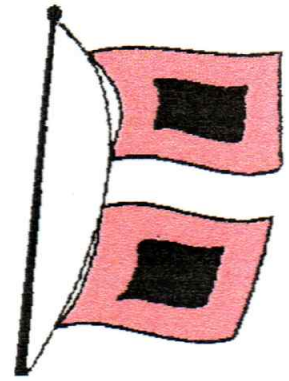
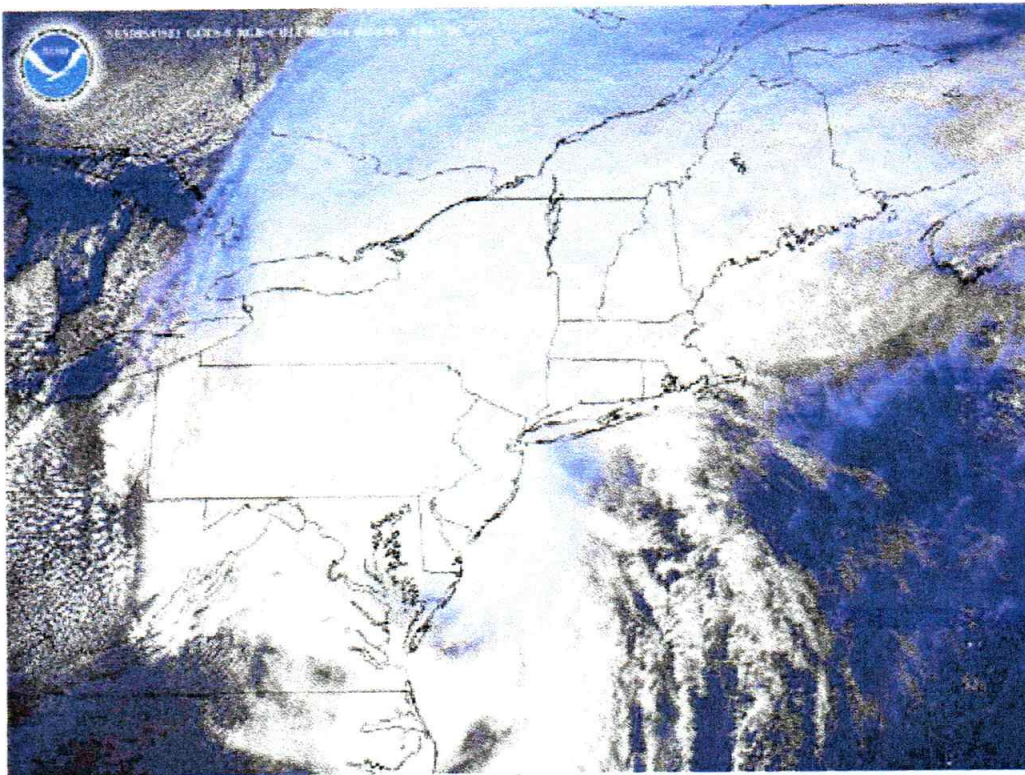


# 2000 New Jersey State Hurricane Preparedness Conference



June 7-8, 2000  
Tropicana Casino Resort  
Atlantic City, New Jersey



Presented By:

Atlantic County  
Office of Emergency Preparedness

New Jersey State Police  
Office of Emergency Management



## **HURRICANE FLOYD**

On the morning of September 7, 1999, a tropical depression formed in the Atlantic Ocean. The next day it was upgraded to Tropical Storm Floyd, then to a hurricane on September 10. Floyd continued to intensify and amaze forecasters by its sheer size and category IV strength as it took aim at the Bahamas and Florida. Floyd was every bit as menacing to Florida as Andrew was back in 1992. With the memory of Andrew still fresh in their minds, residents wasted no time taking precautions.

The forecasters at the Tropical Prediction Center expected Floyd to begin a turn to the northwest, but only after hurricane warnings had been posted. Floyd, now an intense category IV storm, packing winds of 150 mph, made the turn to the northwest paralleling the Florida coast. Armed with these reports, people were evacuated away from the beaches for fear of the storm surge; the number one cause of death from a hurricane. Windows were boarded in anticipation of the hurricane force winds. All the necessary precautions were recommended and rushed to completion, as they have been done in the past, to protect residents from land falling hurricanes. Hurricane Floyd moved north, necessitating the largest peacetime evacuation in history. Residents of New Jersey were becoming increasingly concerned with Floyd's every move. On the morning of September 16, Floyd was churning northward as a category 3 off the North Carolina coast, when it moved ashore under the cover of darkness. Once inland, Floyd began to weaken, down to category II then category I, but still aimed at New Jersey, the most densely populated state in the country!

Floyd was expected to move over the Atlantic and resume a track to the north northeast, or just off the New Jersey coast. By now, many residents perceived the weakening storm as nothing more than a typical nor'easter. However, the count down from a category III hurricane to tropical storm strength proved to be a meteorological disaster in the making. At one time Floyd was one of the largest hurricanes on record, its size comparable to the state of Texas. It caused seas to swell to 50 feet off the coast of Florida, winds of 150 mph or more, and a potential storm surge of 20 to 25 feet at certain locations along the eastern seaboard.

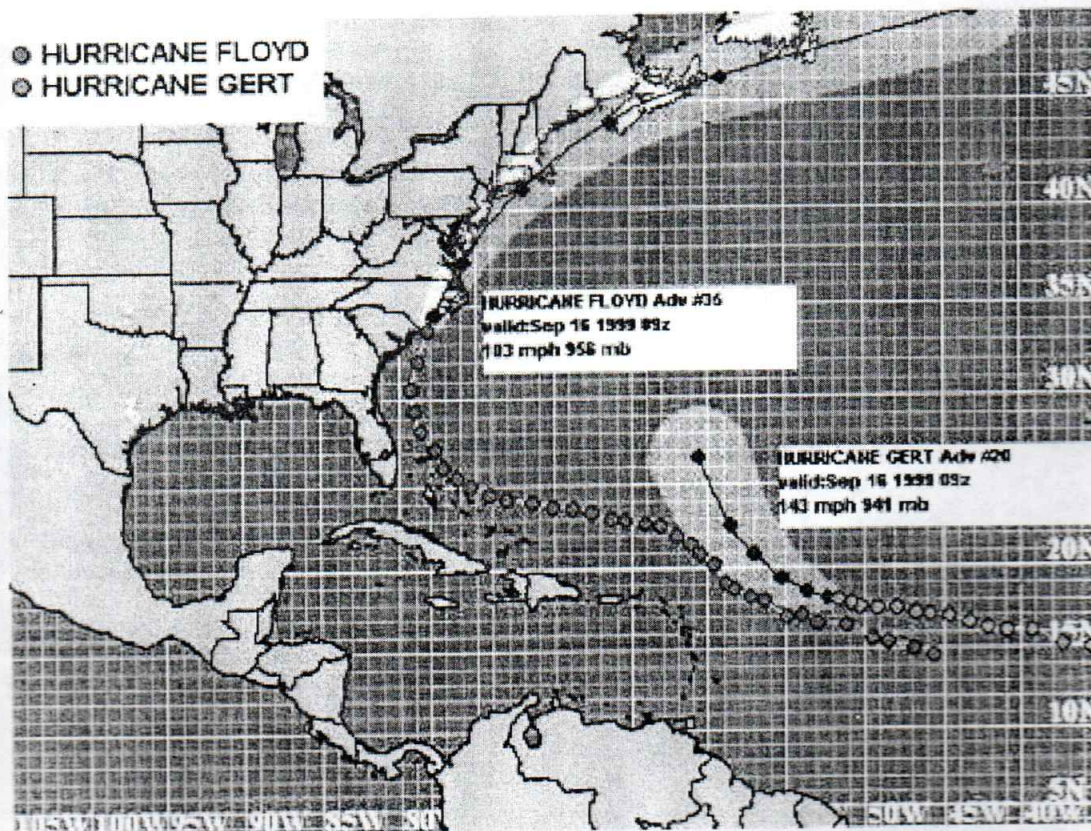
Overlooked by many at the time was the amount of moisture swirling around this huge storm and feeding north along the coast. With each new breath, Floyd inhaled a fresh supply of tropical moisture and continued its track toward the northeast. Meanwhile, a cold front moved to western New Jersey and stalled. The tropical air now had a conveyor belt to ride skyward and condense the abundant tropical air into a deadly situation. Floyd unleashed torrents of rain that caused flooding never before witnessed in 200 years! The secondary effect of now tropical storm Floyd rendered parts of central New Jersey defenseless with 10 to 15 inches of rain sending rivers out of their banks. Hardest hit were communities within the Raritan Basin. The National Weather Service and the New Jersey State Police were forced to redirect their efforts from concerns on the barrier islands to those citizens susceptible to inland riverine flooding. The transition was accomplished with the cooperation of many agencies.

By comparison, Floyd was no Galveston, Texas hurricane of 1900; no hurricane Camille, that swept over Biloxi, Mississippi in 1969; no hurricane Hugo that plowed onshore in South Carolina in 1989; and certainly no hurricane Andrew that leveled parts of south Florida in 1992. True, we were spared from the primary effects of the storm surge and hurricane force winds. However, the secondary effect of inland riverine flooding took lives and caused over an estimated one billion dollars in damage, the largest dollar amount ever from a meteorological event in the state's history. Ironically, there were some who believed we were "hit" by a

hurricane and others who were disappointed that we weren't. At one time there were serious concerns that Hurricane Floyd's storm surge was going to overwhelm the beaches and lash the coastline with hurricane force winds from Sandy Hook to Cape May, and also inundate the interior sections with torrential rain.

Floyd was not a powerful hurricane when it passed by our coast. Nonetheless, there were deaths and flooding of historical proportions in New Jersey, as well as in North Carolina. We have seen the destruction from powerful land falling hurricanes scour beaches and destroy homes along the Atlantic and Gulf coasts, and witnessed the destruction of hurricane Agnes as it brought more than 25 inches of rain to parts of the Northeast in 1972. We have now witnessed the devastations that even a weakened tropical storm can cause. The lessons we must learn are simply to continue with interagency efforts, those preparations necessary to protect the life and property of the citizens of New Jersey against the impacts of hurricanes. The impacts include the storm surge, the winds, some isolated tornadoes or as we experienced first hand, the torrential rains and unprecedented flooding that followed.

Jim Eberwine  
National Weather Service



# 2000 NEW JERSEY STATE HURRICANE PREPAREDNESS CONFERENCE

## Wednesday, June 7, 2000

8:30am - 9:00am	Continental Breakfast/Registration	Hall 2
9:00am - 9:30am	Introductions/Opening Remarks	Sgt. Nick Massa, NJSP- South Region Distinguished Guests Introduction
9:30am - 10:45am	Introduction to Hurricanes	Jim Eberwine, National Weather Service Michael F. Crowley, Rutgers University
10:45am - 11:00am	<b>BREAK</b>	
11:00am - 12:00pm	Tropical Storm Floyd Overview	Lt. O'Neil, Sgt. Georgeles, NJSP- Central Region Pete Martinasco, FEMA- Region II
12:00pm - 1:15pm	<b>LUNCH</b>	Royal Swan Ballroom

### BREAK OUT SESSIONS

1:15pm - 2:45pm	1. Hurrevac (Grand Exhibition Center-Hall 1)	Mike Augustyniak, NJOEM-OPB
	2. USAR/WMD (Grand Exhibition Center-Hall 3)	SFC McNulty, Tpr. I Mitten, NJSP- Domestic Preparedness Unit, Chief Laird, Trenton FD
	3. Debris Management (Carousel Suites)	Len Clark, Gloucester County OEM
2:45pm - 3:00pm	<b>BREAK</b>	
3:00pm - 4:30pm	1. Public Information /Internet Resources (Grand Exhibition Center- Hall 1)	John Hagerty, NJSP William J. Melfi, Ventnor City OEM
	2. Reverse Lane/Road Elevation (Grand Exhibition Center- Hall 3)	Rod Roberson, NJDOT, Brian Walters, Atlantic County, Mike Augustyniak, NJSP- OEM-OPB
	3. EOC Operations During Disasters (Carousel Suites)	James Rapp, Middlesex County OEM Kenneth Link, Middlesex County OEM
4:30pm	Conference concludes for the day.	

2000  
NEW JERSEY STATE HURRICANE PREPAREDNESS  
CONFERENCE

Thursday, June 8, 2000

8:15am - 8:45am	Continental Breakfast	Hall 2
8:45am - 10:15am	Mitigation and Project Impact	Marshall Mabry, FEMA- Region 2 Anthony Mangeri, NJSP- OEM
10:15am - 10:30am	Small Business Administration	Wayne Butler, US Small Business Administration
10:30am - 10:45am	<b>BREAK</b>	

**BREAK OUT SESSIONS**

10:45am - 12:15pm	1. Intergovernmental Liaisons/ Communication During Disasters (Grand Exhibition Center- Hall 1)	SFC Hoptay, NJSP- North Region Chief Joseph Forbes, Passiac County OEM Sgt. Einreinhofer, Bergen County OEM
	2. EMWIN (Grand Exhibition Center- Hall 3)	Santos Rodriquez, National Weather Service
	3. NJ Tide Telemetry System (Carousel Suites)	Eric J. Evenson, Jon Marlow, USGS- Water Resource Division
12:15pm - 1:15pm	<b>LUNCH</b>	Royal Swan Ballroom
1:15pm - 2:45pm	1. Hurrevac (Grand Exhibition Center- Hall 1)	Mike Augustyniak, NJOEM-OPB
	2. Battle Lab (Grand Exhibition Center- Hall 3)	Major Gerald Minchin, Director of Simulations T3BL, National Guard
	3. Debris Management (Carousel Suites)	Len Clark, Gloucester County OEM
2:45pm - 3:00pm	<b>BREAK</b>	
3:00pm - 3:30pm	Closing Remarks / Conclusion Critique	Sgt. Nick Massa, NJSP- South Region

## Breakout Sessions

### **Hurrevac-** June 7, 1:15pm and June 8, 1:15pm- Grand Exhibition Center- Hall 1

Presented by: Mike Augustyniak, NJOEM-OPB

Two years ago, FEMA and the ACOE contracted to update the old Hurrevac hurricane and evacuation software. Since that time, extensive training has been done up and down the East Coast. Last year, the NJOEM retrained all 21 counties in HurWin95. This session will review the software AND demonstrate new features of the program since last year.

### **USAR/WMD (NJ-TF1)-** June 7, 1:15pm- Grand Exhibition Center- Hall 3

Presented by: SFC McNulty, Trp. I Mitten, NJSP- Domestic Preparedness Unit and Chief Laird, Trenton FD

NJ-TF1 is a volunteer team made up of members from the fire, police, emergency medical and medical communities that are specially trained to respond to collapsed structures, trench collapse, swift water rescue, confined space rescue and rope rescue incidents. NJ-TF1 is trained, equipped and staffed according to the Federal Emergency Management Agency's, Urban Search and Rescue standards. NJ-TF1 members are assigned to one of four operational teams that include: Rescue, Medical, Technical and Search functions. NJ-TF1 is a self contained unit that is fully staffed and equipped to manage search and rescue operations for periods of up to ten days. Learn what this team can and has done and what resources they can bring to your community.

### **Debris Management-** June 7, 1:15pm and June 8, 1:15pm- Carousel Suites

Presented by: Len Clark, Gloucester County OEM

Based upon the real world application of an academic project, this program will introduce participants to a major key in recovery; debris management. The effective management of the debris problem provides the public with the first visible sign that recovery is taking place. Topics covered will include debris modeling, planning, resource management and disposal methods.

### **Public Information/Internet Resources-** June 7, 3:00pm- Grand Exhibition Center- Hall 1

Presented by: John Hagerty, NJSP and William J. Melfi, Ventnor City OEM

The public information portion will review accepted practices in dealing with the media as well as disseminating vital information to the general public in times of emergency. The Internet resources portion will give emergency management personnel some idea of the variety of sites available on the information superhighway. A site created for just that purpose will be showcased. EMLINX.com currently lists over 135 web sites and provides a one-stop location for emergency managers to find information without surfing the web for hours.

### **Reverse Lane/Road Elevation-** June 7, 3:00pm- Grand Exhibition Center- Hall 3

Presented by: Rod Roberson, NJDOT, Brian Walters, Atlantic County OEM, and Mike Augustyniak, NJOEM-OPB

Reverse Lane Strategies: Following the evacuation and emergency response lessons learned from Hurricane Floyd up and down the East Coast, FEMA is recommending the States, counties and municipalities revisit their hurricane evacuation plans to include more creative means of handling traffic and moving population. No longer considered a last resort option, reverse lane strategies can save 15 or more hours in evacuating flood prone areas and moving people to shelters. This session will discuss the evaluation and planning strategies necessary for developing and integrating this option into existing plans.

Road Elevation Analyses: Begun in Cape May County in 1996 and done more recently in Atlantic County in 1999, the NJOEM and FEMA are assisting counties with developing detailed GIS engineering for what will be needed to elevate their hurricane evacuation routes to 25, 50 and 100 year flood heights. This information has also been incorporated into County Master Plans. Both FEMA and NJDOT were pleased with this information for possible inclusion in their large scale mitigation projects and policies. Attendees will learn first hand how the projects were accomplished, so that they may evaluate the usefulness of performing the same engineering.

## **Breakout Sessions (cont.)**

### **EOC Operations During Disasters-** *June 7, 3:00pm- Carousel Suites*

Presented by: James Rapp and Kenneth Link, Middlesex County OEM

This presentation includes a synopsis of Middlesex County's experiences over the duration of Tropical Storm Floyd including the major impacts on Middlesex County and how their office responded to the unprecedented number of requests for assistance from their municipalities. The discussion will include how their office prepared for the storm, pre-placed staff, and utilized their unique capabilities to meet the challenge of responding to the varied problems encountered as a result of the storm. There will be a detailed description of the coordination of fire fighting resources in response to the loss of water pressure for six days after the storm.

### **Intergovernmental Liaisons/Communications During Disasters-** *June 8, 10:45am- Grand Exhibition Center- Hall 1*

Presented by: SFC Hoptay, NJSP- North Region and Sgt. Einreinhofer, Bergen County OEM

Discussion will include communications problems that occurred as a result of the damage that was sustained during Tropical Storm Floyd. These communication failures included: main cell phone control boxes out, most of Bergen and Passaic Counties phone systems out and no phone link in place to communicate municipality to municipality. The Intergovernmental Liaison portion will deal with the local and county governments role in relaying and obtaining vital emergency information while the communications systems were disrupted.

### **Emergency Manager's Weather Information Network (EMWIN)-** *June 8, 10:45am- Grand Exhibition Center Hall 3*

Presented by: Santos Rodriquez and Rob Wagner, National Weather Service

As an integral part of its mission, the NWS recognizes the need to provide the emergency management community with access to a set of NWS warnings, watches, forecasts, and other products at no recurring cost. Toward that end, the Emergency Managers Weather Information Network (EMWIN) system was developed. In partnership with the Federal Emergency Management Agency and other public and private organizations, EMWIN is now evolving into a fully operational and supported NWS service. EMWIN is a suite of data access methods which make available a live stream of weather and other critical emergency information. EMWIN will be explained and demonstrated.

### **New Jersey Tide Telemetry System-** *June 8, 10:45am- Carousel Suites*

Presented by: Eric J. Evenson and Jon Marlow, USGS- Water Resources Division

The New Jersey Tide Telemetry System is a collection of 29 tide gauges and 4 weather stations that provide real time water level and weather information on New Jersey's back bays to the Emergency Management community and others. The sensors are linked through various forms of telemetry to a statewide network of computers that compile and display the data through specialized software. This session will demonstrate the many applications of this new system.

### **ARNG Training and Training Technology Battle Lab-** *June 8, 1:15- Grand Exhibition Center- Hall 3*

Presented by: Major Gerald Minchin, Director of Simulations T3BL, National Guard

The Training and Training Technology Battle Lab provides the participants a tool to execute actions/response in a simulated environment. It stimulates an emergency responder's activities during a high populace response scenario: WMD, evacuation, civil disorder, etc. This session will outline this system, that is available to emergency responders, as well as how it's resources can be utilized in emergency planning for your community.

## Exhibits



**American Red Cross-** The Atlantic/Cumberland Chapter of the American Red Cross stands ready to provide for the immediate disaster related needs of the victims of single-family, multifamily and major disasters in both counties. This assistance usually takes the form of food, shelter and clothing. During major disasters, the Chapter works along with the State, County and Local emergency managers by managing and staffing Red Cross shelters, providing mass care feeding and by providing disaster health and mental health for both disaster victims and emergency workers.

**ARNG Training & Training Technology Battle Lab-** Administers simulation exercises that are designed to train and test a myriad of audiences involving first response and disaster capabilities. The scenarios are easily adaptable to exercise Local, County and State first responders and agencies, EOCs, specialized WMD teams and reserve components.

**DRC, Inc.-** Specializes in providing and managing disaster response and recovery services on a year-round basis. With a full time staff of over 50 employees and a vast network of subcontractors and suppliers, we offer a variety of disaster-related services including debris management (removal, reduction, disposal), demolition work, hazardous waste abatement, specialty construction, emergency power and communications, emergency water and ice delivery and temporary housing and roofing. We provide technical guidance and consultation to our clients to maximize the disaster assistance available to them under federal and state laws.



**FEMA- Project Impact-** Project Impact helps communities protect themselves from the devastating effects of natural disasters by taking actions that dramatically reduce disruption and loss. This nationwide initiative operates on a commonsense damage-reduction approach, basing its work and planning on three simple principles: preventive actions must be decided at the local level; private sector participation is vital; and long-term efforts and investments in prevention measures are essential.

**National Weather Service- Mount Holly-** The Mount Holly WFO provides warning service to 34 counties of eastern Pennsylvania, most of New Jersey (except the portion near New York City), all of Delaware, and the adjacent 5 counties of northeast Maryland. The forecast and warning information, generated at Mount Holly, is broadcast through NOAA Weather Radio stations; located at Lewes, DE, Atlantic City, NJ, Allentown and Philadelphia, PA.



**National Weather Service- EMWIN-** As an integral part of its mission, the NWS recognizes the need to provide the emergency management community with access to a set of NWS warnings, watches, forecasts, and other products at no recurring cost. Toward that end, the Emergency Managers Weather Information Network (EMWIN) system was developed. In partnership with the Federal Emergency Management Agency and other public and private organizations, EMWIN is now evolving into a fully operational and supported NWS service. EMWIN is a suite of data access methods which make available a live stream of weather and other critical emergency information.



**NJ- Department of Health and Senior Services-** Our mission is to foster accessible and high quality health and senior services to help all people in New Jersey achieve optimal health, dignity and independence. We work to prevent disease, promote and protect well being at all life stages and encourage informed choices that enrich quality of life for individuals and communities. We will accomplish our mission through leadership, collaborative partnerships, accountability, advocacy - especially for those who need us most - and a strong commitment to informing and serving the diverse consumers in this state.

**NJ- State Police- OEM-** The Emergency Management Section conducts its emergency mitigation, preparedness, response, and recovery responsibilities through personnel located in five bureaus: Regional Organization Bureau, Operational Planning Bureau, Training and Program Support Bureau, Field Services Bureau and the Communications Bureau. Through emergency planning, first responder training, full-scale exercises, and emergency responses, the Emergency Management Section focuses its work in four hazard-specific areas: severe weather, hazardous materials planning/training & response, radiological preparedness, and emergency operations plan development.





## Exhibits (continued)

**NJ- Urban Search and Rescue Team (NJTF-1)-** NJ-TF1 is a volunteer team made up of members from the fire, police, emergency medical and medical communities that are specially trained to respond to collapsed structures, trench collapse, swift water rescue, confined space rescue and rope rescue incidents. NJ-TF1 is trained, equipped and staffed according to the Federal Emergency Management Agency's, Urban Search and Rescue standards. NJ-TF1 members are assigned to one of four operational teams that include: Rescue, Medical, Technical and Search functions.

**ProNet USA-** ProNet USA Inc. provides Free Internet Access without ads, banners or special software. Full service Accounts include Free Web Hosting, E-mail and USENET News access. Access to our extensive "Pro Weather" site is included. No "limited hours" or missing services. We support 56k and ISDN at all sites. ProNet is an International Service Provider with over 1700 sites throughout the US, Canada and Japan. Sign-up on line for instant access at: <http://www.pro-usa.net> or call our National Toll Free number at: 1-877-PRONET5.

**ProNet USA, Inc.**



**Rutgers University- LEO-15-** The Rutgers University Long-term Ecosystem Observatory at a depth of 15 meters, is the most heavily instrumented coastal research area in the US and is just a few miles from here. Hurricane Floyd's eye passed directly over LEO, giving us a comprehensive view of hurricane weather above and below the ocean.

**State Farm Insurance-** The entire State Farm family -- more than 16,000 agents and 76,500 employees -- is committed to providing Good Neighbor service. State Farm agents and employees are located throughout the United States and Canada. Within 48 hours after the 1994 Northridge, Ca., earthquake, 600 claims people from across the United States and Canada joined local claims people. Two months after the earthquake, the number of State Farm people still helping policyholders exceeded 1,600, including more than 1,000 exclusively handling claims. For us, Good Neighbor service means being there when and where we're needed to do what we've promised.

**VOAD-** Many groups come forward to provide service to the public after a disaster, the largest, most well-known, and most visible of the direct service providers are the American Red Cross and the Salvation Army. Both are large, international, well-respected organizations with the ability to draw on national human and financial resources to support their public feeding and public shelter operations. Both the Red Cross and Salvation Army are members of the National Voluntary Organizations Active in Disaster (VOAD).



**United States Geological Survey-** The New Jersey Tide Telemetry System is a collection of 29 tide gages and 4 weather stations that provide real time water level and weather information on New Jersey's back bays to the Emergency Management community and others. The sensors are linked through various forms of telemetry to a statewide network of computers that compile and display the data through specialized software.

**US Small Business Administration-** The US Small Business Administration (SBA) is a federal agency that has been in existence since 1953. The SBA's programs and services can assist individuals in almost every aspect of starting a business, from developing a business plan to obtaining financing. Among the items that will be available at SBA's exhibit will be the 2000 edition of the SBA's *New Jersey's Small Business Resource Guide*. This guide describes the programs, services and resources of the SBA in New Jersey.



## 2000 Tropical Cyclone Names

Alberto	Beryl	Chris	Debby	Ernesto	Florence	Gordon
Helene	Isaac	Joyce	Keith	Leslie	Michael	Nadine
Oscar	Patty	Rafael	Sandy	Tony	Valerie	William

### EARLY APRIL FORECAST OF ATLANTIC SEASONAL HURRICANE ACTIVITY AND US LANDFALL STRIKE PROBABILITIES FOR 2000

*A year of expected continued above average hurricane activity and Florida-East Coast landfall probability*

This forecast is based on ongoing research by the authors and their colleagues, together with meteorological information available through March 2000.

By

William M. Gray, Christopher W. Landsea, Paul W. Mielke, Jr. and Kenneth J. Berry

### 2000 ATLANTIC BASIN SEASONAL HURRICANE FORECAST

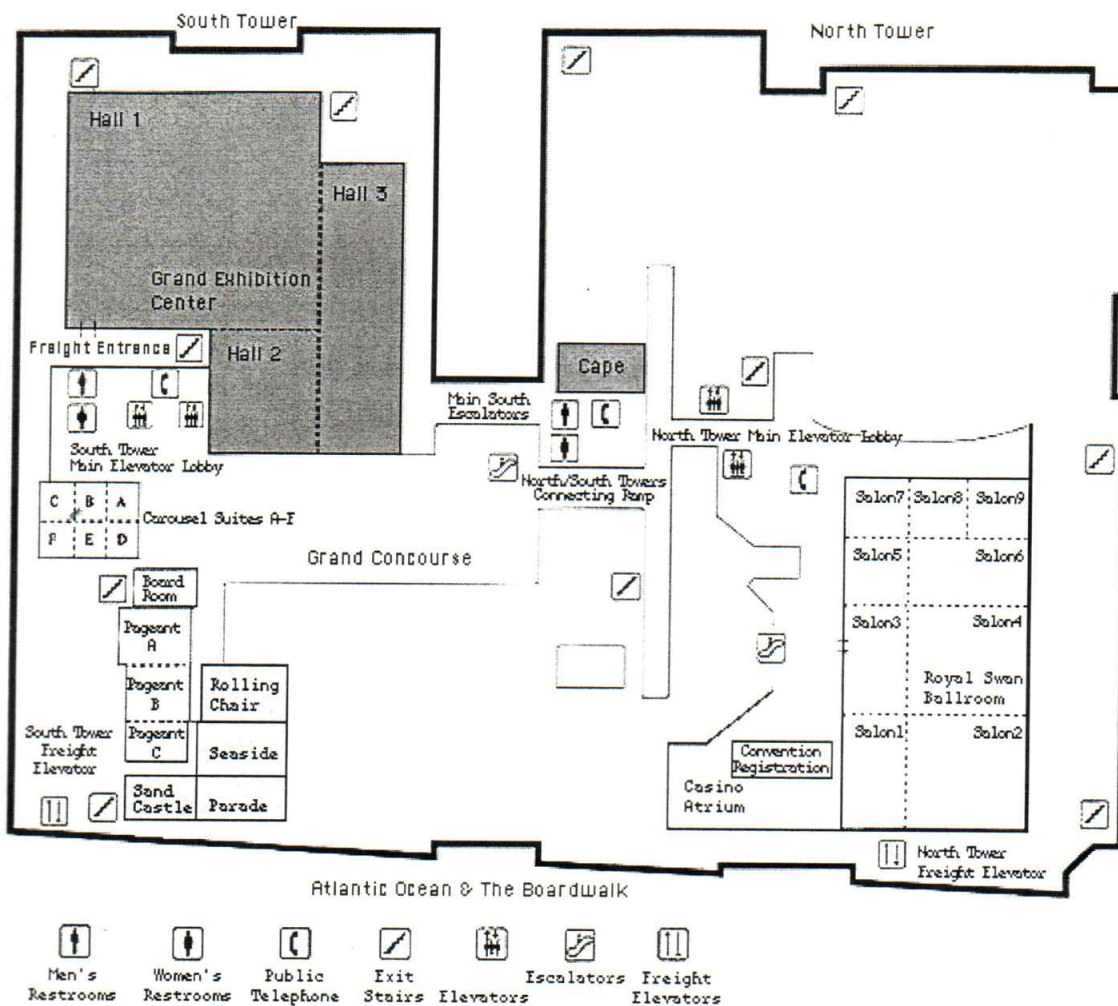
**8 December 1999 and 7 April Update  
Tropical Cyclone Seasonal Forecast for 2000**

Named Storms (NS) (9.3)	11
Named Storm Days (NSD) (46.9)	55
Hurricanes (H)(5.8)	7
Hurricane Days (HD) (23.7)	25
Intense Hurricanes (IH) (2.2)	3
Intense Hurricane Days (IHD) (4.7)	6
Hurricane Destruction Potential (HDP) (70.6)	85
Maximum Potential Destruction (MPD) (61.7)	70
Net Tropical Cyclone Activity (NTC) (100%)	125

#### **PROBABILITY OF ONE OR MORE MAJOR (CATEGORY 3-4-5) HURRICANE LANDFALL**

- 1) Entire US coastline - 60% (average for last century is 52%)
- 2) US East Coast Including Peninsula Florida - 39% (average for last century is 31%)
- 3) Gulf Coast from the Florida Panhandle westward to Brownsville - 34% (average for last century is 30%)
- 4) Caribbean basin (about 10% above the last century average).

## Conference and Breakout Session Locations



### Grand Exhibition Center

#### Hall 1-

- General Sessions
- Exhibits
- Hurrevac
- Media Issues/Internet Resources
- Intergovernmental Liaisons/  
Communication During Disasters

#### Hall 2-

- Registration
- Continental Breakfast

#### Hall 3-

- USAR/WMD
- Reverse Lane/Road Elevation
- EMWIN
- Battle Lab

#### Carousel Suites-

- EOC Operations During Disasters
- Debris Management
- New Jersey Tide Telemetry System

**Royal Swan Ballroom-** Lunch

• denotes breakout session.

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Disaster Services Worldwide