be evacuating? We know the answer to that already. And the answer is no, it will not. The infrastructure cannot, the roadways cannot, and I believe -- and we're here to learn today -- I'm not sure that there are enough facilities here either, in Cumberland County, to really handle the numbers of people who would be coming to this area.

Finally, one of the things that we want to do -- and I don't know if we're doing that today -- is for people to fully understand -- to describe, to simulate. I don't know that we're doing that today, though, are we?

MR. KELLY: In part.

ASSEMBLYMAN VAN DREW: Maybe in part we'll do that -- the full depth of what it's going to be like, of what an evacuation would be like, how pervasive a storm would be, what it would look like. And what was described to us in our last meetings -- I mean, if you could imagine a

20-foot wall of water and what that's going to do and the effect that it's going to have in our area.

This is serious business. You know, the health, safety, and welfare of the people is the primary responsibility of government, whether you are liberal, conservative, Republican, or Democrat. This is our responsibility as elected officials and as leaders, as a State, and as a county, and we need to do better and we need to do more. So hopefully we will come up with some good recommendations and solutions at the end of this process.

And once again, I thank all of you who are on the panel and all of you who are out there for being here.

With that, I would like to start with some testimony, unless there are members of the Task Force who would like to speak first. Does anybody have a desire? (no response) We're going to have an opportunity later. So we will start with -- maybe together -- both Freeholder/Director, my friend, and just a good man and a good leader in our county and in our region of the state, Freeholder/Director Douglas Rainear; as well as the Cumberland County Administrator, Ken Mecouch. I guess you would both come together.

D O U G L A S M. R A I N E A R: Yes.

ASSEMBLYMAN VAN DREW: Okay.

Douglas has promised me that if anything really bad happens that I could stay over at his house. (laughter) Is that true Douglas?

MR. RAINEAR: Absolutely, Assemblyman. Any time you need to stay over here, you're more than welcome.

ASSEMBLYMAN VAN DREW: Just give me a cell phone, bathroom, and use of the kitchen now and then -- I'm okay.

MR. RAINEAR: You're more than welcome.

Let me first of all -- and I have a very easy job today, quite frankly -- let me welcome you to Cumberland County and thank the Assemblyman for his great work, thank the members of the Task Force -- because indeed it is extremely important. And although we think we've done a commendable job in Cumberland County, certainly there's always room for improvement. But more importantly -- this Task Force that charges to coordinate the efforts amongst Cumberland, Salem, Gloucester, and the eight southern counties that the Assemblyman referred to.

ASSEMBLYMAN VAN DREW: Can't forget Ocean.

MR. RAINEAR: Ocean. I forgot some of the other ones. But certainly our neighbors, particularly to the south -- Atlantic and Cape May -- in the event of an emergency, certainly as the Assemblyman said, would be using Cumberland in a major capacity. So we really do need to have our ducks in order and our house prepared for visitors in the event of an emergency, and we certainly do not want to have a repeat of Katrina.

So let me thank you for your continued good work, Assemblyman.

Along with me today is our Administrator in Cumberland County, Ken Mecouch. I'll let Mr. Mecouch speak.

ASSEMBLYMAN VAN DREW: Thank you, Freeholder.

Thank you, Ken.

K E N M E C O U C H: I would also like to welcome the Task Force here on behalf of Doug, the other members of the Board of Chosen

Freeholders. We think you're doing very important work, knowing the vital place we will be playing if there ever is an evacuation; and knowing that, Assemblyman as you've said, there is probably not adequate points for people to gather at or prep, or roads, or everything to get the volumes out that we may face. But again, let me welcome everybody here. I hope it wasn't too hard to find us. I know we're a little off the beaten path at some points, but welcome. And anything we can do to help, we would offer our help.

ASSEMBLYMAN VAN DREW: Thank you very much.

Thank you both for being here.

With that, we're going to ask for Gary Szatkowski, from the National Weather Service, to come forward.

Mr. Szatkowski, thank you for being here. And Gary is going to discuss exactly what the trending is, what storms are looking like, what's going to happen off the coast of New Jersey, and I think along those lines, how much at risk and what our vulnerabilities are.

G A R Y S. S Z A T K O W S K I: Very good.

Thank you very much for having me today. Thank you to Assemblyman Van Drew, Assemblyman Rumpf, and other members of the Task Force.

Yes, basically what I was asked to do was to do a little bit of a what-if. I know that you had some information at the last meeting from one of my coworkers, Jim Eberwine. And so I was asked to kind of talk about what -- the what-if. If a Category 3 was to threaten New Jersey, what would it be like. And obviously, you know, you could spend a whole lot more time than I'm going to do today to go over that, but in about 30 or 35

PowerPoint slides just talk about what it would be like in the days immediately prior to it, briefly what it would be like when it happens, and immediately after. And then that's kind of getting out of our area of expertise. The National Weather Service's main thing is to forecast and to warn for weather. And so some of the infrastructure impacts, things like that -- I think we can have a very general feel, but you'd probably want to talk with other folks in terms of how long it would take the roads to get clear or electricity to be restored, etc. But we know it would be a long time, based on previous experience both with Katrina and even Hurricane Isabel back several years ago.

So with that I'll go ahead and proceed. Okay, again, the National Weather Service -- we're a Federal agency. Our mission statement -- I've kind of highlighted in bold here, a little bit, the ones that are most important for this. But we do both weather and water and climate forecasts and warnings. But obviously for hurricanes threatening, it's going to be those weather forecasts and warning. And the key thing when a hurricane is threatening is the protection of life or property. And that certainly is the heart of our mission.

Just very briefly about us: Our office is in Mt. Holly, New Jersey. We actually serve 34 counties in four states. We cover almost all of New Jersey, except the extreme northeast part of the state. Our Doppler radar is actually located over closer to Fort Dix, which is -- it's a coastal radar, and the goal is to put it on Federal property closer to the ocean to provide better oversight and warning for storms, whether it's a hurricane or nor'easter, or whatever that's going to be coming in from the ocean. And not a huge office -- 25 people, most of them meteorologists. We're a

24-by-7 operation, so we're always there. If you're watching TV late at night and that little crawl appears on the bottom of the screen with a beep, beep, beep, and there's a severe thunderstorm warning, that's us. You know, we're watching the weather and warning you when that happens.

So again, these are the questions I was given to try to take a swing at answering again. The basic question was, what if a Category 3 hurricane threatened New Jersey, what would happen? And the way I chose to answer that was to talk about just immediately prior to its arrival, basically from five days out to its arrival, and a little bit about immediately after the landfall. And then a little bit of what the future holds, in terms of what do we know based on the patterns we've seen, in terms of -- and this will touch a little bit on climate change and a few other things, with the focus on New Jersey.

So again, we'll just start off with the scenario, basically, five days out. The Weather Service now does a 5-day track forecast and has been doing that for a number of years. So basically, if a storm was out in the Atlantic and five days away, and by Day 5 it was bringing it close to the New Jersey shore, I probably would have been having some phone conversations with New Jersey Office of Emergency Management even before then. But for sure, if I wasn't calling them, they'd be calling me, and we'd be probably setting up some rounds of conference calls. This would probably also be a time where you would see some public interest growing in it due to media coverage. That, when it's -- by that time, if you're going to have a dot that's somewhere near the Jersey shore, five days out, that's probably going to be the lead story on a number of the evening newscasts, and so you'll certainly see public interest react to that.

ASSEMBLYMAN VAN DREW: Mr. Szatkowski, let me ask you a question, and I don't mean to interrupt you.

MR. SZATKOWSKI: Yes.

ASSEMBLYMAN VAN DREW: Predicting the storm, has the science-- I know it has gotten better over the years. How much better? How much more sure are you than, say, 10 years ago, 20 years ago? I mean, everybody always makes -- obviously, there's humor involved with predicting the weather. It's a difficult thing to do, especially along coastal areas. But I'm curious if that's become more of a sure thing and how much more sure over the years?

MR. SZATKOWSKI: Yes, that's a great question.

Up until about five years ago, the National Hurricane Center, which is part of the National Weather Service, did 3-day track forecasts. But at the request of a number of key partners -- including the Department of Defense, who wanted more time to move assets, particularly navy ships, out of harm's way if a hurricane was threatening -- the Hurricane Center did first some internal work for a year or two, just to kind of show it had skill, and then starting about five years ago, started with a 5-day track forecast. Just giving you some numbers off the top of my head: when it's one day out, the error is on the order of 70 or 80 miles, as far as the track versus the center of the storm; two days out, it's about a 150-mile error, on average; Day 3 is around 250 miles; and then it gets greater for Day 4 and 5. So Day 4 and 5 is used for mainly planning or contingency purposes of people who need a longer response time to prepare for stuff, or if folks just want to start getting prepared or something. Out at five days, I'm not expecting people to take a lot of action. But if that hurricane binder has

been sitting on the shelf and maybe has gathered a little bit of dust, I'm expecting it's getting pulled off at that point in time. People might be scheduling fuel deliveries to top off tanks at emergency facilities, whether it's medical, emergency management, or other, where they have back-up power. So it's the kind of thing where you can start to make some plans even out at five days. But certainly at five days, I wouldn't be betting the entire house on that the track will be right. We realize that we're going to be probably off on the order of several hundred miles, out that far.

ASSEMBLYMAN VAN DREW: How about three days out? Because many folks think it really would require three days for proper evacuation. I don't know if you can answer this question: If you were a betting man and you had a track that said it was going to make landfall in a vulnerable area three days out, what do you believe would be the percentage of error, or what the chances are that it would actually hit in that area?

MR. SZATKOWSKI: Again, about -- at that point, you know, you're probably looking at an average track error of around 250 miles or so. Now, the other thing to focus on is that a hurricane is not a point -- it's easier to track the point than focus on the eye of the storm. We'll see in this example, I picked a case using Hurricane Edouard from about 10 years ago. The area of hurricane-force winds with the storm, in this particular case -- and this would be pretty typical -- is larger than the State of New Jersey. So even if it hit Delaware, New Jersey would know it for sure. You know, a storm -- in this case, we'll talk about what happened if New Jersey took a direct hit. But if it hits Delaware, you're going to know it. There's also some slides in here about the '44 hurricane, which never made direct landfall on the Jersey shore, but actually made landfall up in New England

parallel to the Jersey coast, but caused tremendous damage. So you don't even need a direct hit. If we're off by some, the storm is not a point, it's a fairly -- in some cases, a fairly large mass. And if you get hit by any part of that, you're going to be dealing with some serious impacts, including the need to evacuate.

ASSEMBLYMAN VAN DREW: Last question, and then I'll let you go. How much better are we at it now than we were 50 years ago?

MR. SZATKOWSKI: Fifty years ago?

ASSEMBLYMAN VAN DREW: Yes.

MR. SZATKOWSKI: Order of magnitude better. Fifty years ago, the '44 hurricane came in with basically no warning. I mean, we-- The only way-- The most difficult scenario right now, the one I'm going to present right now, is one that's out there and we're tracking it. The most difficult scenario would be one that develops near the coast and intensifies. We saw that earlier this year with one of the hurricanes that formed in the Gulf of Mexico. It basically intensified and made landfall in 36 hours. It wouldn't happen this quick around here, but I could certainly see a scenario where something develops off the Florida coast and moves north and threatens New Jersey in two or three days time. So there are some scenarios where you are not going to get five days warning, and that's going to be where something springs up new.

ASSEMBLYMAN VAN DREW: Okay. Thank you.

MR. SZATKOWSKI: Okay. All right.

Moving on to the next slide, is just again-- On the last slide, the last bullet just said public experience with hurricanes is very limited. This just shows some of the population growth for two of the counties. I

really could have picked any of the coastal counties. This happens to be Cape May and Atlantic. And just really, I would say that the last real experience New Jersey had with a hurricane was 1944. And again, some folks might differ, but we're going to see some slides from '44 -- that's what I'm talking about when a hurricane impacts the state.

And so you can see, first of all, the population is doubled or tripled in these jurisdictions, and obviously there are very few folks at this point in time who still remember the '44 storm. I've met a few of them, and some of the stories are kind of hair-raising. But there's just not that many folks left around any more who can remember that event. And real-life experience is part of what we rely on when we're making decisions, including evacuation decisions, things like that.

Ninety-six hours prior to landfall: Again, now the hurricane track has stayed pretty consistent. It brings the storm onshore into New Jersey. Public concern is going to ramp up, I think, pretty significantly at that point. You're going to see the lines at the grocery store and the home improvement stores form at that point. There will be other information out there: In this case I've just mentioned, a private-sector weather company -- we saw this with Isabel, where there were different tracks of the storm. The Hurricane Center is the official government agency, the National Weather Service is the official government agency for hurricane track forecasting; but I'm not going to fool you and say that's the only one out there. And so, people are going to be listening to-- In this situation, 96 hours out, people are gathering a lot of information at this point in time to try to decide what decisions to make. They're going to use whatever information is available. There will be conflicting information out there. We'll work with the local

state emergency managers to make sure what the Weather Service expects is understood. But I think you need to understand that that's not going to be the only voice out there that's going to be giving you information.

And this is -- I mentioned earlier -- this is-- I've got a couple of shots of Hurricane Edouard. This was a time when the heart started to beat a little faster in New Jersey. This was back in 1996. And up until the point where those colors on the map -- and that's a shading of the intensity of the hurricane -- basically where the little hurricane symbol is, is where it's at, and the line off to the right is where it's been. And then the line pointing up to New Jersey is the forecast. And so basically, you're looking at something now -- we're saying, "A hurricane is going to strike." And this was a major hurricane. This was a Category 3 at the time this forecast was issued. And so that got a lot of people's attention. Now, the good news is that after a couple more forecasts the track shifted further East -- the forecast track did, which was also the actual track -- and Hurricane Edouard never had any major impact other than some swells along the Jersey shore. It didn't have any impact. But-- I see the emergency managers at the table are nodding their heads yes. If you see this, everyone's blood pressure goes up.

At 72 hours prior to landfall, the storm is forecast to make landfall, in this example, as a Category 3. Winds of 125 miles an hour will qualify at that. If that happened, that would be the greatest natural disaster in the history of New Jersey. I wouldn't even want to put a price tag on it, but it will beat everything else that's ever happened to the State of New Jersey in our history.

And decisions are now starting to be made. Earlier, you know, Assemblyman Van Drew, you asked about 72 hours out. You now start to need to make decisions at 72 hours, because you do need at least three days to start trying to do some things. And this is an example of what it would probably look like or could look like, and it's still sunny over in New Jersey. There's a hurricane out there, the track is pointed right at us, and you're asking people to think about evacuating or spend money to do this or that -- to start to open up shelters or board up buildings -- and it's still sunny outside and the storm is still well out there. But that's what you would be dealing with in 72 hours.

Now, 48 hours prior to landfall, if the track -- and again, this scenario of the track is still over us -- and so that's part of the thing, is that if that track is now-- This is Day 3, where people are getting kind of hammered with, "Okay, the storm's coming, the storm's coming." At that point, people are going to start folding, anyone who has been kind of resisting the temptation. At least some of them will start to fold their cards and say, "Okay, it's coming and we have to do something." And as you pointed out earlier, the road infrastructure, particularly if it's not in a controlled fashion-- You can tell people whether or not they should evacuate, but we've seen in a number of storms, including Hurricane Isabel, where people self-evacuate, and sometimes not from areas where they even necessarily need to be evacuating. So all those folks will be on the road, whether you've told them to evacuate or not; they could very well be there.

And then this is also one of the slides I mentioned earlier, this is another one -- another snapshot. This is Hurricane Edouard assuming it had proceeded on that forecast track -- again, this didn't happen in real life

-- but that red circle up there is the area of hurricane force winds. And just eyeballing it real quickly, you can see, compared to the State of New Jersey, that red circle is considerably bigger. So, basically, what that means is as that hurricane continues along the forecast track, everyone in New Jersey is going to get at least hurricane force winds. Those maximum winds, Category 3, will be right where the center makes landfall, so that will certainly be where the worst will be. But hurricane force winds, or 74 miles-an-hour or greater, that's going to take down a lot of stuff in a lot of places at some considerable distance from where it makes landfall.

So again, bigger hurricanes -- people tend to, and reasonably so, people tend to focus on how strong the hurricane is -- is it a Category 2 or a Category 3? Size does matter. One of the reasons why Katrina was so bad was it was a large hurricane. It was not just a strong hurricane, but physically covered a large space. That means a bigger storm surge and that means more wind damage. And so a large hurricane is to be feared even more.

Twenty-four hours out, at this point, hurricane warnings-- Hurricane warnings are typically issued 24 to 36 hours out. So at some point in time, you know, they would have been up. Evacuations would continue in some cases again, probably more now; the direct order of folks, with specific areas identified, based on the track of the storm. Certainly, if not by now -- this may be a little optimistic -- I think it would be reasonable that supplies are running out. Maybe before 24 hours out the bottled waters run out at the store, things like that.

So one of the other points is that, again, we talked earlier about: don't focus on the point of the storm. A hurricane is a circular thing,

and so some of those outer rain bands will be getting close to the Jersey shore within 24 hours prior to the center making landfall.

We've got a case here -- this is now using eastbound traffic on the 72 Causeway going onto LBI, but it works fine either way. This is a Summer weekend from a number of years ago, and the traffic is ramping up, trying to get onto the island. It's a Friday and very heavy rain bands of just some local thunderstorms, nothing to do with tropical, struck the area around the bridge, and the entryways around the bridge got inundated. And the traffic count drops from over 1,000 vehicles an hour to nothing. Basically, vehicles can't get through. So you've got to worry in a hurricane scenario -- if one of those outer rain bands hits you and hits in the right spot along any of the coastal communities, it may either temporarily or permanently interfere with your ability to move traffic. If a causeway or a bridge access is flooded, you're at that point not going to be moving any people out of harm's way.

So when a hurricane hits, first of all communications will fail. I know they'll be some isolated examples, but bottom line is, you're going to be in for the fog of war, weather-style, you know, and you just won't know directly what's happening, unless you're -- except what's physically occurring at your location. So anyone caught in the storm surge, that's a life-threatening situation and they need to be in a secure facility. One of the phrases we use is to "flee the surge and hide from the wind" -- that most people, if they're going to die, it's going to be from storm surge.

Again, as we saw from this, if a Category 3 makes landfall, the wind damage will extend far inland. It will go inland even past New Jersey, wherever this tracks to, whether it's Pennsylvania, New York, or New

England -- they would probably experience hurricane force winds also. Not as strong as what was experienced right where it made landfall, but the storm will hold together, when it's that strong, for a considerable period of time. There's always, with a landfall in a hurricane, the potential for major flooding inland. This is actually, as opposed to the wind damage or the storm surge, this is something we have some familiarity with. A lot of folks remember what happened with Hurricane Floyd and the tremendous inland flooding that occurred with that. So that is something, again, that you'll be dealing with. And we've had, unfortunately perhaps, you know, the most practice dealing with that, as opposed to some of these other impacts.

I'm kind of going through those piece by piece. Just a little bit about storm surge: a very simple animation of -- the Jersey shore has a relatively gentle slope off the Continental Shelf, which makes for great fishing going offshore; but the bad news is, it makes for bigger storm surges. So you get some pretty large numbers around here when you look at storm surge potential, and that's in part because of the physical condition of the coast and the waters offshore.

A couple slides here: This is where you basically run a scenario -- where you take a storm of certain strength and moving in a certain direction, and you bring it ashore. And those parallel lines basically are just saying, "Suppose it made landfall at each of those locations." This is kind of a worst-case scenario. This would probably never occur, where you had a maximum storm surge going on in both the Delaware Bay and up in the Raritan Bay. But if the storm struck in one area where it favored the Raritan Bay, that's what would happen up there. If it happened farther south, it would favor those locations down there. So you can see, again as

was commented earlier, this is a Category 3 and most of Cape May County is going under water at this point in this map. And you can see there's certain areas where it's particularly focused: up in the Raritan Bay area where it focuses in, because of the -- basically the angle of the shore there; and then also of the Delaware Bay, because of the narrowing of the Delaware Bay as you move further north.

And in respect to our hosts here today, I did this for Joe and Jim: This is the 1933 hurricane, which made landfall down in -- near Norfolk, and actually caused some damage to beachfront, boardwalks, piers, and stuff in New Jersey. But I've shifted it north. Now it's making landfall near Ocean City, Maryland, and moving up west of the Delaware Bay -- and that's that black line that's running up to the west of the Delaware Bay. And that's almost an ideal scenario. That's the ideal scenario for jamming storm surge up the Delaware Bay. This was a Category 2 hurricane, so a Category 3 would be worse. There's some pennants there to kind of show you how big the storm surge is in different locations, and you can see you're talking double digits in all cases, until you get all the way up close to Philadelphia; but you're looking at 16, 17 feet where the bay narrows.

You know, we have a nuclear power plant there. We have petrol chemical plants. You know, there's a lot of stuff that doesn't mix well with water, and there's going to be a lot of water around. This is just the actual rise in the sea level. There will be waves on top. Now, the waves on the Delaware Bay are not going to be as bad as they would be on the oceanfront; but nonetheless, you could easily have, even on the upper part of the Delaware Bay if you got that much surge, you could have eight-, 10-

foot waves because of the strong winds, you know, and the greater depth of the water which allows for bigger wave height.

Storm surge flooding: Again, this is actually one of the shots from Hurricane Isabel with some of the flooding that occurred on the Chesapeake Bay. This could very easily be Atlantic City, Asbury Park. You know, this is -- after the storms pass, the water is going to take a little time to recede, and, you know, you could very easily be looking at this kind of picture.

Barrier Islands will breach: This is again from Isabel. This is from down in North Carolina. And the shot on the left, which is black and white, is basically the way it was to begin with, and then the shot on the right is where the breach has occurred. And we'll see another -- we'll get another picture of this in a little bit.

And then inland flooding: Just a real brief bit about that, because again we have some familiarity with this. This is some pictures from Hurricane Floyd. And just again, you will see quite a bit of that along any of the major rivers where the heaviest rain falls. It could be along the Delaware; it could be along the Raritan, the Passaic. It really kind of depends on the track of the storm and just how high the water was to begin with before any rain started to fall.

A couple of slides here on the 1944 hurricane. This is an actual shot during the storm. And this again, I would argue, is our last real hurricane that hit New Jersey, even though, technically, it didn't make landfall. This is close enough. It meets in my book. And you get some real interesting -- these are from newspaper clippings. I really don't think that there was a 50-foot wave or a 40-foot wave, but I think it probably looked a

lot like a 40-foot or 50-foot wave. It was probably more like about a 10-, 20-foot wave. But the bottom line was, it was enough -- the damage was real. The boardwalks are destroyed, piers are gone. Wind gusts are measured, and that's probably more reliable. You've got wind gusts from 93 up to 115 miles an hour. You've got, on Long Beach Island -- I view it as plausible that a wave was big enough to actually, at the maximum storm surge, breach the island and wash across from one side to the other.

And then just a couple shots. This is Atlantic City Boardwalk where it hits Absecon Inlet, and you can see the damage. And again, this is the '44 storm. And this is Harvey Cedars after the '44 hurricane.

ASSEMBLYMAN VAN DREW: Is this the worse storm that hit New Jersey in recent--

MR. SZATKOWSKI: In recent, I would argue. I mean, there's '33, '38, and '44. I think the '44 was the worst. I think if you'll go back further, I think there was a storm that occurred back in the 1800s that's probably the benchmark storm. It kind of paralleled the Garden State Parkway, and I think that that, based on information from back then-- But obviously there was a lot less infrastructure at that time. But yes, within the past hundred years, this is the one I would use.

MR. SEVER: The '63 coastal did a lot of damage.

MR. SZATKOWSKI: Yes. Oh, yes. I'm talking about tropical systems. But, yes, I don't want to-- And we actually have got a slide coming up here showing the relative -- at Atlantic City, how high the surge was with each of these. But, yes, the focus is on tropical, but we've had the nor'easter. The Ash Wednesday storm is certainly a benchmark in many respects.

ASSEMBLYMAN VAN DREW: Is there any mathematical modeling that would predict when we're due? You know, you always hear these things: "We're due for a storm. We should be getting--" Is there any science to that?

MR. SZATKOWSKI: There are some people out there trying to do it. I don't think it's good science right now. I haven't seen them show any skill. So the only thing I would give you is climatology. And we'll talk a little bit about that in the climate change portion. But basically, we're overdue for a hurricane in this area, just in the sense that you're looking at statistics. That if you look historically over the long haul how often a hurricane would threaten our part of the world, this part of the mid-Atlantic coast, and then you look at how long we've gone, which is from -- since 1944, we're overdue in that respect. You know, we should be seeing storms of Category 1 or Category 2 frequency at least every 20, 30 years; and really, we're at 60-plus years and counting, as far as seeing-- Now, a Category 3, you've got a longer return rate. That may be only something you see every hundred years.

ASSEMBLYMAN VAN DREW: What cat would that be considered -- what category?

MR. SZATKOWSKI: Well, this made landfall as a Category 3, but those wind speeds are in the Category 2 range. Again, if the eye had made landfall-- I would say these are Category 2 hurricane impacts for New Jersey, because -- that's to go with the wind speed. The storm was a Category 3, but again, that center stayed just offshore.

And again, just a couple more shots, which I'll move through quickly, of some of the damage. That was a boardwalk. So again, a couple

of things here: One day after landfall, first of all, power is out. I mean, except for a few locations that have emergency back-up generators. Roads are going to be impassable due to the tree damage because of the strong winds. Injured are going to only be able to be moved by air. You just won't be able to move along roadways. Reports on TV news -- I'm assuming the TV folks will get their choppers in the air, and they'll probably show you something like this: This is actually a shot from Hatteras, just north of Hatteras Village, in North Carolina, from Hurricane Isabel. But this could easily be any one, or several locations, along the Jersey shore. If we have a Category 3 make landfall, it's going to breach the barrier islands; and probably, if it's a Cat 3, in more than one location. So you'll have separate issues. Even if you clear the road, there's not much use to that if a road leads you to this. Then you are going to have to get folks out by either air or boat.

Two days after landfall: Again, the roads are still going to be-- Basically, you'll be making some progress, but it's still going to be basically impassable. The weather, oftentimes after a hurricane passes, is warm and humid. And so it's not at all-- If you don't have power, if you don't have air conditioning, if you're injured, you're more vulnerable to the conditions at that point in time. So heat and humidity a lot of times is a problem to be dealt with. You're not going to have electric, so water and ice are going to be not available. And again, I've actually used that last bullet -- is from a utility company estimate for Long Island if a Cat 3 hit up there; and they're saying 30 days. And we saw with Isabel that it took over four weeks for some of the power to be restored in the Washington, D.C. area. So I think if you're looking for a real ballpark number -- but this is not my direct area

of expertise -- but if you're thinking how long should I be worried about not having power, think weeks. Do not think days.

This is the climate change portion. Just real quickly, where are we going from here? That top graph is just a temperature graph of New Jersey over the past 100 years. And the most important line there is that green trend line, which is going up. The bottom picture there is obviously an altered picture, just basically over a hurricane. And the question with climate change is not so much is it warming up or is the weather changing -- it is. And the question is more, just how much of that is caused by us? How much of our thumbprint is on the weather changes?

ASSEMBLYMAN VAN DREW: What do you think?

MR. SZATKOWSKI: Oh, we're having an impact. I support the Intergovernmental Panel on Climate Change results which came out. I'm going to talk about those a little bit. We're the main driver for climate change.

ASSEMBLYMAN VAN DREW: And you don't think it's part of a cyclical change?

MR. SZATKOWSKI: I think that there's other things going on. But if you're looking for the tall pole in the tent, it's human activity. There's other things going on.

This is sea level trend at Atlantic City. Again, the nice thing around here is that we've got some long-lived records because of the period of time that we've been here. And so we've got records going back almost a century now. Atlantic City -- the sea level has gone up 1.3 feet. That's the trend at Atlantic City.

So even if-- This is the water levels. You mentioned the '62 storm earlier, and that's fourth worst on this list. And then the September '44 hurricane is the second worst; and then, actually, the December '92 nor'easter is the worst one. Again, this is in Atlantic City. You can go to other points and see slight variations in this, but this is our history.

And the weather doesn't even have to get-- Setting aside the climate change business for a second, just because the ocean levels are higher, the same storm if we had it today would be worse. If you had the Ash Wednesday storm, the '62 storm, water levels would be a half foot higher along the coast, which would tie the all-time record. If you had the '44 hurricane today, it would be eight-tenths of a foot higher, at which would be a new record. So you don't even need the weather to be worse. Just because the water is starting at a higher level, you're going to have the flooding, and the areas you have to evacuate are going to be increased.

Hold on, I jumped -- there I go. This is a temperature variation. Again, to answer the question about, "Gee is it us, or is it something else?" this is where we've been for a thousand years, as best we can reconstruct it. And then the dot and the arrow shows where you are today. And then the best estimates we have right now in where we're going to be a hundred years from now is on the right-hand side. So you can see we're kind of-- Basically, at this point in time, we're kind of where no one -- we have never been in this area, you know, where we are now. Temperature, climate change is different than we've seen over the past 1,000 years. We're in a new place, and it's forecast to continue to change. And the reason why there is such spread on the right-hand side, in terms of how much it changes, is for a couple of reasons. One, the uncertainty

within the models. There's still certainly plenty of debate in the climate community regarding how to measure this. But the other thing is us -- the actions we take here, the people here today and everyone else around us. If we go to less greenhouse gas intensive operations, you come in toward the lower end of the scale, as opposed to if you continue to do things or if you expand your use and increase greenhouse gases. That's part of the reason why it's spread on the right. What we do today and over the next 20, 30 years will affect what we see 100 years from now.

So what does the future hold? Again, the Intergovernmental Panel on Climate Change: The threat for extreme precipitation events is increasing. It's very likely. We're seeing increased hurricane activity. The graphic here shows that from the mid-60s to the mid-90s we were kind of in a relative lull period. That's since 1995. It's increased. And so we are seeing more hurricanes in the last 10, 12 years than we've seen previously.

Really, the only discussion now going on that I can find in the climate community is whether this increase-- You asked about cycles before. There is-- Some climate researchers believe that this pattern in the Atlantic, as far as hurricanes are concerned, is cyclical in nature, and that after another 15 years or so we'll see it go back down to kind of like it was back in the '60s and '70s and '80s. There are others now who are arguing that, you know, the change is permanent, because it's driven by the climate change and the increase in temperature. Again, for those of you familiar with hurricanes, they thrive on warmer water, and if you're warming both the air and the water up, conditions will be more favorable for hurricanes. And without getting into any more science than that, that's the argument

being made for why some are saying now that it could be a permanent increase.

And I'll defer to Dr. Anthony Broccoli, who is a noted expert up at Rutgers regarding sea level change, taking into account what's happened in the past. We've already seen it go up 1.3 feet over 100 years, and so his best estimate from a presentation late last year was it will go up another two feet over the next hundred years. So again, there's no reason to think that that trend is going to go away. And again, his work suggests it's going to increase.

So, to see the future, I'll go back to the past. This is the 1944 hurricane. And again, you can see that there is a lady there who lost her recently purchased home when the storm swept it off the foundation and into the back bay at Holgate. She lost everything but the sweater and bag she took with her when she went to shelter in the mainland. She was shown standing at what was once a bus stop along Ocean Boulevard. This is from the New Jersey State Police. I'm asked this question frequently: You can see there's a white house in the background, and people ask me, "How many houses were there originally?" I haven't found anyone who could answer that question. All I say is, I don't think all those power lines are there just for one house. So I'm assuming that those power lines were there to supply a considerable number of houses, most of which have been removed because of the hurricane. So -- and that is the end.

ASSEMBLYMAN VAN DREW: Very good. Very, very good presentation.

Assemblyman Rumpf.

ASSEMBLYMAN RUMPF: One initial question. The actual storm event, from the time we first begin to feel the impact of the hurricane until it's beyond us, how long will that last with your typical Category 2, Category 3?

MR. SZATKOWSKI: If there is any good news, it's in that area. If the storms typically-- The bad news is that it has to do with storm speed, and so the bad news is that they could be moving pretty fast when they come up here, which may collapse some of your decision times -- maybe even less time to react. But the good news is that, when they come through here a lot of times they're moving 20, 30 40 -- in some cases, even 50 miles an hour -- based on some of the historical records. And so it would -- for those along the coast, they measure things a lot of times in tide cycles. I think the impact of a hurricane would last one to two tide cycles, and then it would be out of here. And so the good news is that it will hit-- The bad news is it will hit quick, the good news it will leave quick also.

ASSEMBLYMAN RUMPF: So we have to experience approximately one day of actual hurricane-type weather?

MR. SZATKOWSKI: Yes. I would tell you that it could easily be closer to 24 hours from the time-- Really, again, folks in the emergency management business would know better -- could speak more -- better than I. But my understanding is that a lot of their activities get curtailed once you start to get to tropical storm-force winds -- which is gale force, and when it's not a hurricane -- and that's 39 miles an hour. So you could easily have, you know, 24 hours worth of winds that high, which means you've got to -- at that point in time, you can't be moving around outside. You know, you've got to basically shelter where you're at.

ASSEMBLYMAN RUMPF: Now, with Katrina down in Louisiana, one of the big problems was the collapse of the levies. We don't necessarily face that same kind of problem, but what along those lines do you see occurring after the passage of the hurricane that would demand our most full attention?

MR. SZATKOWSKI: Well, again, the good news is that we do not have large areas that are below sea level, as New Orleans does. And so, I mean, the water will recede. It probably will recede slower than it came in, and so you may have some areas there that do take several days to kind of drain out, whether it's back bays or depending on where it hits. If it hits up north, areas along -- where there's canals, along the D&R Canal, that may take a while for some of that area where the slope's not real, where it's kind of a gentle sloping area. It may take several days, several tide cycles for the water to kind of get out of there. But the bottom line is that, again yes, we don't have -- the water will leave, as opposed to fill up like it did in New Orleans.

ASSEMBLYMAN RUMPF: All right. So essentially we have one day of the hurricane force winds and rain, and perhaps another two days of the flooding before it recedes to the point where you can get out there and start taking the trees out of the roads and repairing the lines.

MR. SZATKOWSKI: Right.

ASSEMBLYMAN RUMPF: Okay.

Thank you.

ASSEMBLYMAN VAN DREW: Mr. Jones.

MR. JONES: The only thing to throw out there, which -- and Gary did a great job as he usually does, even on our conference calls -- but

like he said, one of the concerns that we have as emergency managers -- and I think my colleagues here are going to echo it -- is, like he said, the storms tend to accelerate, which cuts down our decision time. And when you saw that the winds, and the arc, and everything else-- Why aren't we doing it? Why aren't we evacuating? Why aren't we-- If we were to call an evacuation when that storm is still off of Florida, none of us would be sitting here. We wouldn't have jobs.

But the concern is: When we do have to make that decision, we're going into that decision already behind the 8 ball, so to speak. Because we're not going to have the allowable time that we know it's going to take to do the evacuations.

One of the other things is: With the amount of rain that's going to fall with that-- We just experienced that in Atlantic County, as did Cumberland and several of the other counties, with the five to seven inches of rain that fell over these rivers, where we had the rivers that -- all that amount of water dumping into those rivers -- the rivers at different points. We had dam breaches, we had roadways wash out. I mean, the inland issue, too, is something else that we're going to have to contend with -- trying to get resources through those affected inland communities, let alone trying to get resources to the coastal communities.

Trying to get the people out when we have to get them out-- As I sit here, that is, again-- My greatest concern is, I don't think we're going to have the time necessary to get everybody out. And that is a concern.

ASSEMBLYMAN VAN DREW: I think you're right.

Mr. Rupert.

MR. RUPERT: I have to agree with Vince on that. A lot of times we're asked -- as these things are potentially approaching -- "Are you going to call an evacuation? I'm not comfortable staying here." "Well, if you're not comfortable, go ahead and leave." I tell folks there is no prize for being the last person to leave. And I generally try to convince people, especially people who don't live there -- renters and so forth -- "If you're not comfortable, go home." We also try to convince people that, "This is for real, and we don't want to drown you."

I think again our colleagues will agree with us that you don't want to order an evacuation and have no need for it afterwards. That's the first thing. Because nobody is ever going to believe you again. The second thing is: you don't want to not have an evacuation and drown half of your population. And it's a very difficult decision to make, as to when you're going to do this. And certainly, I have found that, in working with the National Weather Service and the National Hurricane Center, we've been able to make good, solid decisions based on the information they've provided. And it's always worked out very well for us.

ASSEMBLYMAN VAN DREW: Okay. Thank you.

I believe that is the ultimate issue: when to call it. And, as Wayne said, if you call it too early and it doesn't happen, people aren't going to believe you in the future. And you're going to be even more hesitant to call it in the future. If you call it too late, you're certainly going to have problems with the evacuation. I mean, I think if you called it perfectly, and had all the time you needed, hypothetically, by any model, we're still going to have serious problems because of the infrastructure shortfalls that we have.

Mr. Sever.

MR. SEVER: I'm in agreement with both Vince and Wayne on this whole thing. Because if we are in a situation-- And when we're looking at 72 hours, we're looking three days out. And you're looking, basically, at what you're seeing right there. (indicating) Isn't it? That would be off Florida. That would be approximately 72 hours.

MR. SZATKOWSKI: Yes, that's Hurricane Isabel, and that's about 60 hours before it hit North Carolina. And you have to give it another 12 hours or so, if it's heading here, yes.

MR. SEVER: So we're in that situation -- we're in that window -- where we have to make that decision, and it's a very difficult decision.

We talk about this in our building. And, daily, it's a conversation. What would we do if it's three days out, and what kind of recommendations would we make to medical facilities, nursing homes, and places like that? And how often would they heed our warning if we did it once, and we had to turn around a second time later in the Summer or Fall, and say, "You're going to have to do this a second time" -- because of the cost involved, and difficulty of moving patients, and things like that. So this is a very difficult call for us.

And I'm in agreement with the two other fellows from the other counties. That's our worst-case scenario -- is making that decision on what to do and when to do it.

But I can give the Weather Service accolades. You've always been 100 percent supportive of us. Any time we need information, they're on the phone with us or we're on with them, back and forth. And it's a great rapport.

MR. SZATKOWSKI: Thank you.

ASSEMBLYMAN VAN DREW: Thank you.

Mr. Zach.

MR. ZACH: Well, I concur.

And also, I think one of our biggest problems is convincing the general public that there is significant danger out there. I think one of the things we face as emergency managers is-- Fortunately, we haven't been impacted by very many serious storms or hurricanes. And the general public, I believe in most instances, take it fairly lightly -- that there is nothing to worry about, we haven't had a hurricane in *X* number of years.

And I think one of the challenges we face, both for hurricanes, and significant weather, or any type of major emergency or disaster, is making sure the general public is prepared. Because there are going to be a significant number of people, because of the density of the population of New Jersey -- they're just not going to get out. As Vince said, at some point in time, you're putting more people in harm's way by calling for an evacuation than you do if you shelter in place. The challenge there is making sure the general public is prepared to shelter in place and have their -- what we now know should be at least a week's supply of water, and ice, and nonperishable food, and being able to sustain themselves in their house.

And I know the other challenge is going to be -- and it was mentioned during the presentation -- is, when the power goes out, it's not going to be out for two hours, as people kind of have come to expect now. The power is going to be out for days, weeks, or longer. And sustaining the general public's needs is going to be a real challenge.

ASSEMBLYMAN VAN DREW: Right. Thank you.

One quick question: tornados. I've heard discussions of -- if you get this kind of storm, that inland-- Am I correct, or is that--

MR. SZATKOWSKI: Yes, you're correct.

I mean, tornados do occur with land-falling hurricanes. And what you'll see-- Obviously, a hurricane is going to produce significant wind damage. But what you'll see is some even more intense damage tracks in it. It's not unusual for a land-falling hurricane to produce several dozen tornados when it makes landfall -- sometimes less, but that's certainly not unheard of.

So it just makes matters worse. I mean, there's wind damage everywhere near the center of the storm if it's a Category 3. But there's even more structures that could actually ride out a Category 3 hurricane, could then be damaged or destroyed by the tornado. So it just makes a bad situation even worse.

ASSEMBLYMAN VAN DREW: That was a very good presentation. And we thank you for being here.

MR. SZATKOWSKI: Thank you.

ASSEMBLYMAN VAN DREW: I'm going to ask you to stay -- if there's any other future questions.

We have a little bit more to do.

Joe has been kind enough to show us some old-fashioned hospitality here, and we have some nourishment for everybody, correct? (affirmative response) So we're going to take no more than a 10-minute break, and then we will resume.

(RECESS)

AFTER RECESS:

ASSEMBLYMAN VAN DREW: We will reconvene our meeting.

Just so everyone knows, Assemblyman Rumpf has promised all those who will attend the meeting in his district a seafood festival extraordinaire. (laughter)

Thank you, Assemblyman.

ASSEMBLYMAN RUMPF: Well, it is a breakfast meeting.

ASSEMBLYMAN VAN DREW: Ah, then it will be-- We could still do it. There could be a little lobster in the eggs at breakfast, right?

ASSEMBLYMAN RUMPF: I'll have the Sheriff work on it.

ASSEMBLYMAN VAN DREW: All right. Very good.

Where are we? Let me see. I've got too much stuff here.

Here we go. We are going to have Jim come up. And he is from the Cumberland County Office of Emergency Management.

He is up already.

Thank you for being here. And it is yours.

J A M E S P. M A N S K I: Thank you.

Good afternoon.

Briefly, today, I'd like to just go over Cumberland County's concerns -- some of Cumberland County's concerns with the evacuation, primarily with Cape May County coming through our county; and with

Atlantic County having to go through, somewhat, our county, and then also north of us, which could impact Cape May County's evacuation.

(Begin PowerPoint presentation) Here is our county's surge map. This was generated from the Army Corps of Engineer's data. And like Gary, when he showed the worst-case scenario, this would be our worst-case scenario for Cumberland County. This goes up to a Category 3 storm. The green areas would be the surge areas, the brown areas would be from heavy rainfall.

What we would ask our residents within the green area or the brown area -- those are the areas that we would want to evacuate. And the white areas would be where they would hide from wind.

What I did was, I ran a population study. And that -- using the census tracts, the highlighted -- the darker green areas is where I was able to pull the population area for this -- for that area. It pretty much matched the storm surge area. That's telling us we have about 18,000 people in those areas that we would potentially ask to evacuate if conditions warranted -- 6,000 households. And then if you look at that study area income, we have about a third of our population that would have a household income of under $25,000. The reason why that's important: If you take a look at the people that would seek shelter-- I guess the national average is around 10 to 20 percent. The lower the economics, the higher the percentages of people that would use public emergency shelter. And then also in that study area, we have about a thousand vehicles here -- a thousand homes without vehicles. So that would be an area that we would have to provide transportation for those evacuees.

Cumberland County would like this Task Force to look at ways of moving the people further north -- Cape May County and Atlantic County, out of Cumberland County. Because we are going to be dealing with our own concerns. And like Gary said earlier, if a storm would hit Cape May County, the effects would still hit Cumberland County, with a one- to two-day track area of over 50 miles. You drive 50 miles, that's a pretty far distance in New Jersey. So if it would hit Cape May -- or predicted to hit Cape May County -- you shift it 50 miles, and then we're taking the brunt of the storm. So we would have to take the same precautions as Cape May and Atlantic County would be taking.

One of the areas that I see that we could possibly move additional people -- that I haven't seen in the plans -- would be where 295 crosses over 42. If we could possibly look at the idea of limiting access from 295 onto 42 northbound -- it backs up there every morning.

ASSEMBLYMAN VAN DREW: It sure does.

MR. MANSKI: So maybe if we keep people on 295, that opens one extra lane. You don't have the crisscrossing traffic, and you're using an extra lane for 42 to get off on 295.

And what I'm thinking is, we have a couple extra tricks that we could pull out if we start seeing traffic backing up in different areas -- that we know that, okay, if this area is backing up, or we didn't plan for this area to back up, we have another plan to -- what it would take to start moving people elsewhere.

This is 55 and 42. There might be a way to move additional people through these intersections. And I'd like the transportation experts to take a look at what would be involved, as far as moving people through

this area. Like I said, this backs up every morning. And that's without a reversal on the Atlantic City Expressway and 347-47.

We have four bridges to get across, the Delaware Memorial -- down south. Currently, I think we're relying on the Walt Whitman Bridge and the Ben Franklin Bridge. But we may want to look at having plans utilizing 322 and Route 40, and take advantage of the Commodore Barry Bridge and the Delaware Memorial Bridge a little bit more. The theme is that we keep the people going to their final destination, rather than house them in New Jersey, if there's a lot of people who have to get to Philly and points west.

We need to take a look at fuel supplies so that we can keep people going. And I know that we don't try and direct people to private establishments. But in an emergency, that might be one of the things-- We might want to keep certain fuel centers supplied of fuel, rather than have people running out along the roads, or having fuel tankers trying to deliver fuel right on the roadway. So if -- as the evacuation from Cape May is taking place, we don't have people scattered throughout the county looking for fuel -- we get them easy-on, easy-off.

And we have to keep in mind that the better we keep this route open, we can keep the traffic confined to an area rather than having them spread out and finding alternate routes that they think would be quicker. So if we could keep 55 open all the way up to the bridges, hopefully they would not disperse throughout the county.

And just for review, here (indicating) is where the reverse lane ends for 47-347. It's at the beginning of 55, right here. And then it starts at Cape May County, right at the end of 83 and 47.

So that was just a quick overview of what we had wanted to look at. I think Joe would attest to our shelter capability in the county. We have very limited shelter capability, and we-- If you take a look at the shelters that we do have -- as far as back-up power -- we really have very limited back-up power in our shelters. One of the things I would like to see come out of this committee is possibly requiring that when a school is built with State money or Federal money, that a certain percentage -- 1 or 2 percent of it -- is used for back-up power. I think half our tax money goes to the school systems. Why can't we use that money to protect our citizens in the time of a disaster and have a place for them to go to?

ASSEMBLYMAN VAN DREW: Thank you very much.

A couple of things: Those are good recommendations. If you could put those recommendations in the form of a written report -- written recommendations to us -- especially the 295 area, the 42 area, the lane reversals, number one. Secondly, if you could just give us some sort of a general sense -- and I know it may be hard to pin down a little bit -- of what you think your shelter capacity is. And nobody is going to hold you to it. We're not trying to attempt to find fault here, but just get a little bit of a general sense of where we are with that, so when we do make recommendations they make some sense.

What I'm going to ask the Task Force to do is start thinking about, now -- and do, as we move forward with this -- is, essentially, short-term and long-term recommendations. The long-term recommendations are going to be more difficult. We all know that we need some infrastructure improvements in Long Beach Island. It's not going to be easy to do. We all know that we need infrastructure improvements on Route 47. And, again,

we need the continuation of Route 55. That's very costly, not going to be easy to do. And we're going to make those recommendations and discuss those transportation issues.

But I also would like this Task Force to have a timely, for lack of a better term, *doable* list of recommendations and ideas that actually can be accomplished in the shorter term that make sense, quite frankly that might not have a huge price tag associated with them, but that could make certain situations better.

For example, in the Cape May region they've been discussing not only lane reversals on Route 47, they've been discussing lane reversals also on the Garden State Parkway in order for everybody to go north. And I still don't know how good or bad that is, by the way, because I think it's going to all jam up when you go further north. So I don't know that that's such an amazing idea. But I also know that-- I believe the New Jersey Institute of Technology did some studies and some work on lane reversals on 47 and found that it's not going to be all that effective and that we have real issues there.

So I don't know-- We only have-- We're bounded by the given parameters that we have, because there's not that much we can do. But you brought up an interesting idea about 42. I don't know if anybody has really discussed that. We'd be interested in those recommendations. We'd like to know what your sheltering capacity is, as well.

If there are some questions--

Yes, Assemblyman.

ASSEMBLYMAN RUMPF: I just have a few pertaining to Cumberland County, if you don't mind -- just to educate myself.

You have the State prison in the Bridgeton area. Is that in a Zone A region?

MR. MANSKI: No, I think the State prison in Bridgeton is okay.

ASSEMBLYMAN RUMPF: Okay.

MR. MANSKI: It's the prisons that are located in the southern part, in Morris River Township. They do have evacuation plans. In fact, they move some of those people -- or prisoners -- to Bridgeton Prison.

ASSEMBLYMAN RUMPF: They do.

MR. MANSKI: And they're aware of the reverse lane and how soon they have to move their people out before our evacuation starts taking place.

ASSEMBLYMAN RUMPF: What is, generally speaking, the prison populous that we're talking about that would have to be moved?

ASSEMBLYMAN VAN DREW: When you think of-- South Woods would be fine. You've got Southern State and you have Bayside. I mean, there are thousands.

ASSEMBLYMAN RUMPF: Right.

MR. SEVER: You still have to factor in a Federal facility, and you have to factor in a county jail and a county juvenile detention center in it. And it's based on the category of the storm. FCI Fairton can withstand 100-mile-an-hour sustained wind. That's what it's built for. But then you start factoring in power losses, and utility service problems, and personnel problems -- getting in and out of the facility to work. We could have major, major problems.

ASSEMBLYMAN VAN DREW: Which is a very--

Assemblyman, that's a good point.

If we could, at our next -- at some point-- We would have been good, actually today, to have the DOC, the Department of Corrections, address those issues. Because it's a real -- it's particularly a Cumberland County issue. One out of every four incarcerated individuals in this state are incarcerated in this county. So, I mean, it is a real issue. And it's certainly a dangerous issue.

MR. MANSKI: And we have been working with them. They do have plans in place. So they are aware of our--

ASSEMBLYMAN VAN DREW: Could you describe them just briefly? Would most of them go to Bridgeton? Is there enough room?

MR. SEVER: The ones that would go to Bridgeton, out of the ones in Morris River Township -- the prisons in Morris River -- would be the ones that are still in the trailers -- the trailer units that are interlocked.

ASSEMBLYMAN VAN DREW: Yes, I'm familiar.

MR. SEVER: You're familiar with that.

ASSEMBLYMAN VAN DREW: Very familiar.

MR. SEVER: They would be the ones that would be moved into the facility in Bridgeton. The other facility there that's considered a medium -- the one with the wall -- that one would probably withstand a storm. But it's the Bayside area, the Southern State area, which are the least structurally sound facilities to handle a storm. They would be the ones that would have to evacuate.

ASSEMBLYMAN VAN DREW: Okay.

MR. SEVER: They are the issue.

MR. MANSKI: And we do not have their-- I mean, we made them aware of our plans so that they could write their plans to deal with the situation. I mean, we don't know the nuts and bolts of their plan.

ASSEMBLYMAN VAN DREW: Okay. Yes, we would like to know-- I know-- They don't have to go into every little detail, but certainly I'm curious what they would do.

That's a good point.

MR. RUPERT: Do you know at what point in the progress of the storm they would begin to evacuate?

MR. MANSKI: I believe it is at least 12 hours before we would start our reverse lane. So the reverse lane would start about 24 hours prior. So they're looking around 36 hours. And that's just off the top of my head. I mean, I could be off a few hours.

MR. SEVER: And they often use the same resources that we have written in our plan. They use the department of -- or they use public transportation -- New Jersey TRANSIT buses -- along with our own buses, to move the prisoners. So when you're reading a plan that states that *X* municipality or county will use 15 public-service buses-- Well, those same buses may be committed to moving prisoners from prisons also. So it's an overlapping problem that we have.

ASSEMBLYMAN RUMPF: It sure is. And what comes first, the nursing home or the prison block? It's a good question.

Another--

ASSEMBLYMAN VAN DREW: Especially with the volume we have here. It's a very good point.

ASSEMBLYMAN RUMPF: Another follow-up question pertaining to Cumberland County: I know the plans for the race track are progressing rapidly. Are there any plans to implement any additional temporary housing there that could be taken advantage of?

MR. MANSKI: Not that I'm aware of.

ASSEMBLYMAN VAN DREW: There's going to--

Assemblyman, with the race track -- which has been wonderful. One of the issues that we're going to have is infrastructure, in general. And I know that, just speaking with the Mayor of Millville and some of the elected officials there, as well as the engineers, they are going to be coming to the county and to the State for some major infrastructure improvements, now that we've gotten through that part. Because there are certainly going to be some traffic issues when there isn't -- when there's not an emergency, much less if you had a full crowd there. Certainly, that presents some challenges too. We don't have the answers to that yet.

MR. MANSKI: Right. That's correct.

ASSEMBLYMAN RUMPF: I don't see that as being a super bowl -- superdome repository, as in New Orleans. But perhaps--

ASSEMBLYMAN VAN DREW: Well, tens of thousands of people can still be there at a given time.

ASSEMBLYMAN RUMPF: Sure.

As a weigh station at the very least, if there were some--

MR. MANSKI: And I guess that was one of my concerns.

I think, in the onset, we should start moving people further north, and then possibly using Cumberland County as a last resort-type shelter -- that the storm is bearing down on us, we ran into traffic problems,

and now we develop some shelters where people can come in and at least get out of the storm and ride the storm out for the 12-hour period -- 12- to 24-hour period -- rather than having us be the depository for people to be here to ride the storm out and stay here until their home is ready in Cape May. That's why I would prefer we move people further north earlier on and then save us for the last resort.

ASSEMBLYMAN RUMPF: One last question, if I may: In terms of Cumberland County's perspective, how well-equipped are you, in terms of educating your public and the public that's going to be passing through -- everything from the coastal evacuation signs to the ability for people to know where they're going? And I'm not saying that just because I got lost on the way here today. (laughter) But I think it's a real issue. You have a lot of roads all throughout Cumberland County which could take you in any number of directions.

MR. MANSKI: I think one of the things in Cumberland County's favor is that we have -- we still have the small-town flavor in our areas. We have very good small emergency management offices along the bay shore. And they're in pretty good contact with their residents. And the fire departments work well with them and have plans for route alerting and sort of letting the residents know.

But I agree with you on the-- That was my concern. If we don't keep 55 open, and we have the evacuees getting off of 55, I do believe they would get lost and cause a nightmare, not only for the evacuation people not familiar with the area, but also our local residents.

ASSEMBLYMAN VAN DREW: Jim, I hear you, but I think you're going to be stuck with them anyhow. They're going to be here.

MR. MANSKI: I know they're going to be here. I guess it's at what level that they're going to be here.

And I also look at-- In talking to the hospital-- They're looking at our hospital to depopulate before the storm so that they could take on added people. And that causes a series of other problems as they do that. I kind of look at ours-- We're in a unique position where we could be a great response set-up, so that we could go back in and help the counties next to us, rather than being the sheltering area.

MR. SEVER: One of our issues too is that a number of the shelters that we have identified either do not have emergency generator capability, or they have very limited emergency generator capability. The other problem is, quite a few of them are located quite a distance off of Route 55. For them to be able to -- the people to transverse that area -- either law enforcement agencies, or fire service, or someone probably would have to put up some kind of traffic pattern for them to be able to find those locations. And that's been a concern of ours also -- to be able to help the people find those facilities. And that's why we've often discussed, with a number of agencies, that maybe we should consider starting in Camden and Gloucester counties and filling shelters, and working back our way, if it's a possibility; announcing shelters further inland than doing us immediately at the beginning. Because we could be vulnerable -- as vulnerable as Cape May by the pattern of the storm.

ASSEMBLYMAN VAN DREW: What does the plan actually call for now? How does it work now?

MR. SEVER: Basically, if the plan is called for and we do the evacuation, we work with the American Red Cross, the National Weather

Service, and the State OEM, and make decisions on what shelters we want to open at that time. They're identified--

ASSEMBLYMAN VAN DREW: For example, if there was a storm--

MR. SEVER: One thing we don't do is-- We know what shelters we would open, but we do not provide that to the general public until the time of the emergency. And one of our philosophies behind that is, we don't -- either between the OEM and the American Red Cross -- have the staff to be able to open every one of the identified shelters. So what we would do is say to the general public-- There would be a sign along the highway, message boards that the Department of Transportation has, "There's a shelter at exit whatever," and they could go off to a shelter.

ASSEMBLYMAN VAN DREW: Let me ask you this question though: If a storm is going to hit, there's a communication level that occurs with Frank McCall and you all.

MR. SEVER: Right.

ASSEMBLYMAN VAN DREW: And there's a point where you pull the trigger and say, "Okay. We're opening shelters."

MR. SEVER: Yes.

ASSEMBLYMAN VAN DREW: And you have some sense of where those shelters are now, even though there are not enough.

MR. SEVER: Right.

ASSEMBLYMAN VAN DREW: And they do as well, and they direct people that way.

I mean, as it is now, people would be directed in Cumberland County though?

MR. SEVER: It could be Cumberland or Gloucester.

ASSEMBLYMAN VAN DREW: You're saying to change that. I understand, but--

MR. SEVER: It could be either one.

MR. MANSKI: They looked at-- I mean, we have a few high schools along the route that we would utilize. But one of our biggest shelters that we have was up in Gloucester County, at Rowen -- and utilizing that. Now, I don't know where that-- That's in flux.

ASSEMBLYMAN VAN DREW: Let me ask this question in a more-- If there was a big storm tomorrow, do you all -- does Cape May, Atlantic, Cumberland, everybody have a sense of where they would shelter all the people that would have to leave?

MR. SEVER: Well, not all the people. We would shelter as many people as possible.

MR. JONES: Do we have-- I think--

Assemblyman, do we have the locations identified? Yes. The problem is going to be -- is the Red Cross relies heavily on volunteers to staff these shelters. If these volunteers were in that affected area, and they themselves became evacuees, we may only be able to open one or two good shelters that we know we could properly staff, manage. This is a-- It's not just a couple-county -- this is a huge, regional issue with the sheltering. Because we honestly don't believe we're going to have the staff to be able to effectively, and properly, and safely manage these shelters. Because, for instance, Joe and I share the same chapter -- Red Cross chapter. So my volunteers are his volunteers, his volunteers are my volunteers. Well, that's going to become a problem if we're evacuating them and they, themselves,

become evacuees. They can pull from other chapters, but we're going to identify them out of harm's way. We're not going to know where that harm's way is, or that barrier, until we have conference calls with the Weather Service and they say, "Our best guess is: start thinking 20 miles out, 30 miles out, might be that safe zone." Well, then we're going to have to look at that map and go, "All right, 30 miles out. Where are the shelters 30 miles out?" It may be just the last few high schools -- and I'll use that example -- in Gloucester and Camden County. That's where we're going to end up having to send these people.

Communication is there. I know Frank is going to pick up the phone and call me. I know when he's going to go; he's going to know what I'm going to be doing. And Joe is going to know, and everybody up and down is going to know who is going, when they're going, what towns are going first, where we're sending them.

But even-- Getting back to the jails: We met with-- We had-- The seven of us got together on our own and identified, "This jail is an issue." We met with all the county jails, the State facilities, just to brainstorm about, "What are you going to do with this segment of population that we don't want out on the street if an evacuation occurs?"

Again, the same resources-- What we did-- We asked them to perhaps consider -- which they did, and it worked out well -- was -- use that same model that the hospitals use -- that surge capacity. I know, in Atlantic County, our county jail-- We looked at worst-case scenario and, in an emergency, "How many extra inmates could we take from Bridgeton, or could we take from here?" So we may be able to go to-- Bridgeton might be able to send 30 inmates to Atlantic County, leaving 30 spots now clear

in Bridgeton, so now Southern Staters could go to-- So they were looking at, amongst themselves, coming up with that game plan, working collectively together to move -- start moving -- discharging inmates, so to speak, as the hospitals do, and then moving them to other facilities to gain space in some of those other jails. And this went-- They even looked at DOC and said, "You know, we may be taking these people up and out of the state -- some of these inmates. They actually may have to move up out of the state to make room." So it's a huge, huge, regional issue when you start talking about moving different populations.

MR. SEVER: You could turn and look at the-- We're working, now, with the hospital, discussing the possibility-- When they reduce their population to anticipate the surge coming in from the shore -- from shore-related hospitals that may have critical patients that they have to move inland-- The shore facilities are going to depopulate their hospitals, and they're going to send those people home, to home care. Those individuals are now under home-care management, which would be managed either by an LPN or an RN. Then, when they call for shelter-- Say Frank calls -- Frank McCall calls for shelter, say, in Wildwood, and he has 15 patients in there -- are on home care, because they had been released from the hospital but now they're on home care-- Now they're going to have to evacuate into Cumberland, or Salem, or Gloucester counties. Now we're bringing a whole other set of population that may need special -- what we call *special needs assistance*. Because now we may be bringing in people with health issues into a general shelter that will need special attention.

So when we start talking about doing evacuations, we think about the tourist population and general population. But you start

breaking out all the special groups within that population -- your group homes. That's another population of people that have to be cared for. Do they go home to their families? Do they come into a shelter? All those things we are all now trying to analyze. And hopefully the gentlemen here from the State will be able to answer some of that for us.

MR. MANSKI: And with the hospitals -- that was one of the issues that we brought up -- was they could be releasing people from our hospital and sending them into an area -- a green area -- where we're going to be calling for an evacuation, or-- We're in an area that, if that storm just shifts a little bit, we're getting hit rather than Cape May. And yet we moved people into our area. And I would just hate to see that looked upon as-- We're not safe from the hurricane because we're in from the ocean. We're still along the bay.

MR. JONES: It's kind of a double-edged sword for Cumberland. It really is.

ASSEMBLYMAN VAN DREW: Got it, because you're getting both the evacuees and the possibility of getting hit by the storm.

MR. JONES: And the possibility they, themselves, may have to move, yes.

MR. MANSKI: And like I said, 50 to 100 miles is the whole state.

ASSEMBLYMAN VAN DREW: Anybody else?

Assemblyman, did you have anything?

ASSEMBLYMAN RUMPF: No.

ASSEMBLYMAN VAN DREW: Good.

Thank you very much.

MR. MANSKI: You're welcome.

ASSEMBLYMAN VAN DREW: Okay. And now, from our last-- We have Anthony Innes and William Schaffer, the New Jersey Department of Human Services.

A N T H O N Y G. I N N E S: I've provided each of the members a copy of my statement. Would you like me to read it anyway, just to enter it into the record?

ASSEMBLYMAN VAN DREW: Actually, I'm sorry, repeat that please.

MR. INNES: I've provided each of the members of the Task Force with a copy of my testimony.

ASSEMBLYMAN VAN DREW: No, you don't need to read that. That's fine. We have that, and we'll review that. But if you could just--

MR. INNES: In reviewing your mission for the Task Force, we wanted to let you know who was actually responsible for sheltering in the State of New Jersey.

In order to know what happens at -- in New Jersey, you have to understand that when a storm first hits -- as you probably are well aware -- it is a local emergency. Then the emergency -- the local government cannot provide assistance. Then it moves up to the county, then it moves up to the State. At the State level, we would be sitting -- we, the Department of Human Services -- would be sitting in the OEM, the ROIC -- the Regional Operations and Information Center -- with our partners from the Red Cross, with our partners from the Salvation Army, coordinating sheltering aspects for New Jersey. We at the Department of Human Services do not

actually provide sheltering services. We coordinate with the Red Cross, Salvation Army, and the others.

Currently what we're doing is mainly through Bill's side of the office. We've gone out and contacted each of the county's emergency management offices and received data on the number of beds that they have identified as being available for evacuees during a disaster. And that's that slide you see right there. For Cumberland County, it's just under 7,000 beds that we have identified.

W I L L I A M A. S C H A F F E R: These beds are reduced by the SLOSH. So any area that you did have shown as a shelter, we GISed them out and made sure where they were located. If they were in a surge area, we took those out of the total. So these would be not out of the MEOW or the wind areas, but these are out of the surge areas.

MR. INNES: We've also looked at the -- who would actually be needing sheltering during storms. So we broke down, as Jim has before, we took a look at the income levels of the residents in the counties and also those who are residing in mobile homes. We're using a percentage of 5 percent of the high-income citizens who would probably be looking for shelter or in need of shelter, about 12.5 to 15 percent of the middle-income, and about 20 percent of the low-income who would be needing shelter. And that's based on statistics that we've looked at for the last seven or eight years.

ASSEMBLYMAN RUMPF: If I could just jump in there?

MR. INNES: Yes.

ASSEMBLYMAN RUMPF: Do you have that reflected upon a national average, in terms of evacuation events in other areas of the country?

MR. INNES: Yes, there was--

MR. SCHAFFER: Based upon the Army Corps of Engineers after-action reports for Ivan, Francis -- all the way back to Hurricane Floyd. We looked to some of the American Red Cross data. It was good, but it was skewed, so we went back into it and looked at lessons learned. Went through many, many different areas, similar areas to us, like North Carolina and sections of Florida.

MR. INNES: We did not include the Hurricane Katrina though, because that was so off-base that would--

ASSEMBLYMAN RUMPF: Just looking at your table here, this is probably the most pleasant surprise I've had during these meetings, as I would have expected the number of beds to be needed in each of these affected counties to have been much greater.

MR. SCHAFFER: It's good that you brought that up. This only represents housing units that are impacted by surge. We can't determine what a county or a municipality would say. So if a municipality or a county would say everything east of the Garden State Parkway is going to evacuate, these totals will go astronomical. This is absolute homes that are impacted by the Army Corps of Engineers data, the SLOSH map--

ASSEMBLYMAN RUMPF: All right.

MR. SCHAFFER: --based upon municipal averages of anywhere from 2.7 to 3.9 residents per home. So these are actual data only for SLOSH and surge. So these could go through the roof.

MR. INNES: We also looked at -- especially since we're -- your mission is to review the coastal storms. We took a look at the needs, both during the tourist season, out of tourist season, in tourist season during the weekends, and in tourist season on the weekdays to come up with an idea, and we broke that down by Category 1, 2, 3, and 4 -- hurricane categories 1, 2, 3, and 4.

MR. SCHAFFER: And you'll see how the totals rise.

ASSEMBLYMAN VAN DREW: We both have the same question -- Assemblyman Rumpf brought it up. If you were to look at the chart -- we'll use Cape May, because it's the area I know best -- you say that in a Category 4 -- which is quite a storm, I don't think we would ever get -- about 18,000--

MR. INNES: I'm sorry, Assemblyman. Which table?

ASSEMBLYMAN VAN DREW: Table 3-3, which we're probably not reading it right or understanding it right. Where if, in Cape May, if you had a Category 4, pretty much the entire county is devastated.

MR. INNES: Correct.

ASSEMBLYMAN VAN DREW: So where does that number -- explain that number a little bit.

MR. SCHAFFER: This is the residents of Cape May, not your tourism. There's a very small portion of tourism represented by the occupancy units. That's all we can-- We can't figure out if there's 250,000 people coming in on a daily basis. We anticipate, based upon after-action reports, that that 250,000 -- that's a daily load -- will also go home. We won't have to shelter them. We know some will need to be sheltered. But

if they're not in a residence or rental unit, we're not counting them. This is based upon our rental units.

ASSEMBLYMAN VAN DREW: Year round. So you're saying, approximately, maybe it's somewhere like 15 or 18 percent of the population?

MR. SCHAFFER: Of the population affected through SLOSH. And again, I have to really stress the point, the only information we have is SLOSH -- is the area that's going to be inundated. If we were to work -- and this is our next step, working with individual counties -- we can better this data by saying, "Where are you really going to evacuate?" This is our first step.

MR. SEVER: This is only water inundation, right? This is what you're talking about?

MR. SCHAFFER: Exactly.

MR. INNES: Yes.

MR. SCHAFFER: We haven't included any of the MEOW charts or wind damage, because we--

MR. SEVER: So power outages or wind damage, that doesn't have any -- doesn't reflect in that?

MR. SCHAFFER: Absolutely. No.

MR. SEVER: So what you're saying is, Cumberland County has 2,095 residents in that area, only that does not include damages countywide from wind and rain and those types of things?

MR. SCHAFFER: Absolutely. They're the unknowns. There's really no data out there at this point that we can find that would be reliable

enough to come in here and tell you. There's a lot of assumptions made. We know things are going to change rapidly if -- how the storm hits.

ASSEMBLYMAN VAN DREW: Seems like a very conservative estimate.

MR. SCHAFFER: It is. And again, this is based upon surge area only. If you looked at -- has anybody seen the SLOSH maps?

ASSEMBLYMAN VAN DREW: In the past, not today.

MR. SCHAFFER: Okay. That's what we're talking about. Right in the far corner you'll see where Joe did -- Joe Gavin from the Army Corps -- he actually said these are the housing units that are going to be impacted. We took the housing unit, based upon the municipality, and went to the demographic profile sheets at the Department of Labor and looked at that and said, "3.2 residents per residence," and times the math, out down to the municipal level. And it's good data. Again, like I say, we're not sure if a municipal government is going to totally evacuate -- that will rapidly change.

ASSEMBLYMAN VAN DREW: It would seem to me, for example, on the Category 4 in certain areas, like Atlantic County -- with the casinos being present -- or even Cape May County, that with a Category 4 there's going to be very little power left, particularly, for example, in Cape May; virtually none in the Category 4. So a good number of those residents -- I think a more significant number would have to be evacuated over time.

MR. SCHAFFER: Absolutely, sir.

And again, this is our first -- we started on this last year.

ASSEMBLYMAN VAN DREW: It's your first crack.

MR. SCHAFFER: This is going to be distributed to all counties and then we're going to work with the counties to better the data.

ASSEMBLYMAN VAN DREW: Got it.

MR. INNES: Understand Assemblyman, if we had been before you a year ago, we could not have even given you this information. So it's our first step.

ASSEMBLYMAN VAN DREW: Very good. Continue.

MR. INNES: In looking at, traditionally, some of the problems we have faced, some of the problems have been, as I've mentioned before, not even knowing the number of beds we could shelter individuals at the county level. We also have seen an abundance of pop-up shelters. And what I mean by a pop-up shelter -- being a firefighter, the ladies auxiliary, during a storm or right before a storm hits, might open up the hall or the engine room and say, "Hey, we can bring some people in here." And maybe a few hours after the storm hits, Bill and I can be sitting in the OEM, pick up the phone, "We need supplies at our shelter." "What shelter are you talking about?" "Well, the shelter on Locust Avenue in Hamilton Township." We didn't even know there were people there. We don't know how many people are there. So that has always been a problem. There's a need to pre-identify as many shelters as possible.

There's a complete lack of regional sheltering. I think it's been mentioned by Joe. It was mentioned by Jim. I think we need to look at a more countywide regional shelter. Because again, the Red Cross cannot handle these smaller shelters with the manpower they have currently. It just does not work for them; it does not work for our citizenry either.

There's a lack of a viable shelter information system. Red Cross has been working on one and FEMA has been working on one, which would provide names and numbers of people located in their shelters. We need to have one. Hopefully the FEMA system will work that will be -- incorporate all the shelters in our state. So if somebody wanted to know the location of a lost individual, they could make one phone call and maybe it would help them find that individual who may be staying in one of the shelters.

There's, mentioned before -- there's a lack of special needs shelters. Currently, OEM and the Office of Homeland Security and Preparedness is working with a contract, the Delta Group, and they're beginning to explore the possibility of establishing a registry for special needs residents. That would be the first step. Once we know how many people we have, then again, we still need to look into the possibility of a regional, or a number of regional, special needs shelters for these--

ASSEMBLYMAN VAN DREW: And that process is ongoing now, correct?

MR. INNES: Yes, it is.

ASSEMBLYMAN VAN DREW: That started with Rich Canas. I know we were speaking to him the other day about that.

MR. INNES: Yes, it is. Yes.

There is a lack of shelter for animals. The Department of Agriculture is beginning to look into it. There's concern because currently Red Cross does not permit animals to come into a shelter with their owners, especially pets. So we need to look into either establishing a shelter that will allow the owner to enter with his pet or setting up special shelters just for animals, and then providing some kind of a transportation service so the

individual can go out and see his animal or her animal, and come back and still have a place to stay for a couple of days. That seemed to work pretty well down in New Orleans with Katrina.

We are currently working with the Department of Community Affairs, and again with Red Cross, to develop standards for shelters. Currently, there's-- Some of the listings of shelters which we see throughout the state may not be in existence once a Category 1 or a Category 2 storm came by. So we are working diligently with DCA and Red Cross to develop these standards.

And long-term, there's a lack of housing stock. We're all aware of it. There's very little housing stock available for long-term housing of evacuees. After Katrina, although we tried our best to provide assistance to Katrina victims and see if we could move a few of them into the State of New Jersey, the best we could offer them was 80 spots in Perth Amboy. The housing stock is not there. We have to look at some other alternatives down the road for that.

The other problem -- again I refer back to what Jim said about public schools -- we have recently discovered that public schools can opt out of becoming shelters, especially if they receive some of the new funding under the school--

ASSEMBLYMAN VAN DREW: School construction -- SCC.

MR. INNES: Schools Construction. From what I have been told, you can hit a box and say, "We are not a shelter," and they don't need to provide those services. It's imperative that these schools meet the standards that come up for sheltering and that they become shelters. They

have to be shelters. They can hold an enormous number of evacuees. They can be the prime area for regional sheltering, and it just works.

ASSEMBLYMAN VAN DREW: And we're spending billions and billions of dollars in this state, and that should be an effective byproduct as well. At least they would be usable shelters.

MR. INNES: Yes. And even--

ASSEMBLYMAN VAN DREW: So we're definitely going to look into that and find out if that's true -- if they've been allowed to opt out and what we can do about that.

MR. INNES: And in the process, if they're in the process of building a new school or doing retrofits, why not include an area where we can pull up a trailer with a transformer and just plug the transformer in? We're talking about a lack of electricity. We can pull a trailer up, plug it in, and we have electricity for that shelter, for that regional shelter. It works. Let's do it.

ASSEMBLYMAN VAN DREW: All good uses of Federal dollars from Homeland Security, I would think.

ASSEMBLYMAN RUMPF: Do we have such portable generation presently?

MR. INNES: We don't have the resources. What we do for the Department of Human Services -- we go out and bring vendors in and they provide us with services. So again, if it's out there, we can still assist the local economy by bringing somebody in after a storm and having them provide this utility.

ASSEMBLYMAN RUMPF: If we needed to plug in 20 or 30 schools next week, do you have the ability to go out and get that generation?

MR. SCHAFFER: Through E-Team or EMAC -- through the Emergency Management Assistance Compact, we could put requests in through the Office of Emergency Management, ask assistance from neighboring states or anybody that's in the EMAC system.

ASSEMBLYMAN VAN DREW: See, here's the thing I wonder about -- I know we all talked about this before and we don't have to have an answer today. But if there's a real big storm and it's affecting all of New Jersey -- all of New Jersey, as well as, say, Manhattan, New York, that area, which is potentially possible -- I am correct, right? -- a lot of resources that we would hope would come our way very well may not. So part of the goal here is for these eight counties that are most vulnerable to really try to identify -- as I started out this conversation earlier on -- to make us somewhat self-sufficient during that process. So some of that, that we might want to get-- I don't know how quickly it comes to us when you have a population base -- God forbid this all happens -- that is so much larger; and also when you have infrastructure there that is so highly valued. When you think of Manhattan, New York, and northern New Jersey, we're going to be an afterthought. Whether we like that or not, that's the real work, and we are going to be. So I think that's some of the concerns that we have here and I'd really like this group to address. You know, think about that over the next few months as we get into this, again for these short-term and long-term recommendations, on how we best can deal with some of those issues. Because that might work, but it might not.

MR. INNES: And lastly, something that we could possibly do -- we've all heard about CERT teams that are being introduced in local municipalities and the counties, even the State. There's probably a need to ensure that there's a shelter management course included, or shelter worker course included, in the surge program to provide us with a cadre of certified shelter workers that American Red Cross can draw on, or we can draw on, and provide assistance at the various shelters.

ASSEMBLYMAN VAN DREW: Very good.

MR. SCHAFFER: We do have one final list. We are purchasing equipment through grants from the Office of Homeland Security and FEMA for the (indiscernible) county, so it will be 22, 500-bed-capacity trailers. And we just received a grant notification from Director Canas that he approved a $124,000 grant for Ocean, Atlantic, Cape May, and Monmouth counties for each one to receive a 500-bed mobile trailer. They'll have 500 cots in it. Everything but personnel and perishables, basically.

MR. JONES: Truly a mobile home.

MR. SCHAFFER: What's that?

MR. JONES: Truly a mobile home.

MR. SCHAFFER: Yes. And it will be--

MR. INNES: Don't say mobile home. (laughter)

MR. SCHAFFER: It will be a wheeled trailer, so you can take it with your population. This is, again, a first event. We'll hopefully receive more money next year and the following years, and we'll be able to build that store of equipment.

ASSEMBLYMAN VAN DREW: Any other thoughts, questions?

MR. ZACH: Just on the sheltering, especially with the schools and the new construction of schools. If you're going to identify -- whether it's schools or whatever building is a shelter, it has to be built to certain codes. There's certain construction codes, within the BOCA Code, from the State of New Jersey that require certain types of construction for that building to be classified as a shelter.

ASSEMBLYMAN VAN DREW: Which is more expensive, if my memory serves me right.

MR. ZACH: Absolutely.

ASSEMBLYMAN VAN DREW: You can't use a lot of preformed trusses and certain things like that.

MR. ZACH: Absolutely.

ASSEMBLYMAN VAN DREW: I think part of that recommendation, as we go through it, is to see if there's some cost-effective way or something that we can do to kind of work around or work with that. I know you're exactly right, because it amazed me. Even some of the new buildings that I've been involved with in my tenure in government service -- that it would say that these are really not really rated for -- government just built a new building, it's not rated. How can that be?

MR. ZACH: Correct.

ASSEMBLYMAN VAN DREW: And they, of course, proceed to explain to me, it's because of some of the cost savings that was put into it.

But I would also think if we're building new structures and we have this problem and we're a vulnerable area, that there's got to be, hopefully, some way to address that.

MR. ZACH: Through the construction code, through the DCA.

MR. SCHAFFER: As long as they're not listed as earthquake or tornado shelters, the code is pretty good -- to increase your load to 130-mile-an-hour wind or thereabouts.

ASSEMBLYMAN VAN DREW: Okay.

MR. ZACH: You'll have to still make provisions on the buildings--

MR. SCHAFFER: Absolutely.

MR. ZACH: --for the portable generators that you're talking about to make it compatible. You just don't pull up. So nobody misinterprets the fact that you just can't pull a trailer-mounted generator up to a building with no provisions and put that building on back-up power. The provisions have to be in place for that trailer-mounted generator to work.

MR. JONES: And the other thing, too, is we look to our schools as short-term sheltering, not long-term sheltering. And I don't even know if we even have any long-term sheltering available to us. Because eventually we've got to get the schools back open and try to get, as best possible, back to that normal routine. But if we have whole neighborhoods or towns wiped out, long-term sheltering -- I don't know what we're going to do.

MR. ZACH: And the regional sheltering -- I'll also say my county has been working with the Central Jersey Chapter of the Red Cross.

We've identified five or six facilities that can be regional shelters, or in the process of working through what their capabilities are -- what they're bed capacities are. And the Red Cross has committed to supporting those five or six regional shelters. But there's still an ongoing issue with the animals. There's still an ongoing issue with--

MR. SEVER: Special needs.

MR. ZACH: --special needs.

MR. INNES: And even coming up with a good working definition of special needs.

MR. ZACH: Right.

ASSEMBLYMAN VAN DREW: That's very difficult right now, too.

MR. INNES: It's a Federal problem, not just a State problem. No one can put a handle on what is a special need.

MR. SEVER: Yes. You can't define it. Everybody -- what is a special needs person? A person who has no shelter? That's an issue. We're talking back about the schools -- that has been an ongoing concern of ours. When we found out from one of the school districts that it wasn't required that they have to do that, they can basically check off and say they didn't want to participate, that just right away cut into our possibilities of additional shelters and new buildings on top of it.

ASSEMBLYMAN VAN DREW: It would be nice to have a program where, when building new ones, it was done; and we could find the dollars somewhere and retrofit some of the other schools that don't have the availability. Because that certainly would be a viable way to shelter

some folks. That would help a lot. I think that's going to be definitely one of the things we're going to recommend that we look at.

ASSEMBLYMAN RUMPF: That might have to go into the new school aid funding formula.

ASSEMBLYMAN VAN DREW: Yes, there you go. God help us, okay? I don't even want to talk about that.

Does anybody else have anything?

ASSEMBLYMAN RUMPF: One brief question, if I may? Just throw a question back to my Cumberland County colleague, and I forgot to ask it before. You're fairly close to the nuclear power plants down in Salem County. Are you within that 20-mile range or 10-mile range?

MR. SEVER: We have two municipalities -- Greenwich and Stow Creek Township is within the 10-mile EPZ. Population-wise, we're probably looking at less than a thousand, because it's very rural in the area where that's located. Very strong program with the Salem Nuclear Generating Station. Annually exercised, the whole thing.

ASSEMBLYMAN RUMPF: Okay.

One of the items, Mr. Chairman, at our next meeting next week, that's somewhat unique to Ocean County, is we have that nuclear power plant sitting smack within our boundaries right on the bay. So you couple your hurricane with a potential nuclear disaster, the magnification of the horror and extreme lack of infrastructure really presents a story I'm sure you're going to enjoy hearing -- although it's not really that bad according to Wayne.

ASSEMBLYMAN VAN DREW: It's going to make us feel good down here, and we're looking forward to that.

With that, I want to thank everybody for being here. The next meeting is going to be in Ocean County where we are all going to have lobster omelets. (laughter)

And I thank you all for being here, and we are eventually going to make our way up to Middlesex County, as well. We're going there.

MR. ZACH: Okay. We would appreciate that.

ASSEMBLYMAN VAN DREW: And we appreciate you being down here, as well.

MR. ZACH: Absolutely.

ASSEMBLYMAN VAN DREW: Thank you all.

Meeting is adjourned.

(MEETING CONCLUDED)