Hurricane and Storm Season 2007. . . Is Your Community Ready?

by Samuel Oppelaar, Jr.

O n February 27, 2007, weather experts from the National Oceanic and Atmospheric Administration (NOAA) reported the onset of a possible weather-producing phenomenon, known as La Niña, in the Pacific basin. The experts predicted a significantly active Atlantic hurricane season as a result of the La Niña effect in the Pacific.

The 2006 storm season was mostly benign in its impact on the United States, but many communities along the Gulf Coast are still recovering from the destruction caused by the multiple tropical storms that struck in 2005. This year, we might not be quite as fortunate as we were in the 2006 season, and it is imperative that we take some actions in advance of that first-named storm that eventually will be headed for landfall in the United States. The La Niña advisory of February 27 could be our first call to action for 2007.[1]

DISASTER CAN STRIKE

Some say that you can never be fully prepared to face disasters. There may be some truth to that, but the opposite is also true. Inherent risks are associated with the potential for naturally occurring disasters, and taking no preparatory action is equivalent to accepting fate without mitigating any of the risks.

The core of this concept is based on fact. We know that tropical storms will develop during the storm season, and with some certainty the hurricane experts[2] predict at least some of these storms will make landfall in the United States. What we don't always know is where exactly this will occur.

In the aviation business, pilots sometimes (rarely, we hope) invoke the big-blue-sky theory of collision avoidance, arguing that, because the sky is so big and aircraft so small, a midair collision is unlikely at best. Those who take this risky approach to safety place themselves and others at significant risk. Actual midair collisions do happen, and they might have been avoided by not subscribing to the big-blue-sky theory of aircraft separation.

The unfortunate parallel to this is that some people seem convinced that "it can't happen to us," and they invoke such varying reasons as "a storm has never hit here before," "we are not in the path of most storms," or "we are safe in this part of the country."

If any part of this mind-set ever becomes business as usual in local government, the potential for increased destruction and loss of life will expand exponentially as a result of inadequate or noneffective preparation. To answer the question posed by this article: One would need to know the potential outcome of disaster striking the community.

County governments in coastal areas publish a graduated flood-plain chart that shows the areas of the county that would flood under varying storm strengths should a direct impact occur. This is an excellent preparatory step as it makes citizens aware of the potential flooding of their homes if a storm strikes the area. Understanding floods is good, but there are significantly more risks associated with a storm strike than just flooding.

This article takes a look at the major risk categories that a local government should consider in the development of disaster response plans, long-range plans, and short-term actions. Practical steps can be taken toward preparation, steps that address risks, risk avoidance, risk mitigation, and recovery.

Certainly the potential for destructive flooding is a risk category associated with storms. Several other areas of risk to the community must also be addressed; these can be called risk groups.

NATURAL DISASTER RISK GROUPS

Citizen Safety Risk Group. In preparing for natural disasters such as tropical storms, protecting citizens from loss of life and injury is the top concern. And, in the aftermath of a storm strike, taking care of survivors who may also be injured is also most important. People may be displaced from their homes and in need of food, water, and shelter.

Local Infrastructure Risk Group. The essential services that people rely on

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day to day are most likely going to be interrupted as a result of a storm strike. We know that most power grids will be shut down as a result of storm damage to the power sources, transmission substations, and residential and commercial power line connections. Water supplies may be cut off because of the loss of power, and water might be undrinkable because of line breaks and treatment center flooding or failure.

Loss of power may take primary communication systems out of service, including landline telephones and cell phone services. Fuel supplies will be reduced or not available because of damage to service stations, loss of power, or exhausted supplies.

Real Property Risk Group. The outright destruction or damage to residential, commercial, and government structures directly contributes to the first two risk groups. Loss of residential structures will increase the number of survivors who require shelter. Loss of commercial structures will decrease available supplies of food, water, fuel, and emergency items such as flashlights, generators, lumber, and other construction materials.

Loss of government structures will result in the interruption of local services, including services by first responders. Loss or damage to roads and bridges will hamper relief efforts during and after the disaster by preventing emergency personnel from reaching citizens in distress.

Economic Risk Group. Local businesses that provide services to citizens may face a serious economic impact as a result of a storm strike. Jobs may be lost or interrupted because workers have been displaced or a job site damaged or power lost, and jobs may be suspended or terminated because of employers' financial distress.

The impact of this loss has second-level effects: People who need money the most may lose their source of income at the worst time. Loss of commercial enterprise will eventually affect the local government's tax base, which is needed to provide continuity of essential services. In short, a storm strike places enormous pressure on individual citizens, the local economy, and government resources.

Emergency Services Risk Group. In the immediate aftermath of a storm strike, the sheer magnitude of the impact on people and property may exceed the response capability of even the best-equipped and -staffed emergency first responders. Communication systems may not operate properly, vehicles may be damaged or destroyed, and the responders themselves may not be able to report for immediate duty.

Taken together, these five risk groups include the bulk of potential risks that a community must plan for. They are not

mutually exclusive because the effects of one or more risk groups impact the others. By establishing this basic set of risk groups, a baseline is formed from which to plan and prepare.

Preparation is essentially a two-step process. First is the identification of specific risks, followed by the establishment of mitigation actions that can reduce or eliminate the risk. It is critical to note, however, that the best-planned mitigations may prove inadequate or ineffective. When this happens, the risk transforms itself into a real problem that will require immediate attention. What can your locality do to make your preparations less vulnerable?

PRACTICAL STEPS TOWARD PREPARATION

Despite the enormous potential destruction and chaos in the wake of a disaster, there are important actions the local government should use in preparation. These steps offer local governments a quick guide to preparation:

Develop and fine-tune your disaster response plan. In the face of impending crisis, having the ability to deviate from a plan to accomplish the mission is always better than having no plan at all. On the battlefield, commanders must have the flexibility and agility to react to unexpected actions of the enemy, which translates to deviating from the plan of attack or adjusting to meet the threat.

A naturally occurring disaster is the enemy of order and good government. It makes unexpected moves, attacks without mercy, and is indiscriminate in its target. The job of community leaders is to have a sound plan of action that addresses each of the five risk groups and that allows the response team the latitude to deviate from the plan when needed to preserve life and property. Some of these steps may be organic to a plan, but they deserve individual description.

Establish mutual support agreements. As stated in the emergency services risk group, during a massive crisis, your response capability may not able to meet the requirement for services.

To mitigate that risk, mutual support agreements should be established with neighboring communities, county-level government, and state agencies. In the event of a disaster, these supporting agencies can be quickly summoned to support your locality.

Establish an emergency response command-and-control capability. This step has several components that form a synergistic capability set:

- Establish a disaster control center (DCC). Your locality may already have a DCC housed in a government facility, but it is also important to arrange for an alternate facility or mobile command post in case your primary facility cannot support operations. The DCC functions as the hub of decision making and communications, with both your response teams and outside support agencies.
- Establish a team of experts to lead and staff the DCC. Simply having a facility to operate from is insufficient in terms of preparation. The team to operate the DCC must be identified in advance and train regularly to operate the equipment and communication systems, while team members practice the processes needed to coordinate response actions.
- Equip the DCC with robust command-and-control communication systems. Your DCC must have the capability to communicate vertically and laterally during operations and be able to operate on its own power source, independent of the local power grid. Communication systems should include access to satellite phones, Internet access, UHF and VHF radios with spare antennas, and an adequate supply of tactical hand-held radios for distribution to response leadership. Commercially available satellite network access equipment can provide your DCC with Internet access even when land-based service providers are not operational.
- Define the chain of command. Establish in writing who is in command of the response. In most

cases, it will be the local government manager, police chief, or fire chief. Describe the reporting chain so there is no doubt where information must go and who is responsible for decisions.
- Conduct DCC exercises. This cannot be overemphasized. It is imperative that the team exercise together regularly to gain understanding and mastery of procedures and actions that will be needed in a real event. Personnel should understand thoroughly the responsibilities of the other team members and have the opportunity to make decisions in a benign environment to test their effectiveness and impact. Emergency communication systems, networks, and radios need to be activated, tested, and used during exercises to the maximum extent possible.

Establish a disaster awareness program for the community. Everyone who lives and works in the area must be aware of their responsibilities in case of disaster. This includes evacuation instructions, awareness of emergency notification procedures, preparation of personal property, and, most important, what to do when disaster strikes.

Residents must be able to identify and locate emergency shelters, know how to notify response teams of the need for emergency care when telephone systems are inoperable, and provide important phone numbers. Individual citizens can also take other precautions in advance, such as setting up a planned evacuation location at a friend's or relative's home outside the local area.

As part of training the DCC, notify and remind the population of emergency preparation activities and include community and business leaders in the preparation of the disaster awareness program.

Open the lines of communication. No command-and-control system, whether civilian, government, or military, can be expected to function effectively within minutes or seconds without routine use. Military, police, fire, and medical response commu-

nication systems are used constantly. Relationships with superiors, subordinates, and lateral organizations are established and, when called into action, require minimum coordination because the relationships across agencies are already well established.

It is also critical that the members of the DCC team routinely make regular contact (not only during a crisis) with local, county, state, and federal agencies to establish close working relationships. Crisis situations that involve time-critical decisions and actions are not the time to realize that you don't have the phone number for a critical support agency, the governor's office, FEMA, or nongovernmental relief agencies that you might rely on. Practice makes perfect (or, at least, effective) when the time comes.

Stock an emergency consumables supply. Part of your disaster response preparation is the establishment of a basic supply of emergency consumables. Food packs, such as meals ready to eat (MREs), bottled water, fuel supplies to run emergency generators, medical supplies, clothing, and blankets are essential components of this contingency supply stock.

Have a plan for how this supply can be accessed, and by whom. Although your stock will probably not be sufficient to service the needs of everyone, it should be sufficiently robust to service your response teams and relief workers right away.

Establish a community disaster response committee. In the event of a disaster, help can come from a wide variety of sources. What's critical is having the organizational structure in place to enable effective and efficient management of relief aid. A multidisciplined committee made up of government, business, and community members can provide a valuable forum for establishing a coordinated set of responses, and it also allows some ownership to the community for emergency planning. Efforts of this committee can directly contribute to the local government's overall disaster-planning effort.

PM Look to ICMA

National Emergency Management Network (NEMN)

As an advocate for a network-centered approach, ICMA has co-founded the National Emergency Management Network (NEMN) that has the flexibility to move people, resources, and assets where they need to be, when they need to be there. NEMN can provide sustained support from one region to another, leveraging the resources of multiple local governments, the private sector, faith community, and nonprofit sector. It played a key role in recruiting a group of Florida professional managers to provide disaster recovery assistance to the Gulf Coast-area community of Pascagoula, Mississippi. (Access to an article on this topic in the April 2007 issue of PM magazine is available at www.icma.org/pm.)

NEMN is an automated mutual aid process for communities, businesses, and nonprofit organizations to deploy, track, and get reimbursed for response and recovery assets through a software system, which is composed of:

■ Comprehensive NIMS compliant database of people and physical assets available for emergency response and recovery efforts, and
■ A geo-mapping and situational awareness tool to identify, visualize, select, activate, deploy, track, and manage municipal and emergency service assets.

Members also receive:

■ A one-day leadership forum to assist policy and decision help their communities respond to, and recover from, disasters.
■ A newsletter, Mutual Aid, which promotes effective and efficient mutual aid between local and state governments
■ Training resources based on the needs of the NEMN members.

For additional information or to join NEMN, visit the Web site at www.nemn.net or call 866/460-NEMN.

READY FOR WHATEVER TAKES PLACE

When we turn on the Weather Channel in the morning and hear the hurricane expert tell us a tropical depression is forming in the Caribbean, we should not be in a state of panic. We should already have taken proactive steps toward having a plan of action if the storm heads our way. We should have practiced our command-and-control procedures, established working relationships with collateral agencies, tested our emergency communication systems, and activated our local emergency notification system.

Now we wait and see where the storm will go. If it heads our way, our disaster response plan kicks in well in advance of the storm, and our response teams, equipment, supplies, and procedures are ready to deal with whatever

nature hands our community. **PM**

[1]Although this paper addresses tropical systems as the core issue, the concepts and ideas presented also apply to other significant natural events such as tornadoes, flooding, severe or destructive thunderstorms, and even wildfires and earthquakes.

[2]The Department of Atmospheric Science at Colorado State University predicts that the 2007 Atlantic hurricane season will include 14 named storms, seven of which will be hurricanes. Three of these are expected to be severe hurricanes. There is a 40 percent probability for landfall along the East Coast of the United States, Florida, and the Gulf Coast.

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