

COMPLETE STATEMENT

OF

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BEFORE

**THE COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEE ON EMERGENCY PREPAREDNESS, RESPONSE,
AND COMMUNICATIONS**

UNITED STATES HOUSE OF REPRESENTATIVES

ON

**ENSURING EFFECTIVE PREPAREDNESS AND RESPONSE:
LESSONS LEARNED
FROM HURRICANE IRENE AND TROPICAL STORM LEE**

NOVEMBER 29, 2011

Mr. Chairman and members of the Subcommittee, good morning and welcome to Northeastern Pennsylvania. My name is James Brozena and I am the Executive Director of the Luzerne County Flood Protection Authority. Thank you for the opportunity to provide my insights into lessons learned during the recent Tropical Storm Lee event and my comments regarding the federal response to recovery efforts.

To provide you with some background, the Authority operates and maintains the Wyoming Valley Levee System located in the Wyoming Valley in northeastern Pennsylvania. The Wyoming Valley Levee System consists of approximately 16 miles of levees and floodwalls, 13 pump stations, closure structures and relief wells. The system provides protection for approximately 65,000 residents located in nine communities from the Susquehanna River. The Wyoming Valley Levee Raising Project, which raised the existing levees overtopped in 1972 by Tropical Storm Agnes, started construction in 1997. Work is still ongoing.

TROPICAL STORM LEE - SEPTEMBER 2011 **Levee System**

On Monday, September 5, the National Weather Service Binghamton Office provided its first briefing from its Warning Coordinating Meteorologist. Briefings continued on throughout the week as the situation worsened. The web based briefings provided an efficient means of informing Emergency Management personnel from all counties in the region concurrently about current and projected river conditions. Also, it gave Emergency Management officials the ability to understand issues and problems occurring in neighboring counties. The “local knowledge” of all areas in the service area allowed for keen insights by the National Weather Service meteorologists. If specific areas of concern were observed, the National Weather Service and River Forecast Centers were available for direct consultation.

As the projected river crests continued to rise, the Authority contacted the U. S. Army Corps of Engineers, Baltimore District, to request assistance in the emergency operations during the event. Multiple teams arrived Thursday afternoon. The Wyoming Valley was under a mandatory evacuation beginning at 4 pm Thursday as the river was now projected to crest at 41 feet later that evening. Approximately 100,000 residents would be evacuated. The projected crest would match the flood of record for Wilkes-Barre set in 1972.

The Authority was fortunate to have several professional engineers from the county volunteer their assistance with the levee patrols. Also, several Corps personnel that resided in the area volunteered their help as well. In addition, a local contractor, Mericle Construction, offered to stage equipment and material at several locations in the event that it would be needed. All of their efforts would be needed in the next twenty-four hours to contain the river.

Issues developed with the closure structure as the Market Street Bridge in both Kingston and Wilkes-Barre as seals failed. A flood wall in Forty Fort began to crack and the Corps provided the Authority recommendations on an interim solution. Mericle Construction completed the work about 2 am Friday morning.

At that point it appeared that the river had crested at 38.5 feet; however, the United States Geological Survey (USGS) gage had reached its operating limits. This information was not known by the Authority, the Corps, the National Weather Service or the Susquehanna River Basin Commission. During a review of the Forty Fort repair officials determined that the gage had failed and that the river had crested early Friday morning, September 8, 2011 at 42.66 feet. This surpassed the previous flood of record set during Tropical Storm Agnes in June 1972 and was 1.66 feet above the design height of the raised levee system.

Additional problems arose Friday morning with boils in Forty Fort, Kingston and Plymouth. The water began to recede and residents in the protected areas were allowed to return to their homes Saturday afternoon. The Wyoming Valley Levee System had prevented approximately \$5 billion in damages.

Unfortunately, not all areas of the Wyoming Valley escaped unharmed. Nearly 3,000 properties in unprotected communities were flooded.

The early notification from the National Weather Service and the River Forecast Center, the expertise of Corps and local engineering professionals, the skills of local contractors and local municipal public works employees and the dedication of volunteers prevented Tropical Storm Lee from becoming a much larger disaster.

The Luzerne County Board of Commissioners, the Luzerne County Emergency Management Agency, the National Guard, the Red Cross, the Pennsylvania State Police, the Pennsylvania Department of Transportation and all of the other county, state and municipal officials and especially the volunteers are to be commended for their efforts during of the event. During a very difficult time, everyone remained focused on accomplishing the tasks at hand to ensure the safety of lives and property.

LESSONS LEARNED

Levee System

USGS Gage – USGS took action immediately after the flood event to relocate the Wilkes-Barre gage to a location that allows it to now read river heights in excess of the top of the levee system. The new gage was installed within thirty days of the flood event. USGS is working with the Authority to install a staff gage in the event of a failure of the electronic gage. In addition, USGS has come to the realization of its need to make data users aware of operating limits and gage heights of features. It has spurred a movement to accomplish this nationally within the USGS.

Corps of Engineers Emergency Management and Preparedness – As local project sponsors struggle with budgetary constraints, less and less qualified staff is available for levee patrols. The involvement of Corps engineers on site is crucial during major flood events. Also, the Corps should develop High Water Operations training and hold annual training sessions for local project sponsors. A training video should be created and made available that would allow for additional local training opportunities.

Interagency Coordination – The Susquehanna River Basin Commission has expanded its annual Susquehanna Flood Forecast and Warning Interagency Committee meeting to include a discussion with emergency managers and municipal officials to evaluate system performance and share lessons learned during Hurricane Irene and Tropical Storm Lee.

PL84-99 – After major flood events, the Corps has the ability to inspect and rehabilitate flood damage reduction projects. Unfortunately, the timeline for the process is long. Even if projects are economically justified, funding may not be available. Local sponsors, like the Authority, do not have the funding available to address damages caused by significant flood events. Delays in addressing repairs put individuals' safety and property at risk.

Susquehanna Flood Forecast and Warning System – A permanent solution to funding the \$2.4 million Susquehanna Flood Forecast and Warning System must be identified. The system uses radar and a network of stream and rain gages to provide the data that are used to forecast river levels and issue more accurate early flood warnings. The system provides the National Weather Service the critically important data necessary to issue flood warnings. The System is extremely cost-effective, providing a 20-to-1 benefit-cost ratio.

Levee Project Funding – The Wyoming Valley Levee Raising project started immediately after the Agnes flood in 1972. Sadly, the project is still not complete. While the major flood control works are complete, federal funding for the mitigation program is not in place. The project contains a Mitigation Program that provides \$23 million for flood reduction activities in 53 unprotected communities located in five counties. A GIS based Flood Warning System has been used by Emergency Managers for nearly ten years to provide early notifications that have allowed individuals to take protective actions during flooding events. Hazard Mitigation Plans were developed. Approximately 20 homes have been acquired and demolished and numerous other structural flood mitigation projects completed. However, the lack of adequate federal project funding since 2009 has prevented additional projects from being completed. With adequate project funding, additional projects could have been done that would have reduced damages.

LESSONS LEARNED

Post Event - Unprotected Communities

Pennsylvania is one of the most flood prone states in the country. Pennsylvania consists of 67 counties with nearly 2,600 municipalities. Floodplain management responsibilities under the National Flood Insurance Program fall to the municipalities. In Luzerne County, there are 76 municipalities. Many of the communities are staffed by one person that handles all administrative functions. Typically salaries are low and turnover is high. Most do not have the technical expertise or training to properly administer the flood insurance program.

Major flood events are infrequent and the small municipalities are paralyzed immediately following an event. It is at this point that FEMA assistance is most critical as municipal leaders are bombarded with questions regarding flood recovery.

Whether there is a presidential disaster declaration or not, FEMA should immediately contact municipalities by phone or email and remind them of their responsibilities to enforce the requirements of the flood insurance program. Visits to municipalities must occur in a more timely fashion. Most visits did not occur until nearly thirty days after the event and some municipalities still have not been visited.

In addition, while FEMA has thousands of publications, it does not have a "Flooding 101" document. The manual would consist of a comprehensive step by step reference regarding all necessary actions a municipality must undertake following a major disaster. While I use flooding as the topic, the manual should address all hazards.

Looking forward, FEMA should require the annual registration of a municipal flood plain manager. In addition, video training or webinars should be developed to continue to educate municipal officials regarding the National Flood Insurance Program.

Failure to involve county officials in the recovery effort is an error. County staff could act as the liaison between FEMA and the affected municipalities and allow for a consistent message being presented.

A more efficient means of dealing with substantially damaged or destroyed structures must be identified. Property owners flooded in September will not even know if their property is possibly included for acquisition until the end of January. A time line for acquisition still has not been determined. Individuals damaged by flooding cannot be expected to have to wait the 1 1/2 to 3 years that a typical Hazard Mitigation Project takes.

CONCLUSION

Thank you for the opportunity to provide my comments on emergency preparedness and response and the lessons learned during Tropical Storm Lee. Federal officials need to have a better understanding of the challenges facing local governments as the agencies evaluate modifications to their programs.

This concludes my testimony. Again, thank you for this opportunity. I hope that our actions today lead to a more efficient response for the next disaster. If you have any questions, I would be pleased to answer.