



April 11, 2012

**Summary Report of
Nurture Nature Center Forum for Emergency Management Personal
Extreme Weather: Moving from Risk to Readiness**

This report summarizes the results of a forum for emergency management professionals held at Nurture Nature Center (NNC) in Easton, PA on March 15, 2012. The forum on *“Extreme Weather”—Moving from Risk to Readiness (Lessons Learned from Irene, Lee and More)* attracted 31 participants from areas in the Delaware and Lehigh Valleys. This report is designed for leaders of the Emergency Management community and other stakeholders to provide them with details about the concerns and priorities of the emergency managers related to flooding and the possibility of more extreme weather events resulting from a changing climate.

NNC’s mission is to help communities address local environmental risks through science, art, and dialogue. With support from the National Oceanic and Atmospheric Administration (NOAA)¹, NNC hosted this forum. Participants understood that their feedback would be summarized in a report that would be delivered to emergency manager leaders. This report, compiled by NNC, contains a summary of the emergency manager responses to a question posed during the forum as well as results from a survey conducted by RMC Research Corporation, an independent project evaluator funded through the NOAA grant.

Program Format

The forum program began with a presentation called Rising Waters on NNC’s Science on a Sphere exhibit, which shows the conditions for precipitation and looks at current and future trends of flooding. Emergency Managers were then provided an opportunity for discussion

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about related planning and technology needs on a local level. Following that discussion, there were two presentations: one by the Northampton County Emergency Services Director on local emergency manager information and the second by the National Weather Service on the latest technology available in flood warning and awareness systems, including forecasting tools, inundation mapping, and communication aids, for emergency managers and first responders.

Emergency Manager Discussion of Planning and Technology Needs

During the discussion component of the program, one question was posed to attendees concerning local planning and technology needs. Participants were asked to think quietly about the question for a couple minutes and then hold a conversation at their table for about ten minutes before answering.

The question was: **As your community prepares for future flooding events, what changes in emergency planning and/or technology do you think would be important to have?**

Responses included:

- Reactivate the Burlington Delaware River USGS Gage for vital information necessary to make important evacuation discussions.
- We need to provide opportunity for improved individual and family flood preparation.

As a community, there must be a consistent method of warning, identification of flood prone areas, local shelters, pre-flood evacuation, identify community partners, look for local/neighborhood leaders – the local preparation must emphasize that when it is time to evaluate – we will provide a place to go, a means to get there and keep you informed of what is going on in the area during the duration of the event. We will also be attempting to get local communities to sponsor CERT.

- Alternative methods of information gathering. Better methods to educate the public on dangers and proper behavior during events.
- Preparing better enforcements/regulations (outreach). More wells and sewer gauges.
- Improved access to the weather forecasts and data. Example: Some of the private websites have more info than NOAA (such as Weather underground).

Notification to the public (ex. Rev. 911).

- Get the community to understand that all problems and issues are not the responsibility of the local municipality.
- Radio communications between agencies.
- A well prepared notification system. Know your flood levels and where to evacuate first. Keep municipal folks informed and county level personnel.
- Use of technology to increase public/private awareness of planning/response/recovery.
- The use of text messaging as an alert system.
Utilize electronic billboards from private businesses.
More reliable alerts among news agencies.

- Community education.
Technology is sound.
- From a township that has many volunteer agencies need overall better good communication and cooperation between all the emergency responders. Also, to get more people involved in a voluntary and volunteering way.
Better staff communication.
More self-reliance.
- More public awareness education.
More 'digested' information for general public probability.
Rate of rise forecasts in simple terms. More shelter planning and education.
- The general public needs to have more education in planning for a flood, both their homes and family. They need to heed the warnings. Planning and zoning need to identify and govern flood prone areas in a manner to reduce future damage.
- Historical data.
Projections both aerial and visual.
Public education.
Flood insurance information for businesses and homeowners.
- Social media.
Telematics – receiving/sending information.
Increased mitigation funding.
Increased 'green' solutions.
- Better notification systems
Interagency communication and coordination both at the agency and county levels.
More first responders trained in awareness/operations/technician levels for water rescue.
Regionalization of personnel and equipment.
- Better local monitoring of rainfall, additional water flow monitoring.
Better notification options.
- Lehigh and Northampton counties should form a B1-county EMA/response division to better respond to problems in the entire Lehigh Valley Area.
- My community is not in any floodplain, except for a small area surrounding a dammed stream/swamp. Communication is always the most important aspect of planning/mitigation.
Intra-agency notification re: current operations can prevent unintended gaps in coverage for rescue and evacuation scenarios.
- Bucks County-Noxamixon Township – Our largest challenge during any activation is maintaining effective communications.

I'd love to see our community participate fully in the NWS "Weather Ready" Community Certification Program. Our exposure along the river proper is minimal, but we have several active tributaries, and it would also be helpful for other kinds of weather emergencies.

But if I could ask for one overarching change, I'd love to just POUND on people about buying, learning to use, and then actually using (on a regular basis) a S.A.M.E. programmable NOAA weather radio. Having them aware of the NWS online hydrographic stream gauges would also really help.

We did this year institute active social media presences on Twitter (@noxemawxcomm) and Facebook, which proved incredibly effective during the earthquake, Irene/Lee and October snowstorm and subsequent power outage events. Strongly recommend this, along with formalizing SMS/Text message networks through online services such as celly.com, because texting survives, along with other data services, even when cellular voice networks go down. This was a critical element of our public outreach during these events.

Survey Results as Summarized by Independent Project Evaluator, RMC Research Corporation

The next section of this report comes directly from a report by independent project evaluator RMC Research Corporation, which summarized the results of a survey that was given to participants at the conclusion of the forum. Thirty discussion participants completed the surveys.

1. Changes in Emergency Planning

Asked about changes in emergency planning that would be important to initiate, 18 of 27 respondents, or 67% answered. The overwhelming response was more public education and awareness, cited by 10 respondents, or 37% of those who answered surveys.

Four respondents identified data sources, especially "the cool stuff that NWS/NOAA has." One of these four also mentioned encouraging his township to work more closely with Northampton County for training and resource sharing. Three respondents identified better notification, planning, and resource use, and one identified efforts to get more people to volunteer and participate during emergencies.

2. Changes in Technology

Asked what changes in technology would be important to have available, 21 out of 30 respondents, or 70%, answered. Two respondents reported the existing system as very good.

Four respondents identified greater use of websites both dedicated for responders' use as well as social media sites such as Facebook and Twitter; three also identified greater cell phone use; and one suggested that everyone have and "use a NOAA weather radio." Individual responses (6) covered a range of topics, for example:

- *Expanded GIS to local level*
- *Monitoring not just on major rivers and tributaries, but also more local and moderate sized tributaries*
- *Regionalization of water rescue resources*

Four respondents wrote broadly about access to information, as in:

- *[Need] another way to access data, maps, radar besides internet— need redundancy*
- *Enhanced technology for better communication and predicting operability throughout EMS organizations*

One respondent wrote he is “Still thinking about it.”