

**THE STORM WITH NO NAME:
Individual and Official Responses to the Superstorm of 1993**

Julia Miller Cantzler
University of Colorado at Boulder
julia.cantzler@colorado.edu

Introduction

From March 12 to March 14, 1993, the eastern third of the United States was crippled by a storm, the size and intensity of which had not been experienced before in many parts of the affected area. As a result of this enormous and unprecedented storm, significant loss of life and property damage occurred from the Caribbean all the way to Nova Scotia. The storm caused considerable damage in 22 states, which was estimated at over \$2 billion (Natural Disaster Survey Report (NDSR) 1994:1-1). At the time, the storm was the fourth costliest disaster in United States history, behind Hurricanes Andrew and Hugo, and the Oakland Hills Fire in California (March 31, 1993). The economic losses from the three-day event were also staggering. For example, about 25% of flights nationwide were cancelled, resulting in tens of millions of dollars in losses to the airline industry.

In the northern states, the threat to life and property was primarily from heavy snow and high winds that caused blizzard conditions (NDSR 1994:ix). Given the accuracy and long lead-time of the forecasts, combined with the minimal coastal flooding that occurred, however, the number of fatalities in the northern region was relatively low. In the southern states, the storm created various hazards from high winds, tornadoes and severe coastal flooding in Florida to heavy snowfall and record cold temperatures in the inland southern states. All in all, the storm claimed about 270 lives, with many of the fatalities resulting from tornadoes and coastal flooding in Florida (NDSR 1994:viii, 1-1). In fact, the 1993 storm caused more deaths by drowning than Hurricane Hugo and Hurricane Andrew combined. A significant number of fatalities from heart

attacks caused by overexertion while shoveling heavy snow were indirectly attributed to the storm (NDSR 1994:viii).

In light of the massive scope of the storm's impact and its devastating toll in lives and property, it has been dubbed by many as "The Storm of the Century" or the "Superstorm." Because it was a nontropical storm that struck well before the beginning of Hurricane season, Floridians know it simply as the "No-Name Storm."

Purpose of the Study

This report examines the social impacts of the No-Name Storm in Florida's Pasco and Citrus Counties. These counties were severely affected by the storm and, in the collective memories of the counties' residents, the storm continues to represent the most devastating natural disaster to hit the Tampa Bay region in their lifetimes. For many, the No-Name storm serves as a yardstick by which to assess the risks and potential impacts associated with all other storms that threaten the area. Because the area is regularly threatened by hurricanes and tropical storms, the memories of the No-Name Storm continue to loom large in the minds of its survivors.

Through qualitative content analysis of 130 articles published in the *St. Petersburg Times* from March 13, 1993 to September 28, 2004, this report reveals not only the extent of the physical impacts of the storm, but also how the residents and emergency managers perceived the event and their respective roles in the pre-impact, impact and recovery phases. Through newspaper representations, a dialogue between the residents and emergency responders can be constructed, whereby assessments of the official responses to the disaster, and the allocation of blame for failures in those responses, can be analyzed. Through this dialogue we can uncover precisely how the players perceive their roles in the impact and recovery phases, and also how they view each other's responsibilities given the unique characteristics of the No-Name Storm.

From this analysis we will be able to determine whether and how lessons have been learned which will improve future preparation and recovery in disaster situations.

This report also examines how the memory of the No-Name Storm guides Pasco and Citrus County residents and emergency responders in their preparations for future hurricanes and tropical storms. Research has demonstrated that individuals' prior experiences with disasters influence the ways in which they perceive risks associated with subsequent disasters and how they prepare themselves to deal with later events (Mileti and Sorensen 1990; O'Brien and Payne 1997). Given that the physical characteristics of the No-Name Storm, including high winds, tornadoes and storm surge, are similar to those associated with tropical storms, it is not surprising that people's perceptions of their risks for subsequent hurricanes and tropical storms is equated to their experiences with the No-Name Storm. While these similarities likely provide meaningful and useful points of reference in some instances, they may also create unnecessary obstacles to adequate preparation for subsequent storms. This is primarily due to the fact that the No-Name Storm, although similar in some ways to tropical events, was ultimately an unexpected and unprecedented weather phenomenon for the Florida Gulf Coast.

Research Design

In order to gather relevant articles from *The St. Petersburg Times*, a general search was conducted using the LexisNexus database. Articles for all dates that referenced the "No-Name Storm" anywhere in the text were retrieved. Since the name "No-Name Storm" did not become commonly associated with this storm until almost two weeks after the event, another LexisNexus search was conducted for March 12, 1993 through March 21, 1993 using only the word "storm." The articles retrieved using this search term were then examined to make sure that they, in fact, referenced this particular event. Articles referencing the storm appeared from March 13, 1993

through September 28, 2004. Of the articles retrieved, only those which appeared in the City & State, Pasco County or Citrus County sections of the newspaper were analyzed. Articles from any other section or edition of the *St. Petersburg Times* were not included in the study. In addition to the newspaper articles, the National Oceanic and Atmospheric Administration’s (NOAA) *Natural Disaster Survey Report, Superstorm of March 1993* was included in the study and analyzed using the method set forth below.

The retrieved articles were reviewed inductively, without any specific expectations as to possible findings. Comprehensive notes were taken from each article, which detailed the significant aspects of the storm’s impact and the major concerns of its victims and responders. From these notes, general themes began to emerge which formed the foundation of the general research questions that would guide the analysis. The comprehensive notes were then coded to reflect these emergent themes and categorized according to the source of the expressed concern. Three general categories emerged: 1) Concerns of the Public and Media; 2) Concerns of County Officials; and, 3) Concerns of Federal Responders. The general themes that were coded and analyzed for each of the three categories are set forth in Table 1, below.

Table 1. General Categories and Themes of Analysis

Public/Media Concerns	County Officials’ Concerns	Federal Agency Concerns
Lack of Warning/ Officials Lack of Preparedness	Lack of Warning/ Forecasting Failures	Praise for National Weather Service (NWS)
Neighbors as First Responders/ Heroes	Physical Impacts of Storm	NWS’ Failings
Praise for Official Recovery Efforts	Psychological Impacts of Storm	Physical Effects of Storm
Individual Responsibility to Protect Selves and Property	County Officials’ Lack of Preparedness	Failings of State and Local Officials
Feelings of Thankfulness, Positivity, the Creation of Community	Best Possible County Response Given Information	Failings of Residents
Perception of Risk/	Individual Responsibility to	Specific Areas for

Complacency/ “Crying Wolf”	Protect Selves and Property	Improvement at the Federal Level
Physical Concerns During and After the Impact Phase	Providing Information to Public (What To Do)	
Concerns About Government Policy	Complacency/ “Crying Wolf”	
The Response of Local Businesses	Actual Recovery Efforts (What was Done)	
Psychological Impacts	Insurance Issues	
Criticism of Media	Specific Recommendations After Initial Evaluation and Subsequent Weather Events	

Once the article review was completed, additional documents were examined in order to provide further background information on the impacts of the No-Name Storm on the Tampa Bay region and to document any changes in the official protocol of the local emergency responders that were instituted since 1993. Most notably, Citrus and Pasco County’s Comprehensive Emergency Management Plans and Local Mitigation Strategies were examined.

After the articles and relevant documents were coded and analyzed, two significant themes were observed. First, there is a discrepancy between what the specific responders (residents, county officials and federal officials) perceived their own duties to be during the storm and what other parties expected of them. Likewise, there is a discrepancy between how the different responders assessed the performance of their own duties during the impact and recovery phases of the storm and how others assessed their performances. Second, there is a clear trend during and immediately after the storm, for residents and emergency responders to compare the event to a hurricane or tropical storm. Similarly, there is an ongoing trend in the eleven years since the No-Name Storm for residents and emergency responders to compare their experiences in all subsequent hurricanes and tropical storms to their experiences with the No-Name Storm. Because it is believed that these themes may be particularly relevant to the

planning and preparedness for future extreme weather events on the Gulf Coast of Florida, they will serve as the primary focus of this study.

This research project was ultimately driven by the following general research questions:

1. What were the physical characteristics of the No-Name Storm and how did they differ from tropical storms?
2. At the time of the event, did emergency responders and residents associate the impacts of the No-Name Storm with a hurricane? How?
3. What were the perceived successes and failures of the responses to the event by Federal agencies? State agencies? County officials? Residents?
4. Did the perceptions of the successes and failures of the responses differ according to the point of view (i.e. resident, county official) of the speaker?
5. How has the memory of the No-Name storm changed people's perception of personal risk with regard to subsequent storms? Have their experiences with the No-Name Storm influenced their preparation or evacuation decisions in subsequent storms?

The Organization of Response and Emergent Phenomena

A substantial amount of research has examined collective behavior and organizational responses in disaster situations. While many within official emergency management circles still believe that disaster response efforts should be organized using a highly centralized command and control structure (Drabek & McIntire 2003), recent evidence suggests that this model may not be appropriate for all disaster situations. Specifically, this model may not be effective where the particular impacts of the event are unforeseen (Drabek & McIntire 2003).

The command and control model assumes that chaos will ensue after disaster events and victims will act irrationally, requiring emergency responders to restore order (Drabek and McIntire 2003 *citing* Dynes 1994; Fischer 1999). However, a growing body of literature suggests that when disasters strike, the public does not tend to panic, flee or engage in anti-social behavior (Drabek and McIntire 2003 *citing* Quarantelli 1986). Instead, it is much more common for disaster “victims” to act rationally and innovatively in resolving many of the immediate challenges that they face during an emergency situation (Drabek & McIntire 2003). Where citizens or groups take on disaster-related activities during emergencies, it is known as an emergent phenomenon. According to the Drabek and McIntire (1990), “emergent phenomena are most likely to occur when demands are not met by existing organizations (Auf der Heide 1989, p. 71), when traditional tasks or structures are insufficient or inappropriate (Stallings and Quarantelli 1985, p. 71) and when the community feels it is necessary to respond to or resolve their crisis situation (Wenger 1992, p. 9).”

Many scholars believe that because of their unpredictable nature, disasters impede command and control responses by interfering with the bureaucratic structure of emergency management plans (Drabek and McIntire 2003 *citing* Schneider 1992:138). On the contrary, disasters actually promote emergent activities (Drabek and McIntire 2003 *citing* Neal and Phillips 1995). It can, therefore, be expected that where a community has no direct experience with a particular type of emergency, where the impact of the event is unexpected, or where the effects of the disaster are more severe than anticipated, emergent phenomena will likely occur and citizens will be called upon to act in ways necessary to ensure their safety, protect their property and, where possible, rescue other individuals.

Although emergent phenomena are common during the impact and recovery phases of a disaster, they are rarely acknowledged by official emergency responders. Few, if any, official disaster preparedness plans recognize that, in unexpected situations, residents are oftentimes the first responders to the event. Not only does this omission demonstrate official responders' failure to comprehend the actual conditions of a disaster event (Drabek and McIntire 2003, *citing* Dynes 1994; Neal and Phillips 1995), it also represents a missed opportunity for official responders to make disaster responses more efficient and more effective (Drabek and McIntire 2003). Similarly, by failing to acknowledge the community's role in an actual disaster, official responders are, effectively, creating a disaster culture that minimizes individual responsibilities and ignores an important and recurrent aspect of survival in actual emergencies. If emergency managers fail to recognize that citizens routinely play an important role as first responders to disasters, how can citizens be expected to recognize this? Without being educated as to the limitations of official emergency responders, the public may develop unrealistic expectations about what officials should be expected to accomplish under real disaster conditions. Likewise, they may not be aware that, in certain circumstances, their best chance of survival rests in their own hands.

The same trend is apparent with regard to disaster preparation. With an overemphasis on official emergency management responses, the obligation of individuals to protect themselves and their property may be minimized. This lack of understanding about the appropriate roles and obligations of individuals and official responders in real disasters may explain why there is a discrepancy between how the respective participants in certain disasters perceive their obligations in that situation and how they ultimately assess the response to that disaster.

How Prior Experience Shapes Future Decision-Making in Disasters

One area of analysis that has received increasing attention is whether and to what extent people's previous experiences with disasters affect their responses to subsequent disasters. Some of the research on this topic has examined how prior experience with hurricanes affects evacuation rates and whether experiences with "near misses" or "false alarms" decreases the likelihood of people to prepare or respond to subsequent natural disasters (Dow and Cutter 1997; O'Brien and Payne 1997).

While the specific effect of past experience on people's preparedness for, and response to, subsequent disasters remains unknown (Mileti and Sorensen 1990), most of the literature suggests that past experience is one, of several, resources people use when deciding how to deal with the threat of an impending severe weather event (Dow and Cutter 2000). In some cases, past experience with a particular type of disaster is the best predictor of who will take some protective action in subsequent events (O'Brien and Payne 1997). Among other factors considered by people when deciding how to respond to an extreme weather event are the media, the size of the storm, perception of the safety of one's housing unit, perception of one's location relative to the danger, how long one has lived in the area and any official recommendations, with official recommendations given relatively low weight compared to the other considerations (Dow and Cutter 1997; Perez-Lugo 1999). Clearly, people's past experiences with weather events is related to, and cannot be fully separated from, many of these other factors.

Specifically, the literature on warnings suggests that official warnings will only be effective in persuading residents to appropriately respond to a disaster in a certain way if the warnings are understood, believed and personalized by the receiver (Mileti and Sorensen 1990). According to Mileti and Sorensen (1990), "some members of the public are better equipped to

process and respond to warnings because of their pre-emergency knowledge about the hazard and the appropriate response” (p. 5-8). One important piece of pre-emergency knowledge is prior experience or lack of experience with the particular hazard.

It is not uncommon for communities that face recurring risks from particular hazards to incorporate their experiences into their perceptions of their residential environment and living conditions. For example, many residents of forested areas develop strong connections with their natural environment that are grounded in their perceptions of the forest itself. Given that some forested locations are routinely at risk from forest fires, residents’ perceptions of their natural environment and their way of life tend to include the acknowledgement of the forest fire risk (Halvorson 2002). For many coastal residents, the ocean is a strong force that grounds them to their residential environment and becomes part of their perceived way of life. As with forest residents, coastal residents’ perception of their environment also includes a recognition of the risks associated with their location. For residents of the Gulf Coast of Florida, the most recurrent risks are those associated with tropical storms and hurricanes. When a community is strongly and adversely affected by one particular disaster, it is not uncommon for that event to survive in the collective memory of the residents for a long period of time and serve as a benchmark for their evaluation of personal risks for subsequent disasters (Halvorson 2002).

The Physical Impact of the Superstorm on the Florida Gulf Coast

The No-Name Storm hit the Gulf Coast of Florida particularly hard and without warning. While long-range computer modeling by the National Oceanic and Atmospheric Administration (NOAA) lead to early and accurate warnings and watches for most of the storm’s impact area, the forecasting failed to adequately predict the intensity of the low pressure system and its resulting storm surge. It was this aspect of the storm that caused the greatest amount of damage

on the west coast of Florida (NDSR 1994:ii). The storm had been brewing in the Gulf of Mexico for several days before it gathered strength and came ashore in the late evening and early morning hours of March 12 and 13, 1993. Due to the size of the storm, the coastal areas were raked with thunderstorms, tornadoes, gale force winds and coastal flooding for about 12 hours, with the most significant storm surge occurring in the pre-dawn hours of Saturday, March 13. At its worst, the storm surge reached an unprecedented 9 to 12 feet, resembling the impacts of a Category One hurricane, although extending over a much larger area. Although the most disastrous flooding occurred along the coast, the effects of the surge were felt up to nine miles inland causing damage to many homes that were not covered by flood insurance (March 17, 1993).

Although the unusual size and nature of the storm had been predicted as early as five days before it came ashore (March 16, 1993), the lack of adequate flood warnings from the National Weather Service (NWS) left many local officials and residents totally unprepared for the storm's ultimate impact. Because the worst of the storm surge hit when most people were still asleep, many did not see the water rising and coming into their homes until it was too late. This situation was exacerbated by the fact that many counties did not issue evacuation alerts until the water was too high for most people to leave their homes (March 14, 1993). As a result, many people had to wade out of their homes and swim to safety. There were numerous reports of people going door to door in their boats in the early morning hours of March 13th rescuing stranded neighbors. In all, one hundred and twenty-nine people were rescued from their rooftops by the Coast Guard (March 18, 1993).

After the initial impact of the storm, residents faced additional hazards associated with freezing temperatures and lack of power, tainted drinking water, and fires in their homes and cars

caused by the corrosion of their electrical wiring by saltwater (March 15, 1993; March 19, 1993). In the end, a state of emergency was declared in 21 Florida counties, including Pasco and Citrus Counties (March 14, 1993). Two million Florida residents were left without power. In Citrus County alone, 900 to 1000 people were forced to stay in shelters the first night after the storm (March 15, 1993). Another 800 had arrived in Pasco County shelters by 3:00 p.m. on Saturday afternoon (March 14, 2003). All in all, the No-Name Storm caused \$1.6 billion in property damage in Florida, which is well over half of all property damage caused by the storm in the United States (NDSR 1994:1-1). Tens of thousands of homes were destroyed or substantially damaged, with the majority of those homes located in Pasco County (April 2, 1993). In the end, forty-four people lost their lives in Florida and another eleven were missing at sea as a result of the No-Name Storm (March 18, 1993).

Findings

After examining the relevant articles, one of the themes that emerged was the discrepancy between how official county responders, other bureaucratic agencies and the public viewed their obligations before, during and after the storm. Much of the discussion centered on how unprepared people were for the devastating storm surge. Interestingly, however, different groups had vastly different explanations for why people were left unprepared and who, ultimately, was to blame for this. Many in the general public placed the blame squarely in the hands of the County officials (March 14, 1993). Many felt that there was no excuse for the fact that the evacuation orders were issued after it was too late for people to leave their neighborhoods (March 20, 1993). As the friend of a fisherman who was lost at sea said, “The sad thing was nobody knew it was going to be this bad. Everybody should have been evacuated” (March 19, 1993). Another angry resident noted, “Our neighbors were told to stay in their house, that the

storm was not going to get any worse. Well, thank God, we didn't or we would all be dead!"

(March 29, 1993). The executive director of a local television station also blamed county officials for their lack of preparedness:

My comments are directed more to public officials who claim they weren't told or prepared. WTVT-Channel 13 began a discussion of the unusual nature of this storm five days in advance of its arrival - three days before it was even on the weather map! With each passing day it was stressed more specifically what could be expected and when. As the storm approached Friday, March 12, we began periodic special updates detailing and defining its expected impact. Before the storm arrived, terms such as "dangerous," "unprecedented," "life threatening," "can't emphasize enough" were continuously used. . . It is beyond my comprehension how any public official couldn't understand and be prepared for any eventuality of the storm event (March 17, 1993).

Others pointed to the breakdown in the counties' emergency management plans as evidence of the counties' failings. For example, some complained that local television and radio stations were not adequately used to warn residents (March 29, 1993). Others commented on the fact that county officials did not have enough boats and vehicles available for rescue efforts and had to resort to donations from the public in order to evacuate trapped residents (March 14, 1993; March 16, 1993). Still another commented that there were insufficient protections against possible looters (March 29, 2003).

As a result of the official responders' failure to ensure timely warnings and evacuations of the counties' residents, many residents were called upon to evacuate themselves and their neighbors. Stories of heroism by members of the public filled the pages of the *St. Petersburg Times* in the weeks after the No-Name Storm. After the water subsided and assessments could be made, it became clear that many of the rescue efforts during the impact phase of the storm were conducted by local residents using their boats, their trucks, or simply wading and swimming their way from door to door (March 14, 1993). These instances of heroism elicited high praise from residents about the quality and character of the members of their community. The following

types of comments and depictions were frequently expressed by storm survivors: "I made my way to another neighbor's [house], and they took me in even though I was a complete stranger. There are some really fine people around here, but it's a heck of a way to meet your neighbors" (March 16, 1993); "It was the first time in my life when I thought I was going to die. I really thought I was going to drown. If it hadn't been for [my neighbor] Dave" (March 17, 1993); "[Three neighborhood youths] were pulling out babies. They were just floating around trying to get people out" (March 17, 1993); "In a time when you must always be looking over your shoulder, wondering just what might happen next, it's nice to see so many people in our community working together to help each other out in a true time of need" (March 29, 2003).

Others saw the efforts and heroism of their fellow neighbors as a symbol of officials' ineffectiveness in keeping residents out of harm's way. This sentiment was expressed by those who recognized that, in the No-Name Storm, residents really were the first responders. One woman put it succinctly when she said, "Nobody was here for us except the neighbors" (March 17, 1993).

In light of the general public's criticism of county official's responses, one might expect the counties' assessments of their own performances to also be critical. Although both Pasco and Citrus Counties found problem areas in their responses, as a general matter, county officials believed they performed as adequately as possible given the unique and unpredictable nature of the storm and the National Weather Service's failure to give adequate warnings about the likelihood of storm surge (March 17, 1993). According to some county officials, early indications from the NWS suggested that the storm would miss high tide and, if any flooding would occur, it would probably happen later Saturday afternoon (March 17, 1993; March 21, 1993). One county administrator voiced his frustration with the NWS when he said to the press:

“Where do we get our information from? The National Weather Service. We’re not meteorologists” (March 17, 1993). Florida’s Governor, Lawton Chiles also felt that the NWS was responsible for the inadequate warnings and asked the NWS to specifically determine what went wrong (March 18, 1993). The governor stated, “We rely on the National Weather Service for its expertise to provide the state with enough adequate advance information to help prepare Floridians for severe weather. In this case, however, I am concerned that the warnings were not posted early enough to keep people out of harm’s way” (March 18, 1993).

Some State and county officials, however, chose not to assign blame to any one person or agency and, instead, blamed only Mother Nature. To them, the severity and unique nature of the storm caused hazards, the impact of which, could not have been predicted by anyone. As one Senator put it, “I don’t think the weather service could predict the enormity of what happened” (March 18, 1993). Similarly, Citrus County’s Spokeswoman said, “I don’t know in this case if fingers can be pointed. It was a weird situation with the water. Nobody could predict that amount of water and the speed of that water” (March 17, 1993).

At first, the National Weather Service and NOAA denied any forecasting and warnings failures on their part. According to one NWS meteorologist shortly after the storm, “From my perspective, this was all handled very well, but we’re here to find out” (March 17, 1993). Later investigation, however, proved that although the NWS was successful in tracking the storm and predicting its size, it had not been able to adequately predicted the storm surge. This was due primarily to the insufficient numbers of marine and coastal observation sites in the Gulf of Mexico and on the coast, as well as the lack of real time water level information and the lack of an adequate forecast model for predicting storm surge (NDSR 1994). Although NWS conceded that it failed to adequately forecast coastal flooding, the agency asserted that at least part of the

explanation for the inadequate response rested in the Florida public's inability to comprehend, or perhaps the NWS' inability to adequately convey, the nature of the threat. According to

NOAA's Natural Disaster Survey Team:

While NWS did a good job alerting the public in Florida and the Carolinas of the coming threat, the communication was sometimes ineffective since the public did not perceive the urgency of the situation. Florida residents are accustomed to hearing the terms "storm," "thunderstorms," and even "tornadoes" on a frequent basis. When the same expressions are used for a storm system recognized by NWS to be of much greater consequence, the urgency of the message is not conveyed to the public forcefully. As it was, many people were more concerned about the possibility of freezing pipes and crop losses later in the weekend than they were to the more immediate threat of severe weather and coastal floods (NDSR 1994:x).

Residents were, likewise, not immune from blame in the aftermath of the No-Name Storm. Although, for the most part, the public was commended for its heroism and resiliency, some felt that many residents failed to recognize their own responsibilities in ensuring their safety and protecting their property from extreme weather hazards. Some were particularly concerned with people's lack of personal preparedness, either because they did not have adequate family evacuation plans or because they weren't equipped with bottled water, flashlights, portable radios and other disaster essentials (March 14, 1993; March 16, 1993). Many believe that preparation for the possibility of extreme weather events is critical for people who live in an area prone to hurricanes. One county official explained that residents should bear some responsibility for keeping track of the weather: "I don't know how much warning you can give. We understand that people are upset right now, but if you live in Florida in a coastal area and you see a storm like that, you should know that there is going to be flooding" (March 17, 1993). Still others think that residents should take more care when deciding to live by the coast (March 15, 1993). Given the reality of flooding, many feel that, at the very least, residents

should ensure that their properties are built in accordance with Federal flood guidelines, which require that homes be elevated on stilts (March 25, 1993).

Another theme that emerged from the articles was the tendency for the media, the public and official responders, in the time period during and after the storm, to equate the No-Name Storm with hurricanes and tropical storms. Even more prevalent was the tendency for people to equate their experiences in subsequent tropical storms and hurricanes with their experiences in the No-Name storm. Even though the No-Name Storm was an extratropical weather event that occurred without warning and had other characteristics that were different from tropical storms, people tended to frame their experiences with the No-Name Storm in terms of the types of storms with which they were most familiar. One survivor who had experienced Hurricane Donna in 1985 said, “[Hurricane Donna] wasn’t a spit in a bucket compared to this” (March 28, 1993). Another way that this theme emerged was through criticisms about the counties’ lack of preparedness. For example, one media source states that, “years of emergency planning, practice drills and public education efforts prepared nobody for what hit Pasco . . .” (March 13, 1994). While it is certainly true that the county officials were not prepared for an unforeseen disaster with the magnitude and force of the No-Name Storm, many assume that they should have been given the counties’ past experiences with coastal flooding related to tropical storms.

In the months and years that followed the No-Name Storm, the horrifying experiences and devastating losses of Citrus and Pasco County residents continued to loom large in their collective memories. The storm inflicted unprecedented damage on the region and was the worst storm that many residents in the area had ever experienced. Not only had homes and boats been destroyed, but many people had been forced to swim to safety in chest-deep water during pre-dawn hours. Given the traumatic effect that the No-Name Storm had on many of the local

residents, it is not surprising that residents continue to use the No-Name Storm as the benchmark by which to compare all subsequent storms. This trend is observed whenever a hurricane or tropical storm threatens the Tampa Bay Region. In 1996, when Tropical Storm Josephine hit the region and produced storm surge second only to the No-Name Storm, people were quick to make comparisons. One comparison was with regard to the public's, and the counties', relative preparedness for Josephine. According to one journalist, "Unlike the March 1993 no-name storm, emergency management officials and the public were not going to be caught off guard this time" (October 9, 1996). Some residents, who were unable to evacuate during the No-Name Storm, took no chances this time around (October 8, 1996). Others decided to wait it out. In at least one city in Citrus County, flooding levels rivaled the No-Name Storm. The mayor of this city noted, "There are a lot of areas close to the '93 storm in damages. At least people had a little more preparation time this time. For the city, we saved a lot by having a little more notice" (October 9, 1996).

Other subsequent storms that did not pack as much punch as the '93 storm, were also compared. For example, in 1999, when Hurricane Harvey failed to materialize after the public had been repeatedly warned of its impending landfall, the storm was immediately dubbed, "The Name with No Storm" (September 22, 1999). When Hurricane Allison threatened the area in June 1995, many people's decisions either to evacuate or not evacuate were based on their experiences with the No-Name Storm. One resident explained that she intended to evacuate because she didn't "want to be here if we're going to get another 3 feet of water like we did in '93 (June 6, 1995)." Another resident believed that people's experiences with the No-Name Storm would cause them to stay: "I believe most of the people around here will rough it out

because we've been through the March storm. The March storm hit us all at once. We saw a 6-foot surge coming up the road. There was no time to react" (June 6, 1995).

Even eleven years after the storm hit the Gulf Coast of Florida, local residents were quick to recall their experiences with the No-Name Storm when a series of deadly hurricanes threatened the area in the late summer of 2004. When Hurricanes Charley and Frances bore down on the area in mid-August and early September 2004, the initial indications were that the wind and surge associated with each of these storms would be worse than the No-Name Storm (August 14, 2004; September 8, 2004). With this comparison in mind, people decided whether or not to evacuate. One mobile home owner who decided not to evacuate for Hurricane Charley explained, "I heard somebody on a loudspeaker saying it's mandatory: you gotta go. [But] this trailer lasted through the no-name storm. It survived once, it'll survive again. [Besides,] we just had too much to pack" (August 14, 2004). In the end, the damage left by the hurricanes did not come close to the '93 storm. As one resident explained, the flooding from Frances "was maybe a foot around the house, but it wasn't that bad. The flooding was much worse in the no-name storm (in 1993)" (September 8, 2004).

Discussion

In the weeks and months after the No-Name Storm hit the Gulf Coast of Florida, much of the discussion in the local media focused on what had gone wrong. Clearly there were not adequate warnings about the magnitude of the storm surge and this resulted in the county's inability to issue timely evacuation orders. While a few noted that these failings were likely the result of the unprecedented and unpredictable nature of the storm, many sought to place blame for the devastation on county officials, the National Weather Service or the public at large.

Both Citrus and Pasco Counties spent significant time after the storm assessing their own shortcomings and improving their preparedness plans in terms of lessons learned from the storm. The counties' experiences with the No-Name Storm directly influenced the creation of their Comprehensive Emergency Management Plans (CEMP) and their Local Mitigation Strategies (LMS). In fact, these documents specifically address many of the areas of particular concern voiced by the public after the No-Name Storm. For example, the CEMPs establish elaborate procedures for coordinated response between county emergency responders, other official agencies and contracted businesses during disaster events. Furthermore, the CEMPs establish protocols for improved communication between emergency managers and responders. In addition, new sirens and warning systems have been installed in coastal areas and detailed plans have been established for ensuring that the public is effectively evacuated and sheltered during disaster events that occur with sufficient lead-time (Citrus County CEMP; Pasco County CEMP; March 13, 2003).

The National Weather Service has also made changes that will minimize the impacts of the next No-Name Storm. Most significantly, five new offshore buoys have been placed in the Gulf of Mexico at varying distances from the shore. It is believed that these buoys will give emergency managers a six to twelve hour warning of possible storm surge (March 13, 2003). In addition to the buoys, the NWS has improved its radar system to detect wind speed and has developed better computer models, some of which are used to predict surge from powerful, extratropical storms like the No-Name Storm. As a result of these improvements is, it is now very unlikely that Gulf communities will ever again be taken by surprise by the storm surge of an extratropical weather event (March 13, 2003).

Even though the chances of being the repeat victims of a surprise weather event exactly like the No-Name Storm are low, that does not mean that residents of coastal Florida never have to worry about surprise disasters. There are a number of possible threats from both natural and man-made disasters that could potentially take residents by surprise and demand responses that are outside the realm of any official emergency protocol. Weather-related disasters probably still have the greatest likelihood of affecting Florida communities in unforeseen ways. As many Floridians can attest, hurricanes and tropical storms are inherently unpredictable. Even with a significant lead-time, it is often difficult to plan for the precise hazards that will impact a given area. Sometimes hurricanes shift at the last moment, sometimes they stall just long enough to hit at high tide and bring a surprisingly strong surge or pound an area with greater than expected rainfall, and sometimes they spawn unexpectedly devastating tornadoes.

Even though there is the potential for unforeseen risks from both weather-related and man-made hazards, local Comprehensive Emergency Management Plans fail to deal adequately with the possibility of unexpected events. Most notably, these plans fail to account for the existence of emergent phenomena in surprise disaster situations. As the No-Name Storm clearly demonstrates, when official plans are not adequate to provide for the needs of the public, the public does not sit idly by. Instead, individuals take action to protect themselves, their property and the lives of those around them. The public response during the No-Name Storm validates Drabek and McIntire's (2003) observations that emergent behavior is not an aberration, it cannot be stopped, it fills a void that is left when official responses fail, and it should be viewed as a public resource and not a liability (p. 107).

County officials and residents alike complain that the public is not adequately prepared for disaster situations and does not take an active enough role in protecting themselves and their

property. While that may be true, not enough is done to prepare the public for their roles in an actual disaster. According to many scholars, “actual disaster preparation and planning activities should be based on actual disaster behavior (Drabek and McIntire 2003, *citing* Neal and Phillips 1995:334; Auf der Heide 1989; Wenger *et al.* 1987; Dynes 1994; Scawthorn and Wenger 1990:3, 8). Although education on disaster preparedness is important, it may not be enough to inform people about the possible contingencies in actual disaster situations and the limitations of official emergency managers in responding to unforeseen events. By failing to acknowledge emergent phenomena in their emergency management plans, officials are missing an important opportunity to create a disaster culture that educates the public of the inherent and unavoidable limitations of emergency responders and empowers the public to take a proactive role in their own preparedness and protection.

Given its unprecedented magnitude and devastating impact on Florida’s Gulf coast, it is not surprising that the No-Name Storm lives on in the memories of the residents most affected by it. In many cases, the lessons learned from the storm were extremely useful in improving emergency planning on the federal, county, and residential levels. As described above, many improvements in the capabilities of the National Weather Service to adequately predict storm surge several hours in advance were made in response to the impact of the No-Name Storm. In addition, Citrus and Pasco Counties developed their Comprehensive Emergency Management Plans with full consideration of the lessons learned in the aftermath of the storm. On the individual level, many residents became much more vigilant about weather risks after the No-Name Storm. Many also demonstrated an increased willingness to evacuate their homes when recommendations were made to do so by local officials in preparation for impact by tropical storms or hurricanes.

On the flip side, other residents cited their experiences with the No-Name Storm as rationale for not taking extra precautions or evacuating their homes when the landfall of a hurricane or tropical storm seemed imminent. These individuals tended to believe that because they had survived a storm as devastating as the No-Name Storm, they would certainly survive anything else that came along. The problem, of course, is that no two disasters are exactly alike. In the case of the No-Name Storm and a hurricane, there are significant potential differences. First of all, the No-Name Storm made landfall with very little warning. Hurricanes, on the other hand, tend to have a lead-time of several days to a week. Secondly, the major hazards associated with the No-Name Storm were coastal flooding and tornadoes. A hurricane, on the other hand poses risks from these hazards in addition to high winds and significant rainfall. Finally, upon impact the No-Name Storm was comparable to a Category One hurricane on the Saffir-Simpson scale. Category One hurricanes have 74 to 95 mile per hour winds and tend to bring a 4 to 5 foot storm surge¹. Category One storms cause only minimal damage, primarily to unanchored mobile homes, shrubbery and trees (National Hurricane Center). When Hurricane Charley threatened the Tampa Bay area in 2004, for example, it was a Category Four hurricane. In contrast to a Category One hurricane and, by extension, to the No-Name Storm, Category Four hurricanes have sustained wind speeds of 131 to 155 miles per hour and bring thirteen to eighteen feet of storm surge. These storms tend to cause roof failure in small homes, significant flooding in coastal areas and the complete destruction of mobile homes (National Hurricane Center).

One can clearly see that the comparison between the No-Name Storm and a hurricane may not be a useful one in many circumstances. Specifically, the gentleman in the mobile home who refused to evacuate before Hurricane Charley because his home had survived the No-Name Storm is relying on an inappropriate analogy, the results of which could be life threatening.

¹ Of course, the No-Name Storm had a nine to twelve foot storm surge.

Because some people make personal decisions about their responses to disasters in light of their previous experiences in similar disasters, emergency planners should take extra care to educate the public about the particular risks associated with each potential hazard. This is especially important where risks tend to differ from hazard to hazard in potentially significant ways.

Conclusion

The No-Name Storm has left a deep and lasting impression on the communities of Florida's Gulf coast. The lessons learned from the storm have impacted how individuals and emergency responders perceive their duties and obligations in extreme weather events and have resulted in improvements to emergency preparedness plans at the official and residential levels. Unfortunately, however, several important lessons have not been learned. First, official emergency management plans fail to acknowledge the actuality of emergent behavior during surprise disaster events. As the aftermath of the No-Name Storm clearly demonstrates, where official emergency management activities are inadequate to respond to a disaster situation, individuals will take action to protect themselves, their properties and the lives of those around them. Official emergency management plans should recognize that this type of behavior is an inevitable result of most disaster situations and should seek to educate the public about the limitations of emergency responders and the possible roles that individuals will be called upon to take in these situations. Not only will this limit the public's unrealistic expectations about official responders' capabilities, it will maximize the efficiency and effectiveness of responses to real disaster events. In addition, the No-Name Storm reveals some people's tendency to rely on their prior experiences with disaster situations when making personal decisions to prepare for subsequent events. Emergency responders should keep this tendency in mind and take extra care to make sure that warnings are clear as to the potential hazards associated with each disaster.

This will reduce the likelihood that individuals will make inaccurate and potentially life-threatening decisions based on erroneous comparisons of hazardous events.

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