JOINT STUDY COMMITTEE ON EMERGENCY PREPAREDNESS AND DISASTER MANAGEMENT RECOVERY

February 21, 2006

The Joint Study Committee on Emergency Preparedness and Disaster Management Recovery met on Tuesday, February 21, 2006 at 10:00 a. m. in Room 643 of the Legislative Office Building. Members attending the first meeting were: Representative Cunningham and Senator Nesbitt (Committee Co-Chairs), Representatives Pate, Glazier, Coleman, Edward Jones, Underhill, Wray, Rapp, McComas, and West; Senators Malone, Hartsell, Snow, Lucas, Bland, Brown, and Presnell; and eleven Public Members - Dr. Devlin, Dr. Marty Zaluski, Mr. Thomas McCarthy, Mr. Randy Thompson, Mr. Mike McGee, Mr. Duke Geraghty, Mr. Spencer Rogers, Mr. Bill Gentry, Mr. Jeff Frazier, Mr. Doug Hoell, and Major General William Ingram, Jr. .

Staff persons attending were: Emily Johnson, Denise Thomas, Barbara Riley, Tim Hovis, Beth Braswell, Marilyn Chism, Ben Popkin, Shawn Parker, Sara Kamprath, Hal Pell, Gann Watson, Joy Hicks, Andrea Russo, Steve Rose, Kory Goldsmith, Brenda Carter, Giles Perry, Susan Iddings, Karlynn O'Shaughnessy, Bob Weiss. Sergeant-at-Arms assisting: Jon Fitchett, Martha Gadison Martha Parrish, Frank Prevo, Stan Johnson, and Charles Harper. Vickie Spears and Valerie S. Rustin (Committee Assistants)

The Agenda and Visitor Registration Sheet are attached *(Attachments 1 and 2.)*

Co-Chairman Cunningham called the meeting to order and welcomed everyone on behalf of himself and Senator Nesbitt. Following introductions of all present, Co-Chairman Cunningham thanked everyone for their presence at this meeting. Co-Chairman Nesbitt was recognized to give the overall purpose and mission of this important committee, charged with emergency measures to protect the citizens of North Carolina.

Co-Chairman Nesbitt gave a broad overview of the committee's charge: To access North Carolina's state of preparedness in response to possible natural disasters. He explained that this committee could work into next year to have the full mission accomplished. Senator Nesbitt explained that the task is large so the Co-Chairmen thought it best to focus in smaller subcommittees: (1) Building Codes Issues, (2) Public Health / Bioterrorism Issues, (3) Disaster Preparedness Issues and (4) Energy Security Issues. He reiterated the need for the subcommittees to focus initially on things that could be accomplished during the upcoming short session to prepare for this summer. Co-Chairman Nesbitt spoke from personal experience of hurricane and flood damage in his home district (North Carolina Mountains) requiring from September to February to provide relief. He acknowledged the excellent response from the Emergency Management Department as needs were identified and awareness of State resources. The goal: North Carolina will have a written action plan in place to hit the ground running before the next disaster.

Co-Chairman Cunningham called each presenter in the agenda's order and asked that questions be asked after all presenters had spoken.

- **Secretary Bryan Beatty: Department of Crime Control & Public Safety**

Secretary Beatty thanked the Co-Chairs and the members of the committee for the invitation to share his thoughts at this first meeting and to express his recognition of the importance of the committee's work in the preparedness and response for citizens of our State. He shared his background of 25 years as an experienced and trained attorney and law enforcement officer: having started as a field agent in the State Bureau of Investigation (SBI) and eventually becoming its Director, other interim positions included Assistant Attorney General, our State's first Inspector General, and as Deputy Attorney General– working for North Carolina's last four Attorney Generals. He was appointed by Governor Mike Easley to serve as Secretary of Crime Control & Public Safety five years ago. He explained that his current Department includes several agencies that have responsibility for emergency response including: the State Division of Emergency Management (which co-ordinates our State's emergency response activities); the NC National Guard; the State Highway Patrol; the Civil Air Patrol; the Alcohol Law Enforcement Division, and several other divisions. Directors of two of these agencies are members of this committee, Mr. Doug Hoell and Major General Ingram. Since the attacks of September 11, Secretary Beatty served as the Chair of the Governor's Terrorism Preparedness Task Force, chaired the State's Emergency Response Commission, Homeland Security Coordinator, and served as the liaison to the Federal Department of Homeland Security. He explained that in the last five years, our State has been through six Presidential declared disasters, several State declared disasters, and currently closing out previous disasters (eg. Hurricane Floyd and Hurricane Fran).

Secretary Beatty shared two messages based on his experience:

"(1) Reassurance – North Carolina's experience in responding to natural disasters has given us the kind of experience we need to respond to most events that we are likely to experience in our State. That experience has made North Carolina a national leader in the

field of emergency management. The silver lining to being the second most hurricane prone state in the nation (behind Florida) is that all of our agencies (all 42) and our partner non-profit organizations know what their role and responsibilities are. They work very well together; they know each other's capabilities and are committed to what they do. This experience was extremely valuable after the attacks of September 11, because that experience put our State ahead of many other states: in the ability to come together, to know what needs to be done, and figure out what areas need to be enhanced. We discovered the gaps and have been steadily working on those gaps since that time. The Federal Government had to reorganize: The Department of Homeland Security was created and experience has shown that since its creation three years ago, they are still struggling to figure out how to get the job done. Our State already had a department that had crime control & public safety as its primary focus and mission. All of the agencies in our State that have the responsibility for public health, public safety, and emergency management are doing an outstanding job. These agencies are filled with very professional and committed employees, who are working well together on a comprehensive strategy to prevent, protect against, respond to, and recover from the possibility of a terrorist attack in North Carolina. You will hear about some of those efforts as you go through your work as members of this committee as well from others. Our homeland security efforts in the past four years have made us stronger and better prepared, not only for terrorism but for natural disasters as well. The same types of resources and expertise required for a natural disaster are also required for a man-made terrorist event. The same types of units that we have put in place (such as our urban search and rescue teams, regional response teams, public health regional surveillance teams, the disaster teams being created by the Department of Agriculture, and other resources) are organized regionally, locally and at the state level. All of the above make us better prepared for natural disasters.

(2) Caution**:** Although we have very dedicated professionals who have experience in preparing for and responding to natural disasters and man-made events, other events such as the Tsunami in Asia and Hurricane Katrina in the Gulf States have shown that a catastrophic event of that magnitude requires more extensive planning and additional resources if we are to be adequately prepared. In particular, we need to enhance our capabilities in the areas of evacuation, mass care, mass sheltering, medical surge capability, and inter-operable communications for emergency responders. The 911 Commission has said that the number one (#1) priority was the inability of first responders to communicate during that attack. We have been working on that in North Carolina to develop an inter-operable network (called VIPER (Voice Inter-operability Plan for Emergency Responders)), so that all of our first responders – fire, police, emergency medical, emergency management, and others can communicate. Communication could make the difference between life and death. These and several other initiatives that you will hear about are required if we are to be prepared for a catastrophic event in our State. I look forward to working with the members of this committee to enhance our State's capabilities. Please call on me whenever you think our department can assist you. Governor Easley understands, is very committed to, and wants to support the efforts of this committee's work in any way possible. Thank you Mr. Chairmen."

- **Mr. Doug Hoell: Director of the Division of Emergency Management**

"Thank you Mr. Chairmen and members of the committee. I want to talk to you about the Division of Emergency Management; the role that we play, how we interact with other agencies on the State Emergency Response Team, how we interact with local governments across the state in terms of preparation for, response to and long term recovery from disasters. In our State, we know that disasters can happen and we know that another will happen. It is extremely important that we do everything possible to adequately prepare for that next disaster, likely to happen sooner or later. There could be a winter storm, hurricane, tornado, or potentially some type of terrorism event.

The question is: Are we prepared?*(Attachment 3)* Secretary Beatty said earlier, we have had a great deal of experience in North Carolina primarily with response to hurricanes, winter storms, floods, and tornados. Although we have not had such issues as the pandemic flu or a terrorism event, we are trying to build capability for preparedness for such events. North Carolina is prepared but could be better prepared. This slide presentation is designed to show that no one is immune to disasters: we've had landslide events in western North Carolina; ice storm events effecting from east to west of the State; industrial accidents happening in the eastern and western part of the State; vehicles and transportation accidents; structural fires; hurricanes (a great threat to the State); wind damage from storms; wild fires throughout the State; flooding events; and the potential for terrorism. Many things that we put together for natural disasters are the same kind of resources useful in response to terrorism events (should that happen).

Our philosophy in the State of North Carolina is that our response should be:

- Locally centered - Disasters happen at the local level and local response capability is imperative.
- Regionally augmented - We need regional capability, strategically located in regions across the State that could assist local governments (like our hazardous material response teams, medical assistance teams, urban search and rescue teams, and swift order rescue teams).
- State supported - The resources of the State could be implemented when the local governments and regional teams have problems.
- Federally assisted – Federal assets are employed to assist in the response and to supplement the long-term cost of recovery.

It is a very complex system affecting the citizens; starting at the local government level which initially comes to the aid of local citizen's. This might involve response from volunteer agencies, private sector businesses, locally elected officials, and local government agencies. Then mutual aid comes into play. North Carolina has a very strong mutual aid program so that one county can help another, one city can assist another city, so it is an integral part of helping each other in disaster events. State agencies will aid local governments and members of the General Assembly will have an interest in how the response and recovery goes. Then there is the Federal response that includes involvement by our Congressional delegation and mutual aid on an interstate basis so that we can borrow resources from other states as needed. The media plays an

enormous part in big disaster events because the information may affect persons across the state, country, or the world.

In North Carolina, we have three vulnerabilities:

- Lacking of funds set aside specifically for disaster recovery. The Division of Emergency Management is not budgeted to activate the National Guard or to buy bottled water, for example. So we have to turn to the Secretary's office, to the members of the General Assembly, and to the Governor's office to request the funds required as needed for response and recovery. In advance of the next disaster, it would be smart business to plan for funding sources.
- We could improve at the local and regional levels. We could be better staffed, better funded, and have better resources of dollars built into the emergency management program. For example, at the local and regional level there are seventy-seven (77) counties in the State that operate with a part-time emergency management staff, and only twenty-three (23) counties which have full-time designated emergency managers. More staff is needed at the State level. Most of our staff are funded by one-half (1/2) of federal dollars, and in many cases are fully funded with federal dollars. In the case of those full- time counties, they have other full-time responsibilities other than disaster relief, such as fire marshal or emergency medical service coordinator. Disaster recovery is not the highest priority with local governments across the state. Therefore, more state appropriation and support is needed.
- We do not have an adequate state emergency operations center. The current center was built in the 1960's (located in the basement of the Administration Building); it is battle-tested and battle-worn; and has been through a number of disasters. There is inadequate room for our Federal partners in this space when their presence is required. In a Katrina type event, we would be overwhelmed in terms of being unable do what is needed because of space limitations from which to work.

To give you a sense of disasters in the State in the last ten years, we have invested in excess of $3 billion (federal & state dollars) in North Carolina's victims and counties. But in the year 1996 with Hurricane Fran, there was a significant influx of dollars ($66.5 million). In 1999, during Hurricane Floyd; the NC General Assembly appropriated an additional $837 million of state dollars; and 2004 during the western storms, the NC General Assembly appropriated $247 million. The bottom line is that the State of North Carolina has put in an average of over $100 million per year over the last ten years; including Floyd, Fran and the 2004 storms contributing to the spike. There is a continuing occurrence of disaster and a rising cost of disaster recovery. North Carolina has put considerable money into matching federal disaster recovery dollars to move forward, rebuild our communities, and getting our citizens back on their feet following big disasters. In terms of dollars invested per capita in disaster programs compared to other states; Florida invest approximately $12 per capita, Washington, DC invest approximately $10 per capita, and North Carolina invest under $1 per capita.

As far as limited capability, there are several things that need to be done: We need better investment and planning at the local level; we need better quality planning for

big disasters that might occur; and we need to assess how we utilize all the resources of local governments and the private sector (i.e. how we get them incorporated into that response capability). We also wish to work very closely with the Community College System to develop career training for people in the emergency and disaster business. Over time, we'd like to offer a credentialing system for people in the business of disaster and emergency management in North Carolina so that they are recognized and paid as professionals. We also want to build better capability in the field, for example, where we have regional response teams handling hazardous material. We have seven such teams across the State doing a quality job, however having been in service for ten years, there is a need to upgrade their equipment. There is a need to offer better training and to improve that capability where investments of state dollars have been made. We'd like to improve on our communications systems, medical services capabilities, swift water rescue teams, urban rescue teams, incident management teams, and our ability to receive and distribute goods at the local government level.

Finally, with our State Emergency Operations Center, there are fifty other State agencies that come together when we activate the State Emergency Center. This gives a sense of the volume of people that are involved: those from our agencies and federal responders who co-locate with us for a unified command and a working team. In summary, there are seven preparedness vulnerabilities and recommended solutions for North Carolina:

- Disaster funding law in preparation of the next disaster; with an expectation of a multimillion-dollar requirement to match the federal funds and dollars for any additional supplemental programs to be implemented.
- Certification program with our local emergency managers across the State.
- Full-time emergency manager in every county government or region. More attention to planning and preparing for disasters at the local level is required.
- Strengthen area & regional capabilities with all teams.
- Strengthen the staffing at the NCDEM.
- Strengthen EMPG – Federal dollars, which support local government, need to be matched.
- Need a new State Emergency Operations Center so there is room for all of the partners that come together when we experience grand scale disasters.

Thank you. "

- **Dr. Leah Devlin: Acting Director of Department of Health and Human Services**

"Thank you Mr. Chairmen and members of the committee. I will address the public health infrastructure and how preparedness fits into that. I will focus on two key concerns: Avian Flu and Pandemic Flu. If we are going to be able to respond and participate fully in our preparedness responsibilities, then our state and local governmental public health system has to be strong *(Attachment 4).* Some of the issues that you will read about in the document before you (Attachment 5) Public Health Improvement Plan Public Health Task Force 2004 (a 2-year initiative to strengthen the public health system) include: infrastructure issues- like accreditation and work force development and core service gaps in public health, which need attention if we are to be strong and responsive.

Public health has always been about the business of preparedness *(Attachment 6)*. We began around the turn of the century dealing with plaque and pestilence going on to eliminating small pox in the world. In recent times, we have had success with infectious diseases using antibiotics and other understandings of germ theory over the past century. Most of the illness in North Carolina has turn to chronic diseases. However, now in an age of bio-terrorism following 2001, communicable diseases and preparedness are back as a renewed central core part of our mission. Over the past five years, we have seen a reemergence of West Nile virus; dealt with Anthrax in 2001, every year our flu season is a challenge (whether a shortage, or unusual spike of children's death, or a distribution problem). But every year the flu season is a challenge. In 2003, we had one of the eight laboratory confirmed test of SARS in the country. So we have had enormous opportunity with pandemic flu; terrorist acts; biological, chemical, nuclear, and radiological threats. We use our preparedness capability on a daily basis for traditional public health threats as well as preparing, drilling, exercising, and planning for an act of terrorism. We do this in partnership as previous speakers have mentioned. We work very closely with our local health departments, our hospitals, Emergency Management, the Department of Agriculture, all of our military institutions in the State, and our General Assembly. The General Assembly has been a critical partner. In 2001, we had our Anthrax attack in October, and the General Assembly fronted funding to Public Health to begin our preparedness work before the federal funding was available (six months later). In the last few years, the General Assembly has strengthened the public health laws and supported us in our planning work. We thank you for that.

I have grouped a lot into four goals of our preparedness initiative:

- Planning, Training, Exercising (Including: Surveillance, Disease investigation, Vaccination/ prophylaxis, Quarantine and Isolation, Mass care, Mass fatality, Public information, and Command / Control / Communications).

- Early Detection and Rapid Response (Including: Health Alert Network (HAN), NC DETECT – Database, Hospital Emergency System Surveillance (NCHESS), Electronic Disease Surveillance (NC EDSS), and Laboratory Information Management System (LIMS).

- Enhanced Laboratory Capabilities (Including: Three regional labs, BSL III Lab Central, Technology Improvements, Enhanced Chemical and Radiological Capacity.

- Hospital Preparedness (Including: Eight Regional Advisory Committees (RACs), Each anchored by a major trauma center, Tiered Response SMATs I, II, III, NC Medical Examiner's Office.

We have a commitment to planning with our partners, training, drilling and exercising. We also have a very good plan in North Carolina tied to our emergency response plan; we have a stockpile plan deployment, small pox plan, and pandemic flu plan. So we are working well together in North Carolina, we have deployment plans and we exercise them. So North Carolina is more prepared than we have ever been. The work is not finished; we have wholes and things to be strengthened. Therefore, we are grateful that you have this committee pulled together.

Other major goals are early detection and rapid response, which include issues of people power and expertise. Regarding the capabilities that have been built at the local and state level, seventy of the eight-five health departments have an emergency planner in place. They are all funded to have such; however some of them have chosen to use their funding for other priorities. We have built seven regional response teams in North Carolina; they are co-located with the HAZ-Mat teams. This is important because we do not have resources to fully staff every county health department; therefore we have a regional system that has a physician, nurse, industrial hygienist, and management support staff. Three of them have a pharmacist and all have a veterinarian associated with them. That is the group that provides the preparedness networking and support for all of the counties.

We also have a state-led preparedness team which is critical for providing leadership and coordination on a statewide basis with our statewide partners and with the Federal Government. I have included the Department of Agriculture and hospitals because these are very important parts of our surveillance programs looking at animal disease and its impact on human health. We have funded twelve of the largest hospitals (geographically distributed) across the State with epidemiologists, another part of our surveillance network.

Regarding technology: There is nothing more important than the ability to communicate well, quickly, and on a secure network with our partners. We have approximately 300 people on our health network system. This system will contact the appropriate person identified by pager, phone, or E-mail to get vital information to them. If that individual does not respond in five minutes, the call is sent to the next person on the call list. It continues to page or E-mail until we get someone that receives that message in that county, hospital, in the Dept. of Agriculture, or in Crime Control and Public Safety that will accept responsibility.

The next four issues deal with our public health radar system in North Carolina. If we see anything unusual; either the wrong time of year for this type of illness, or have never seen it in this country, seeing too much of it, have an unusual pattern, or something that is antibiotic resistant all of a sudden, then we need to take a closer look at that. One

that you may have read about in the newspaper is the Hospital NCHESS System; where all hospitals now report their chief medical complaint of every person entering the emergency room to public health every 12 hours. This is a first and is as close to real time as any other reporting system in the nation. Our NC Legislature made that happen, requiring all hospital compliance by 2005. And we have had a great partnership with the NC Hospital Association providing a lot of leadership in this effort.

We have enhanced our laboratory capabilities with technology (a laboratory information management system). We have built three regional labs, have doubled our laboratory capacity here in our main site, and have added a fair amount in the area of radiological capability. The State Lab is 35 years old and not up to the task of doing what is needed to protect the public health of North Carolina.

The fourth major goal of our preparedness work is to help the hospitals with their preparedness systems (the Division of Facility Emergency Medical Services is responsible for administering the federal grant): (1) We have developed with them eight regional advisory committees (the planning regions anchored by a major trauma center to manage mass casualties) and (2) we have developed a tiered response (the state medical assistance teams and the SMATs I, II, and III). SMAT I duplicate the SORT team of Winston-Salem, now a statewide resource and very well equipped. Level II, is a more regional response of mobile units, and level III is 90 packages of decontamination and rapid response for mass casualties. We have also provided more support to the medical examiners office if dealing with mass casualties.

Influenza: the yearly flu that is primarily a wintertime illness, and occurring from November to April *(Attachment 7*). Usually there are type A and type B viruses circulating. Type A viruses infect lots of different animals in addition to humans, which is why we are watching more closely when type A is circulating. Type B only infects humans, and is a usually less severe illness. But typically when the flu vaccines are put together, we identify next year's vaccine on what happening currently. So by the month of May, the vaccine manufacturers will be in production for the next season. By January 30th, one of the flu vaccine manufacturers did all of their pre-booking for next year's vaccine season… that is how far ahead this is planned. Every year the flu kills about 1000 people in North Carolina.

Avian influenza is a type A virus, which is why we are concerned about it…it can infect humans and animals. North Carolina has had some human transitions, 170 cases and 92 deaths since 2003 (a 50 percent mortality rate in seven countries). We have had transmission of avian flu to people since 1997; this is not new to public health. It has gotten a lot press lately because we are seeing increasing movement of birds across the world and an increase transmission to humans. We are on worldwide alert in terms of watching this particular H5N1 virus. According to recent news, there are over 1400 pathogens that effect human health and 58% of them come from animals. In the last 25 years, we have had 38 bugs migrate to human health, so this happens quite frequently. Currently, there is no avian flu in birds or people in the United States.

Pandemic flu is when there is type A disease (maybe of avian origin, some in the past have been) of a strain that we have not been exposed to before (so there is no immunity or vaccine); it has to be easily transmitted from animal to human; easily transmitted from human to human; and it has to cause severe disease. Presently, we do not have easy

transmission of this particular bug to humans and we do not have human-to-human transmission. That is what we are watching here.

We have had three pandemics in the last century with flu: (1) in 1918 there were 500,000 deaths in the United States; (2) the Asian flu of 1957 killed over 70,000 people; and (3) in 1968 it killed over 30,000 people in this country. SARS was considered to be an epidemic; we had 8,000 people sick worldwide and 800 deaths. SARS was not pandemic; however, we are and have been overdue for pandemic flu. This is our estimation of what will happen in North Carolina (which may be conservative): that we would see perhaps five times as many deaths from pandemic flu, assuming a 25% attack rate in the population. The thing about pandemic flu is that the mortality rates are not always high in the population which the annual flu impacts the most; that is the chronically ill, frail, elderly, and young children. Actually it is the healthy adults that are most at risk, which would be our working population.

So these are some of the challenges: We would expect this to be a worldwide event, would be several months or longer in duration, and would come several waves separated by several months in between. We do know that our communities would be overwhelmed, particularly our health services. We do not have what is needed, in turns of personnel, beds, ventilators, and personal protective gear. However, we do have a plan that is real (printed on the Internet), we revised it in January 2006 based on the President's release of the Federal Pandemic flu plan. On the Web, there is a checklist for the public, what businesses can do to be prepared, and faith based community preparation. The education checklist will probably be issued on March 21, 2006 when we have our Pandemic flu Summit here in Raleigh, NC.

Related to pandemic flu planning are the issues of vaccine and antiviral: how much is available and who is the receive it. We would issue community containment measures in the attempt to limit the spread of influenza without disrupting the community too much. Quarantine measures have been long honored tools in public health. This may require quarantine of groups or neighborhoods; we are prepared with very good laws in terms of isolation in preparedness. Travel restrictions would also be involved. Mental health issues and fear in the population would require management. We learned from the anthrax in 2001 that although Anthrax was not contagious from person-to-person, but fear was.

In terms of future needs and issues: The NCGA appropriated $250k (last session) for us to do a study with our partners in Agriculture and the SBI. But we need new laboratory facilities in many of our areas to be fully prepared. The NC Medical Examiner facility is quite antiquated and would not be able to handle any level of mass casualties; it struggles now to get its work done. The surge capacity is something that we have many challenges around; we did some of this work in responding to Katrina. We deployed the SMAT I, Med I from Charlotte, we sent 500 health care personnel, attended 7,000 patients, 15,000 prescriptions filled over an 8 week period. So we had some work there with the surge capacity, but how we bring in the medical and private community of health care providers is a challenge. Our federal government continues to back up on us in our state and local preparedness funding, and we've taken several million dollars of reduction over the past several years (a grave concern to us). We don't have what we need in regards to antiviral and vaccines.

In North Carolina, either we are all protected or we are all at risk. There are health disparity issues in preparedness as well. We must deal in a very positive way with

vulnerable populations; play together in an effective response; understand why we have priority groups; report to health care providers, and understand why we have travel restrictions, quarantine and isolation. In conclusion, there are many challenges ahead for us in public health and we appreciate your interest and leadership in this. We want to work together to make North Carolina as prepared and responsive as we can be together. Thank you."

- **Dr. Marty Zaluski: Director of the Emergency Planning Division - Department of Agriculture**

"Thank you Mr. Chairmen and committee members. As Dr. Devlin mentioned, we do have a significant task ahead of us, and many of these diseases that affect public health have originated from animals *(Attachment 8).* I'll focus primarily on agriculture although there are obviously public health implications of avian influenza to the people of North Carolina. The State has approximately 4500 commercial poultry farms. The contribution to the North Carolina economy is quite significant, about $2.75 billion in cash receipts from the poultry industry. That does not include all of the ancillary agri-business that gets revenue from this production.

To address influenza in general and avian influenza specifically: I will summarize or outline what we are doing currently to detect avian influenza in North Carolina and suggest a couple of remedies or priorities we need to have in front of us. First of all, there's significant intermixing of avian influenza between species. The waterfowl are in fact the reservoir in the middle of genetic recombination or intermixing of materials in and between bird species. So there is significant concern as far as the avian flu mutating and turning into a different and much more virulent form to one that can affect humans, or one that can readily jump from animals to people.

As to types of influenza: On the human side we have seasonal and pandemic and on the avian side there is low or high pathogenicity (i.e. health impact to humans). We do see avian flu in North Carolina occasionally; we had an outbreak in 2002 (which we successfully controlled). What the world is most concerned about at this point is the highly pathogenic H5N1 avian influenza. The biggest concern is that the highly pathogenic avian influenza will mutate into a pandemic influenza.

The United States has had only three highly pathogenic avian influenza outbreaks in the last 80 years; one in 1924 in live bird markets, one in 1983, and one in 2004 in Texas (which was quickly eradicated). The reasons people are concerned are not only because it has potential public health significance, but also because of the completely uncontrolled infections that have taken place in Asia. From January of 2004 to January 2006, there were a tremendous number of countries that have been infected. Continents with confirmed H5N1 outbreaks include: Africa, East Asia & the Pacific, South Asia, Europe & Eurasia, and the Near East. This H5N1 avian flu is occurring through smuggled birds or migratory flight; which continues to spread completely unfettered and we are very concerned that it could reach North America (including the United States). In fact this disease is spreading so fast that the Internet maps tracking this disease could not stay updated. Egypt, India and France happened last week and we don't know what

this week will bring. Therefore, this is a rapidly spreading disease and seems to be getting worse and spreading faster.

Again, the two ways we are most concerned of getting the H5N1 avian flu are via smuggled infected birds or migratory flyways. The ones we are most concerned about is the East Atlantic flyway where there are birds from China and North America going down to the southern tip of Africa (where they are commingling there and returning to their summer migratory areas), where those birds will intermix in South Africa. Then North America will get potentially infected birds in this manner. The other flyway that we are concerned about is the East Asia / Australian flyway, these birds go down from Asia towards Australia and some of those birds go to Alaska. And through other flyways and migratory patterns, we could potentially get avian influenza in North America in that way. So, the risk is pretty significance. What we feel at this point is that the pandemic possibility is definitely something that we need to prepare for, but certainly avian influenza is a disease that will definitely come to the United States sooner or later.

What we are doing in North Carolina is that we have the Veterinary Diagnostic Laboratory System; which is anchored in Raleigh (with Rollins Animal Health Diagnostic Laboratory and four branch labs). We have conducted aggressive surveillance for avian influenza for years, since 1984. Currently, we test all birds submitted with respiratory signs, we test all avian blood samples for one week during the month, and we test all samples for avian influenza when a request is submitted for export or a private grower that may have questions regarding the health of the birds. And there is a recent voluntary program where meat birds (broiler chickens) are tested within 10 days of slaughter. In 2004 we have tested 186,000 samples for avian influenza at Rollins Animal Health Diagnostic Laboratory. So we have been very aggressive about looking for this disease for a number of years.

What else are we doing to prepare in North Carolina? We have the AI Response Plan; a Low and High Path Plan (the High Plan is still in draft), GIS Mapping resources; and we are conducting local and county exercises with Public Health and with county emergency managers. We have an AI Human Health Task Force, which is specifically focused on the implications of avian influenza for the human population in North Carolina. This is a tremendous important task force with industry participation and a number of agencies. Other capabilities include our experience with eradiating avian influenza in North Carolina; we did have a H7N2 Low Path outbreak that we confined to three commercial facilities. The same outbreak was linked to an outbreak in Virginia where they had 197 premises, with 4 million birds dead which cost their state / region $150 million. We have a lot of work to do, but we have a good track record in regards to eradicating avian flu in this State.

The good news is that no H5N1 has been confirmed in North America, although we are very concerned that it will get here in a matter of time. There has been no significant human-to-human transmission; the transmission from animals to human has also been very limited (it has only been through extensive and direct contact with sick poultry); and there is no food safety risk from avian influenza viruses.

As for the challenges ahead: We are likely to have H5N1 affect North America and North Carolina potentially, so we need to do more to prepare. Our poultry industry is a $2.7 billion business so it really behooves us to protect both public health and the North Carolina economy. Regarding the outdated labs in Public Health and Agriculture; at this

point we are stretched to the limit by running those 200,000 samples for avian influenza annually. Imagine the extra load that would be placed on laboratory system if an outbreak occurs in North Carolina. Those labs will not be able to keep up and North Carolina will be at a significant disadvantage in regards to eradicating the disease rapidly and maintaining our business sector. The importance is not only how fast it is eradicated or how many birds we kill, but how much industry do we have left if this takes place. If eradicated in three months and the poultry industry is significantly reduced or wiped out, and then we have not won that fight. I recommend that we increase personnel for outreach and education, collaborate with wildlife, and to maintain business continuity for consumer demand. Within two days of diagnosis of high pathogenic avian influenza in Italy, their domestic demand for poultry was decreased by 70%. They were left with only 30% of their poultry industry. The risk to public health is negligible, but emotions are driving these kinds of decisions. One of our biggest challenges, and one of the ways we need tremendous support, is to make sure that we perform outreach, consumer education, and confidence busting measures for the poultry industry. We may have a disease that does not affect public health at all or has minimal impact on our poultry industry (as far as getting birds sick), but it has a devastating effect on our poultry industry as far decreasing the markets for our products. I appreciate you time."

- **Mr. Larry Shirley: Director of the State Energy Office**

"Thank you Mr. Chairmen and members of the committee. We have been on the edge of declaring an energy emergency in North Carolina, so we've had the advantage of learning from a previous situation. The State Energy Office principally works in three different areas: (1) Energy efficiency; where we are charged with leading the State with reducing our energy consumption. We have an on-going program to reduce energy by 20% in all State buildings including our 16 Universities. We've reduced energy usage by $160 million over the last decade. (2) Energy renewal; North Carolina has an enormous amount of renewable energy sources; for example hydro, solar, wind, and biomass (i.e. animal waste, wood waste, crop waste, etc.). (3) Alternative fuels and vehicles; the State has been the leader in making the transition (we have over 4600 alternative fuel vehicles in the State car fleet and our DOT is the leading user of bio-diesel in North Carolina as well).(*Attachments 9 & 10*).

The 1975 NC Statue 113B-9 required the NC Energy Emergency Plan. The plan supports the work of our Emergency Management function in the State; we staff an energy desk to help them get information related to natural disasters and other emergencies. It is a source for assessing the amount of energy supply available, to look for the impacts of impending shortages and how we might ease the situation. The plan emphasizes communication and voluntary actions before state government mandates fuel allocation. And it coordinates and advises citizens, businesses, and others to try to remove barriers so that the private sector can act easily (in many cases in an energy emergency, it is the private sector that acts to try to fill the fuel gaps which may need barriers removed). During Hurricanes Katrina and Rita, we temporarily removed the barrier of the type of fuel to be used in the State (in terms of emission characteristics) so we could access any fuel available. On the federal level, we waived the requirements of

driver limits so fuel drivers could enter the State with longer hours than ordinary. Those kinds of remedies are taken when possible.

In Hurricanes Katrina & Rita; we faced a shut down of our pipeline system coming from the Gulf (which brings 90% of the petroleum we use). North Carolina has a 90% dependency on two pipelines, the other 10% we get by ship (in a small private facility in the Wilmington port), and the rest by truck. We are one of the most dependent states in the nation on pipelines for fuel. All of the refineries were shut down in the Louisiana and Mississippi area, 29% of all the refinery capacity in the US was offline, and much of it remained off for a considerable amount of time. Our role was to advise the Governor and other agencies and to start monitoring the fuel supply in the State.

It is an imperfect system that needs to be improved; terminals check the amount of fuel on hand in an unregulated area of business with regard to prices. New lines of communication had to be established and shipments were not accurately recorded. We banned all non-essential travel throughout State Government and Universities and urged conservation by everyone. We also discovered a problem: for many of our first responders were at risk (those who are the people needing fuel during a crisis), we found that they were on low bid contracts with independent suppliers. Independent suppliers are the first to be cut off by the terminals when supply is reduced, in most cases with inadequate allowances for back-up fuel suppliers.

Even today, we have one million barrels of oil in the Gulf in refinery capacity that is either shut down or curtailed (we used about 20 million barrels/day in the US). In Hurricanes Katrina and Rita; 167 flat forms were destroyed or damaged; we had 21 gas processing plants down (still several down); and we had 183 different pipelines destroyed. Today, we still have 1/4 of the oil production from the Gulf rigs down; 17% of the natural gas capacity shut in from the Gulf; and much of that will remain as we head into the next hurricane season.

We must work on several areas: (1) we need to be able to fully assess North Carolina's fuel needs on a daily basis, a better system for getting that information quickly and to stay on top of it, and pay very close attention to the fuel needs of our first responder agencies. (2) Our schools need to be monitored via the Department of Public Instruction. (3) make sure our municipalities, counties and critical business (eg. food suppliers) get needed fuel. (4) We need to begin better communication with petroleum providers. (5) Need to determine what fuel storage capacity we have in North Carolina (currently an inadequate storage). We may need to build more storage facilities. (6) We need to consider additional fuel needs in the future, should we diversify our sources. (7) We need to develop alternative fuels in the State (ethanol and bio-diesel). (8) Finally, we need to reduce fuel usage.

In conclusion, we need to improve our infrastructure, improve communication, and improve storage and access to other fuels. Thank you."

- **Commissioner Jim Long and Deputy Commissioner Wanda Edwards: Department of Insurance**

Commissioner Long: Served in the NC General Assembly 35 years ago, currently serves as the Fire Marshall works very closely with those is setting up the emergency operations centers in Raleigh and all over the regions. "Following a disaster, we go out

as building inspectors and engineers to inspect shelters for safety issues; we inspect State buildings since we insure all of the facilities; we also go out with consumer assistance to take care of claims from storms (having to license any brought in from out-of-state), and we deal with the claims on State owned buildings. A Hurricane from Wilmington to Raleigh would cause major damages.

One of the things that we work on is easing and preventing the loss of life, injuries, and damages. Since Hurricane Floyd in 1999, we have pushed very hard on the purchased of flood insurance. We required agents to take a course in flood insurance; approximately 80% of our agents completed that course. We are working the National Flood Insurance Program and will require the course every three years. What we are trying to do is make sure everyone knows about and purchases flood insurance; we require agents to have clients sign a statement saying "that they understand that they should have it but do not want it (when electing to not take it)". In line with that prevention message, I want to present Ms. Wanda Edwards - our Chief Engineer in the Office of State Fire Marshall. She spent time as a Fulbright Scholar in Trinidad and Tobago, putting together a disaster preparedness plan."

Ms. Edwards: *(Attachment 11)* "Thank you for this opportunity to address the study committee and discuss emergency response and preparedness as it relates to building codes in North Carolina. Building codes are an integral part of any emergency management plan for a variety of reasons; to save lives, protect the inhabitants of buildings in disaster events, and to outline criteria for the design and construction of structures in the State. Replacing the extensive infrastructure would be expensive and time consuming.

The Building Codes in North Carolina are written and published by the NC Building Code Council (17 members all appointed by the Governor to serve a six-year term). The members represent the construction industry: including architects, engineers, contractors, subcontractors, inspectors, city and county government representatives, and one public member. The Commission of Insurance has general supervision authority for the administration and enforcement of building codes via the Engineering Division of the NC Department of Insurance.

Historically, North Carolina has enjoyed the reputation as a leader in building codes: having been one of the first States in the union to mandate a statewide building code, to institute a certification program for inspectors, and a mandatory inspection program. North Carolina worked hard to write and publish its own code, later moving to the Standard Building Code used by most states in the Southeast and most recently progressing to the International Building Codes currently adopted by most states of the United States. Unfortunately, we have lost our status and reputation as a leader in the building code industry and we have not kept pace with national standards. NC Building Codes have been heavily amended. The amendments adopted by the Council have lessened the requirements of the International Codes.

One highly debated and controversial amendment was to delete windborne debris protection in North Carolina. Windborne debris protection is required by the International Codes in areas subject to high winds. The purpose of windborne debris protection is to prevent failure of the most vulnerable places in a house (eg. doors and windows). Recent home designs have delivered homes with more and more glass,

making the structure more vulnerable to destruction. In laymen's terms, once a window has been broken, the wind blows into the house increasing in pressure within the house until the structure literally explodes. Under the current standards small flying debris (made air borne during a hurricane) can easily break a window in a house, resulting in the roof blowing off. Once the roof is compromised, the walls begin to collapse. Impact resistant glass, storm shutters, or something as simple as securing fastening plywood can provide windborne debris protection over doors and windows. We have focused on making sure that foundations are adequate, our walls and roofs are securely fastened to the structure, but have ignored one of the most important aspects – protecting the structure.

While windborne debris protection does increase the initial cost of a structure, studies show that over the life of the structure, the savings realized by the homeowner more than covers the cost of the protection. Unfortunately, the Homebuilders of North Carolina were opposed to windborne debris protection of any kind and successfully fought and won its exclusion from the code. The argument was that the requirement would adversely affect affordable housing, which no longer exists in our coastal communities. Effective January 1, 2006, windborne debris protection will be required within the 1500 feet of the Atlantic Ocean, still a drastic reduction from the requirements set forth in the International Building Codes, and it only applies to new construction. With the requirement only affecting new structures within 1500 feet of the ocean, there will be very few new structures built with windborne debris protection. As a result, many insurers have left the North Carolina coast and no are longer willing to underwrite insurance policies in coastal communities.

The Insurance Services Organization reviews codes in states throughout the United States and rate local governments on such items as the code provisions. This information is used to establish insurance rates in the State. Because jurisdictions were downgraded significantly as a result of this provision being deleted from the code, numerous coastal jurisdictions have appeared before the Building Code Council to request inclusion of windborne debris protection. The Council reconsidered and decided to require windborne debris protection within 1500 feet of the Atlantic Ocean. The International Codes would have required this protection in most areas east of I-95. The protection within 1500 feet of the Atlantic Ocean will have little effect on ISO rating, as well as requiring very few structures to provide protection given that most of the land within 1500 feet has already been developed.

Windborne debris protection can be very important with respect to shelters. Hurricane Katrina taught many lessens on what can happen in shelters where large numbers of people are brought together to weather a storm. Many times, gymnasiums and large open structures are designated as shelters. Interestingly, North Carolina has not lessened the requirements for earthquake design, but has lessened the requirement for wind design (which is a more likely event). FEMA has recommended that all states adopt the International Codes without amendments.

The task of assessing and analyzing damages following a storm is very difficult: everyone is busy removing debris and working to repair the damage. Insurance adjusters are interested only in determining the amount of the damage, not the cause of the damage, which is more difficult to determine. While storm surge is a cause of damage, it is too often blamed for all of the damage.

The Building Codes do not contain a lot of requirements for flood protection. The Residential Code refers to the local flood requirements, and the Building Code refers designers to a publication by the American Society of Civil Engineers (ASCE-24), which gives the design criteria for flood resistant construction. The Council has looked at providing more information in the codes regarding flood resistant construction, but felt that the requirements in the code were adequate. The Engineering Division therefore does not have any expertise in this field. The Engineering Division's interest is mainly to see that structures are above the base flood elevation, and providing some guidelines for structures that are built in flood prone areas.

Prior to the advent of the International Code, many industry and engineering experts appeared before and worked with the Building Code Council to develop our building codes. Since the creation of the International Codes, and because most states are moving to adopt the International Codes, interest in the NC Building Code is waning. Experts are putting their time and energy in the International Code process; therefore we no longer have the pool of expertise once available to us. Currently, the NC Statues require that plans for all commercial structures be reviewed by local jurisdictions; however, plans for residential construction are not required for review. Most commercial structures require architects and engineers to seal the plans, whereas, anyone can prepare plans for residential construction. This creates enormous problems as residential designs have become more complex than commercial designs; with asymmetric roof lines, offset walls, large expansive rooms with cathedral ceilings, window walls, and other design elements compared to the small rectangular homes that used to be the norm. Most commercial construction still adheres to the rectangular frame.

Since anyone can design a home in North Carolina, the complex designs, and combined with general contractors who are not required to have any practical experience prior to licensure can be a disaster for homeowners. By requiring plan review, inspectors have an opportunity to review plans in the office, find and correct the problems before construction begins. Therefore, we would recommend that the NC Statues require plan review for homes 3,000 sq. ft. or larger.

After disasters, the Engineering Division provides engineers to serve on State emergency response teams. These teams go into affected areas to work with FEMA and the Small Business Administration to assess damages and report the initial cost figures to the State. The figures are used to determine eligibility for funds depending on whether the event will be declared as a federal or state disaster. Often, the Engineering Division is asked to provide further assistance to local jurisdictions; to do more detailed damage assessment, make any recommendations on which buildings should be condemned, inspect flooded structures, tag homes that need an electrical inspection prior to restoration of electrical service, and various other task.

Last year, the Department of Insurance worked with the NC Building Inspectors Association to develop teams of volunteer inspectors available to local jurisdictions following disasters. The Department of Insurance worked with emergency management officials to include these volunteers with the State Emergency Response Teams. We have provided training for these inspectors, secured a grant from the Association of Independent Agents to provide equipment and tools to these teams so that they may be self-sufficient during a disaster, and can be mobilized immediately following a disaster. Teams will be equipped with generators, sleeping bags, cots, food, inspection tools, and

protective clothing. Local jurisdictions may request assistance following a disaster through their local emergency management coordinator, those requests are then sent to the Emergency Management Command Center in Raleigh, and the teams are then mobilized. We are very proud of the numbers of volunteer inspectors in this program, and the number of local governments who are willing to allow their employees to help jurisdictions in time of need.

In conclusion, my main two recommendations to this study committee are:

- To mandate inclusion of the windborne debris protection requirement in the NC Building Codes as specified in the International Codes.
- Require plan review of residential structures greater than 3,000 square feet.

Thank you for your time."

Co-Chairman Cunningham recognized Co-Chairman Nesbitt to share the four- (4) subcommittee assignments of the members and staff. Senator Nesbitt introduced each staff person assigned to the sub-committees. He stated that the goal in to have each sub-committee complete their work as soon as possible. He admonished them to do two things: Charged with identifying what needs to be done and what is possible to be done immediately. He indicated that any statutory changes, any powers we need to give, identification of money needs (as available), and continuation of services is appropriate. He thanked everyone for meeting in an emergency session to get this done.

Co-Chairman Cunningham opened the floor for questions and discussion by each area of focus.

Question to Mr. Hoell: I understand that you are working on a written emergency management guide for the next emergency?
Mr. Hoell: Yes, we are working very closely with the State Budget Office and a number of State agencies to develop a written program that addresses all of the disaster recovery programs that have been implemented in North Carolina (federal, state, or combined federal & state programs). Rather than having to create new programs on the fly, we will have this reference book in the next disaster.
Question: Will that reference be available to this committee?
Mr. Hoell: Yes, as soon as it is completed. We are hoping to have it completed before the NCGA convenes in May.

Question to Dr. Devlin: (Rep. Glazier): Where are we in terms of other states and our resources to do annual drills statewide in preparation for the different possibilities and seeing how well it will work?
Dr. Devlin: North Carolina is ahead of other states in our preparedness work although there is more to be done. We are leading the US in some areas and have gotten awards for our technology. We will be in Washington, DC this week briefing a Congressional delegation (including the lead physician in The White House) on our early detection and technology system. So we have a lot to be proud of. We are addressing the gaps; we have done a number of exercises within the State, the local Health Departments are

required to perform two per year. This year we did a multi-state exercise with Virginia, Tennessee, and South Carolina…so we continue to drill to improve these plans.
Follow-up question to Dr. Devlin: (Rep. Glazier): The drills that you are doing, are they on paper-drill, computer-drill, or real life drill? And is it a coordinated drill with law enforcement agencies and local governments, or is it a drill strictly within the public health infrastructure alone?
Dr. Devlin: These are tabletops, some of them are web-based, but all are done with partners. The pan flu exercise held statewide on May 24/24, 2006 will be led by Emergency Management, so we are pleased to see that initiative from people outside of Public Health, it will take the entire community. We do drills in partnership and they are real.

Question to Ms. Edwards (Rep. Underhill): If the windborne damage is only required for new construction, what about extensive damage to existing structures that need a total overhaul?
Ms. Edwards: If the damage were significant, then they would have to meet the provisions of the code.
Question to Ms. Edwards (Rep. Underhill): Are you suggesting that we require windborne damage for all new construction across the State?
Ms. Edwards: No, just as it is required by the International Codes which are areas subject to high winds. This does not apply to just costal regions; mountain regions are also subject to high winds. In the east of the State, it would be east of I-95 and in the west in would be above a certain elevation.

Question to Dr. Zaluski (Rep. Coleman): During flooding to the point of soil contamination, is there anything done to treat the soil that will be used to grow produce?
Dr. Zaluski: Not my area of expertise to discuss contamination at large, but in regards to biological contamination and agents…those are easily degraded by sunlight and dry conditions. With very few exceptions, it is highly unlikely that we would have an avian influenza or animal virus (through manure or otherwise) that would be applied to crops to pose a public health risk.

Question to Mr. Hoell, Major General Ingram, and Mr. Shirley (Rep. Pate): We have not heard much about our nuclear power stations in North Carolina, our military installations, or the National Guard. Do we have any sort of agreements from the National Military, where do the National Guard detachments get their fuel during an emergency, and what plans to we have to assist our privately owned utilities (like accidents or attacks to our power stations)?
Mr. Hoell: I can speak to the power plant issue; we work closely with Progress Energy and Duke Energy to have quality evacuation plans for the ten-mile emergency-planning zone surrounding nuclear power plants. We have 4 plants affecting the State; 3 located in North Carolina and the Catawba plant actually located in South Carolina. We perform emergency exercises with those power plants every two years (which means 1 per 6 month period). We work very closely with all of our state emergency response team partners, we activate the State Emergency Operations Center, and we work very closely with the local governments within those 10-mile planning zones. It is a constant

planning, training, exercising process that we go through to be prepared for emergencies that may occur at any one of the power plants. Though most of those are predicated on some event happening within the operations system of the plant. It there were to be a terrorist event, there is a buffer zone protection plan that has been done with terrorism funds to think in terms of how do we strengthen security and better protect those nuclear power plant facilities. It is an ongoing process; therefore they are the best-prepared counties in North Carolina because the nuclear power industry is contributing dollars to help purchase equipment and plan.

Major General Ingram: For the federal response, all commanders of military bases in North Carolina have the local authority to save life and limb in the surrounding area of a nuclear facility within the first 24 hours of response. We practice this through Emergency Management at Camp Lejeune and Fort Bragg. The federal response that would come to North Carolina would come from Northern Command in Colorado Springs (commanded by a four star admiral). If an army response, it would work through the 5th United States Army, the army component of Army Northern Command. That would happen if the Governor asks for and receives federal assistance in a federally declared emergency. We have a defense-coordinating officer that works at the FEMA regions (region 4 for NC) and there is a 6-man cell that comes from Northern Command that works in Atlanta, GA with FEMA 4. They would work with Mr. Hoell if he requested federal assistance without a federally declared disaster, providing helicopters from Bragg or Lejeune, or assistance from Seymour-Johnson, he works through the defense-coordinating officer and specific mission capability comes into North Carolina and then leave. In the case of fuel for the NC National Guard during disasters, we typically get fuel from DOT facilities located around the State.

Follow-up question (Rep. Pate): With the pipelines being down, as discovered in Katrina and Rita, what sort of back up plan does the military have for fuel?

None of the presenters present were qualified to answer this question.

Meeting Handouts: Attachments

1. *Minutes of February 21, 2006*
2. *Visitor Registration Sheet on 2/21/2006*
3. *Are We Prepared?*
4. *Public Health & Bioterrorism Preparedness & Response*
5. *Public Health Improvement Plan (Public Health Task Force 2004)*
6. *Major Infrastructure Development in North Carolina Public Health Preparedness and Response Since 9/11/2001*
7. *Pandemic Influenza: A Primer*
8. *Avian Influenza: A Primer*
9. *NC Energy Emergency Plan Overview*
10. *North Carolina Energy Emergency Plan (2003 Revision)*
11. *Written Comments By: Ms Wanda Edwards*

The next subcommittee meeting was set for March 28, 2006.
The meeting adjourned at 12:30 p.m.
Respectfully submitted,

_____	_____
Valerie S. Rustin	Vickie Spears
Committee Assistant	Committee Assistant
_____	_____
Representative W. Pete Cunningham	Senator Martin Nesbitt, Jr.
Co-Chair	Co-Chair