

## **Lessons of Hurricane Andrew: State and Local Government Failures and Successes**

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Hurricane Andrew's devastation of southern Dade County has focused attention on government's role in planning for disasters. Thus, a post-mortem on the performance of state, regional and local governments in response to Andrew is most appropriate less than four months after the disaster hit the southeast coast of Florida on Sunday, August 24, 1992. Intergovernmental relations have been put to the test and, on balance, it could be concluded that both the state and local governments failed in some notable areas to implement two of three stages of disaster planning effectively and efficiently.

The first stage of disaster planning requires that the appropriate federal, state and local agencies cooperate in determining the timing and scope of any evacuation of populations, in establishing channels for communicating evacuation information to the public, designating and effectively managing shelters for evacuees, and policing areas subject to evacuation. The second stage, recovery, which begins immediately after the disaster event has subsided, is a relatively short period of days or weeks during which post-disaster assistance is provided to those whose lives have been severely disrupted by the disaster.

Coordination with charitable organizations, especially the American Red Cross, is critical during this stage to ensure that water, food, shelter and medical care are available. Governments' policing powers also are applied to more forcefully secure affected lives and property in devastated areas, especially if curfews are in effect. There is no clear demarcation between the recovery stage and the third, post-disaster redevelopment stage, which usually begins about 72 hours after the disaster strikes. It is during this stage that the long-term effects of the disaster are addressed.

### *The Evacuation Stage*

When a disaster is imminent, scientific, computer-based mapping and communications technologies can facilitate the public sector's capability to remove citizens from harm's way. For example, the extended periods of heavy rain that precede hurricanes can be monitored to forecast the location and intensity of pre-event flooding and wind and to anticipate the path, scale and probable destination of the hurricane. Of course, there are disasters, such as earthquakes and tornadoes, which are almost impossible to predict and where pre-event evacuation is extremely limited.

The immediate objective in Stage One is to save lives rather than protect and preserve property. Nonetheless, the policing powers of government usually are used to dissuade individuals from entering an evacuation area rather than applied to forcefully remove individuals from an evacuation area before an imminent disaster. Certain public facilities and the facilities of selected charitable organizations are made available to shelter evacuees until the disaster event passes, and some may even remain open during the recovery stage.

The evacuation phase of disaster planning evolved from the civil defense movement which was inspired in the 1950s by the fear of nuclear war. Moreover, since the '50s, numerous natural disasters have occurred. Thus armed with an extensive historical record of emergency evacuation and post-disaster recovery and redevelopment planning experience, one would expect that by now that there would be

routine cooperative action and success among federal, state and local officials at all levels in determining when and how evacuations are to occur and how post-disaster recovery and redevelopment are to proceed. Unfortunately, as Andrew clearly demonstrated, state, federal and local governments still have major difficulties in determining how to initiate even the most rudimentary triggering mechanisms to get a relief effort underway.

### *The Recovery Period and Redevelopment Stages*

After a disaster has occurred, government is supposed to play a very important role in ensuring that the necessities of life are provided for those without water, food, shelter and medical care in a timely manner. In densely populated urban areas with a myriad of municipal governments, ideally, county and regional governments would play a pivotal substate role in intergovernmental coordination as well as provide recovery period services in cooperation with other states and federal government agencies. In sparsely populated rural areas with few municipalities, the state and/or regional governments should provide coordination and recovery period services notwithstanding the contribution of county governments. Seldom, however, would a municipality be expected to dominate the post-disaster recovery stage, although some of the larger Florida cities might do so if no countywide plan exists.

Where the post-disaster recovery period stage ends and the post-disaster redevelopment stage begins is somewhat indeterminate and even moot if there has been no planning for post-disaster recovery or redevelopment. Unfortunately, such a scenario occurred in the aftermath of Hurricane Andrew. Although private citizens, businesses, local and national charitable organizations, and federal government agencies, especially the Federal Emergency Management Agency (FEMA) and the Defense Department, seemingly were prepared to provide immediate assistance, it appears that nobody at the state-local government levels was in a position to initiate or prepared to effectively coordinate such efforts. This was clear on Thursday, August 27, when Kate Hale, Metro-Dade County government's emergency management director, angrily proclaimed in a nationally televised interview that FEMA was slow in responding with post-disaster assistance. "We did what we were supposed to do," Hale said. State and federal agencies "should have a better understanding of what they were supposed to do."

The federal and state governments stared at each other for several days before the state finally blinked and requested federal assistance. Considering the resultant delay, Ms. Hale apparently had concluded that it was the federal government's responsibility to usurp state, regional and local government authority and unilaterally intervene after the disaster. FEMA, however, is required by law to only respond if the state formally requests assistance. Moreover, both before and after a major disaster, state and local governments, businesses and individuals must satisfy explicit criteria in order to qualify for federal assistance. Federal disaster relief is supposed to assist government, business and households recover and redevelop where insurance coverage is insufficient or inapplicable.

On the other hand, had Dade County prepared a full-scale recovery plan or a post-disaster redevelopment plan prior to Hurricane Andrew, there clearly would have been less chaos and suffering in both the post-disaster recovery and redevelopment stages. Unfortunately, when Andrew struck, the Florida Department of Community Affairs (DCA) had not completed the state's post-disaster recovery plan or even developed state guidelines for local post-disaster redevelopment planning. The state recovery plan was not available despite three years of recurring complaints by local emergency management directors that a plan was not forthcoming. Palm Beach County emergency management director B.T. Kennedy echoed their collective concern when he said the state needs "to stop talking about it and do it. It's been three years since Hugo."

The coastal counties correctly may place some part of the blame for such delays at the feet of the state. The state now acknowledges that it misjudged the scale of the disaster and did not move aggressively enough in the initial stage of the disaster; but the state also has lagged in providing adequate funding for emergency management. Emergency management funds have been dropping steadily, from 88 cents per resident in 1990, to 79 cents in 1992. Apparently, both state and local government officials assumed that, should a hurricane strike, it either would happen in another jurisdiction or on someone else's watch.

Undaunted by the state's foot dragging, cuts in spending or the national recession, at least one local jurisdiction, Palm Beach County, had the initiative and foresight to forge ahead several months prior to

Andrew and begin developing a full-scale, post-disaster redevelopment plan. Unfortunately, the plan only covers the unincorporated area of the county; municipalities must fend for themselves.

Meanwhile, in Dade County, many businesses and households were irreparably harmed by Hurricane Andrew or otherwise ill-served in its aftermath because of a heedless lack of planning. Their suffering will be exacerbated and prolonged and the costs to citizen-taxpayers magnified exponentially, largely because DCA, the county and other local jurisdictions did not adequately fulfill their post-disaster planning responsibilities.

### *The Role of Comprehensive Planning in Post-Disaster Recovery/Redevelopment*

Southeast Florida's experience with Hurricane Andrew is a graphic testament to the chaos, suffering and pain that inevitably will occur when planning for post-disaster recovery and redevelopment do not get the high priority attention they deserve. Unfortunately, history is replete with one post-disaster planning debacle after another, often aided and abetted by the short-sightedness of federal, state and local governments. Tragically, reviewing the "chronicles of unpreparedness"--the ill-planned aftermath of Hurricane Hugo, for example--leaves the indelible impression that Andrew's legacy was "de ja vu, all over again." Clearly, the current situation justifiably begs for governments to learn from rather than merely emulate the mistakes of the past. Nothing will likely change, however, unless post-disaster planning is recognized and supported by all levels of government as the indispensable tool it is in assisting affected areas with their post-disaster recovery and redevelopment efforts.

On a more positive note, Florida can be applauded for being in the forefront nationally in its legislative and rule-making efforts that are aimed at paving the way for post-disaster planning. The State Land Development Plan (1986-2000) requires that coastal counties (and presumably their municipalities) prepare and adopt post-disaster redevelopment plans by 1993. Purportedly, all 67 counties in Florida have developed Comprehensive Emergency Management Plans in compliance with Chapter 9G-6 and 9G-7, F.S. This, however, is not to be confused with the post-disaster recovery or redevelopment planning proposed in this post-mortem. Even if a local jurisdiction already has taken steps to be in compliance with 9G-6 and 9G-7, few have taken steps to develop full-fledged comprehensive post-disaster redevelopment plans.

The state also requires that post-disaster redevelopment planning be a component of local government comprehensive planning [Ch. 163, F.S., and Ch. 9J-5, F.A.C.]. 9J-5 Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance, identifies criteria for each component of the local plan. Section 9J-5.012 specifically addresses coastal management, stating that post-disaster redevelopment planning shall include:

*. . . existing and proposed land use in coastal high-hazard areas; structures with a history of repeated damage in coastal storms; coastal or shore protection structures; infrastructure in coastal high-hazard areas; and beach and dune conditions. Measures which could be used to reduce exposure to hazards shall be analyzed, including relocation, structural modification and public acquisition.*

Section 9J-5.012 also requires goals which address the preparation of post-disaster redevelopment plans and which limit public expenditures that subsidize development in coastal high hazard areas. It also requires policies which address general hazard mitigation for public and private structures and post-disaster redevelopment policies including short- and long-term redevelopment strategies.

In addition, both the federal and state government require hazard mitigation planning after as well as before a disaster strikes. For example, Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act [4 Federal Code of Regulation (C.R.F.) P.L. 93-288 as amended by P.L. 100-707] requires as a condition of any disaster loan or grant made under the provisions of the Act:

*. . . the state or local government shall agree that the natural hazards in the area in which the proceeds of the grants and loans are to be used shall be evaluated and appropriate action shall be taken to mitigate such hazards, including safe land use and construction practices, in*

*accordance with standards prescribed or approved by the President after adequate consultation with appropriate elected officials of general purpose local governments and the state shall furnish such evidence of compliance with this section as may be required by regulation.*  
(FEMA, 1989).

The above section has been interpreted to mean that state and local governments must prepare and implement a hazard mitigation plan to reduce vulnerability to natural hazards as a condition of receiving federal relief funds. The act specifically references land use and construction standards as types of appropriate actions, thus indicating a long-term approach to mitigation. Florida, for example, is required to prepare and submit a Hazard Mitigation Plan (HMP), or plan update, for any declared disaster area within 180 days of the declaration. It also is the state's responsibility to follow up with local governments to ensure that they have implemented appropriate hazard mitigation actions (FEMA, 1989).

Despite the legislative, regulatory and rule-making requirements already on the books, few of Florida's local jurisdictions have developed comprehensive post-disaster redevelopment plans (as delineated below). It does not appear, therefore, that legislative intent and rule-making alone will solve Florida's post-disaster planning problems. Without adequate leadership, funding, administrative follow-up and pro-active enforcement, existing state laws, rules and regulations appear to be more torpid and rhetorical than meaningful instruments of change.

Hurricane Andrew demonstrated anew how a jurisdiction's ability to recover, reconstruct and redevelop in the aftermath of a major disaster is directly related to there being organized and systematic plans in place. Conversely, if no such plans are in place when a disaster occurs, there will be much unwarranted pain and suffering to those immediately affected, and massive monetary costs will have to be born, ultimately by all taxpayers.

Contrary to popular belief, the lion's share--upward to 75 percent--of post-disaster planning activity takes place prior to the occurrence of a disaster. Typically, pre-disaster actions relate as well to mitigation measures which can lessen the impact of a disaster as well as enhance the capabilities of a jurisdiction to recover. Months of preparation and untold man-hours of land-use planning are lost if a jurisdiction has no action plan when a disaster strikes. Moreover, precious resources and redevelopment opportunities are wasted, resulting in prolonged pain and suffering. Without advance post-disaster planning, untold millions of dollars can be lost (wages, tax base, optimal levels of assistance from federal and state governments, etc.), and opportunities to more fully effectuate recovery and redevelopment foregone. Losses and costs will mount exponentially unless an impacted area can recover in a timely and effective manner. Taxpayers, therefore, are entitled to no less than the most capable response their state and local governments can provide when a disaster strikes, and governments must have the plans, tools and accountability to ensure that those needs will be properly met.

A well-stocked toolbox for an effective post-disaster planning response would include a variety of components, such as (1) evaluating the intergovernmental coordination capabilities of a jurisdiction's information systems; (2) hazards vulnerability/ mitigation analysis, including geographic information systems (GIS) technology; (3) the establishment of hurricane recovery goals and objectives; (4) explicit government policies and coordinated action programs by government agencies; and (5) a built-in capacity for periodic review/maintenance of the action plan.

To assess a jurisdiction's post-disaster recovery and redevelopment capabilities, a few questions should be posed. Should the response be "no" to any of them, it is fair to conclude that adequate planning has not taken place.

- (1) Has the jurisdiction explicitly integrated short- and long-term post-disaster planning with the mainstream of its policy and decision-making processes?
- (2) Have goals and objectives and attendant policies been fully delineated and developed?

(3) Has an effort been made to reach a jurisdiction-wide consensus whereby specific agency action-assignments can be made to ensure a smooth and coordinated recovery/redevelopment effort by the numerous government agencies involved?

(4) Does each government agency fully comprehend exactly what actions are expected of it under specific policies in the pre- and post-disaster periods and in the context of question Number three?

(5) Has the jurisdiction developed long-range upgrading and maintenance procedures for disaster recovery and redevelopment planning?

(6) Are automated information management procedures in place whereby recovery/redevelopment planning can be easily updated and effectively integrated with evolving comprehensive planning requirements?

When a disaster strikes, there isn't time to initiate a coordinated effort unless each agency knows its distinct responsibilities and with which other agencies it must coordinate its actions. Unless such assignments are made and understood in advance, the overall recovery effort will be disjointed and very costly, not to mention ineffective. Each agency must have a precise understanding of its various responsibilities under each policy; its specific action requirements as they relate to other agencies (local, state, regional and national); and each requirement must be fulfilled without hesitation and delay, during and after the disaster. As queried above, it is of paramount importance that steps be taken now to install automated information management procedures.

Another more graphic way to illustrate the difference that post-disaster recovery and redevelopment planning can make in the face of a major disaster is to estimate the extent of man-hour savings which could be realized if even a small fraction of the earlier noted 75 percent pre-event planning functions were to occur. Even higher related costs can be projected in the long-term in the absence of such post-disaster planning.

There are numerous distinctive categories of pre-event post-disaster planning activities that can be cited as contributing either to man-hour weeks or months of estimated savings. To name only a few, local governments would save weeks of man-hours by:

(1) Establishing an organizational framework that enables authorities to coordinate redevelopment in a timely and efficient manner;

(2) Ensuring that cash flow, expenditure authority and other post-disaster fiduciary services will be available;

(3) Developing economic policies and action programs for post-disaster recovery;

(4) Ensuring that steps are taken in advance of a disaster to assure that external resources (personnel, vehicles, professional services, etc.) are available upon request; or

(5) Developing a coordinated public information system capable of keeping government and the public-at-large informed of on-going recovery activities and the availability/location of emergency facilities, services, personnel and equipment.

Similarly, months of man-hours savings could be realized if governments would establish in advance:

(1) Necessary procedures, forms and communications networks for expediting public access to the issuance of permits and available forums for the hearing and processing of redevelopment proposals;

(2) Procedures and/or policies for inventorying and incorporating future risks (hazards materials, flooding, marauding stray animals, poisonous snakes, looting, etc.) into public decisions concerning the policing of redevelopment and the overall rebuilding effort;

(3) Education programs designed to prepare government and the citizenry regarding the physical, social, economic and psychological aspects of coping behavior required before and after a disaster, including related land-use issues;

(4) Comprehensive damage assessment guidelines and procedures for the systematic gathering of information on siting, incident reporting and determining the extent of post-disaster damage.

### ***Conclusion***

Many questions remain unanswered in Hurricane Andrew's wake. Will the Stafford Act be enforced to the letter of the law in Dade County? Is Dade County in full compliance with the aforementioned mitigation standards of the act which specify the terms and conditions under which applicants for disaster loans and grants can qualify? If not, who, if anyone, at the local level will be held accountable for noncompliance? It also is unclear the extent to which the current swarm of allegations concerning substandard building codes, fraudulent code enforcement and questionable building construction standards, may adversely affect federal and/or state assistance in the disaster area. Already numerous lawsuits have been filed by irate homeowners and businesses. It is unclear how their resolution may adversely affect the larger picture of disaster assistance or, for that matter, the future of building codes, enforcement standards and construction practices in South Florida.

The Florida Legislature soon will begin its regular session. Will it be responsive to the plight of so many Floridians at risk to natural disasters because of the lack of effective post-disaster planning? Are Floridians, even after Andrew, fully aware of the extent to which they have been left exposed to the vicissitudes of natural disaster? How will the Legislature respond to the devastation and human suffering in south Dade County? Will it explore and hold whomever is responsible for the foot dragging on post-disaster planning accountable for their acts of omission? If not, will the Florida electorate hold elected officials accountable at the polls?

Now that so much damage has been done, will the state use emergency management as a guise for lowering densification levels in lieu of proceeding under the more politically tenuous requirements of Florida's growth management laws? Will the Legislature proceed judiciously in its response to south Dade, or in an overzealous act of misplaced good or blatant pandering, pour good money into what appears to be an already contaminated trough of poorly designed and inadequately enforced building codes and inferior construction practices without appropriate corrective action being taken?

Studies indicate a high probability that Andrew is just one of many hurricanes that will strike Florida. It remains to be seen when and where the next disaster will happen. Have the federal government, the state of Florida and local jurisdictions therein learned from Andrew? Will they prudently avoid remaking the mistakes of the past or go about business as usual with their heads in the sand? Even absent federal or state action, steps need to be taken now at the local level to initiate and coordinate full-scale comprehensive planning for post-disaster recovery and redevelopment.

As implied in the previous section, recovery/redevelopment goals and objectives and their attendant policies and agency action-assignments change from year-to-year, if not month-to-month. It is in the very nature of post-disaster recovery/redevelopment planning that some local jurisdictions may even need to meet quarterly to review and revise their plans. Any plan worth its salt, therefore, will include explicit provisions for periodic review and automated information management procedures that facilitate easy revision of plans in the context of local government comprehensive planning requirements.

The updating and integrating of the post-disaster plan as new contingencies arise may be compounded by the fact that Ch. 163, F.S. and Ch. 9J-5, F.A.C. require that post-disaster redevelopment planning be a component of local government comprehensive planning. It is unclear at this writing as to exactly what this particular requirement means; it is to be hoped, however, that local jurisdictions will not be required

to revise their local comprehensive plans and obtain state clearance every time there is a need to update their post-disaster plans. If they are so required, there no doubt will be incessant haggling between Florida local governments and DCA--a bureaucratic morass resulting in further post-disaster planning delays ad nauseam.

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