government. Jurisdictions in which this team works smoothly together enjoy significant benefits. They reduce their exposure to potentially crippling lawsuits and significantly improve their compliance with the law. That compliance can greatly increase funding for the jurisdiction.

Local attorneys and emergency managers share many common interests. Both desire the best possible protection for the people and property over which they watch. As always with laws that promote public safety, increased compliance directly results in greater safety, both for the general populace and for emergency responders.

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Show Me the Money: Financial Recovery after Disaster

by Frances L. Edwards and Isabelle Afawubo

> Professional emergency management, physical mitigation, public education, and financial assistance can all lessen the impact of post-disaster community recovery costs.

The United States is unique in its far-reaching financial assistance programs for disaster-impacted areas. Communities that request and receive presidential disaster declarations are eligible to receive financial assistance through the Federal Emergency Management Agency (FEMA) for specific recovery activities. The U.S. Departments of Agriculture and Housing and Urban Development and the U.S. Small Business Administration, among others, have disaster assistance programs, as well. Programs include reimbursement for emergency response costs such as overtime and financial support for the repair of damaged public infrastructure. While President George W. Bush provided 100 percent funding for "emergency work" for communities impacted by Katrina, other categories require some matching funds from the devastated state and local governments. At the same time, these local governments are losing revenues as residents and businesses struggle to recover from the disaster.

Federal Aid and Local Financial Responsibility

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 *U.S. Code* § 5121 et seq. as amended) aids disaster-damaged communities through public assistance programs. Following a presidential declaration of a state of emergency or disaster, these programs may be accessed by state and local governments and by nonprofits fulfilling governmental functions. Table 1 shows the activities that qualify for federal financial support. The federal contribution is considered "supplementary assistance," so the federal share is "not less than 75 percent of eligible costs," and the state determines how to apportion the remaining 25 percent between the state and local governments. In California, for example, the state pays 75 percent of the 25 percent remaining after the federal reimbursement, and the local government pays the remaining 25 percent of the cost share.

Category B, Emergency Protective Measures, is the most comprehensive category. It includes pre-impact activities undertaken to protect the community and its residents, as well as immediate response to the disaster (Table 2).

Table 1. Activities Qualifying for Federal Financial Support

Category	Type of work	Description
Emergency work		
A	Debris removal	Trees; building wreckage; sand, mud, silt, and gravel; vehicles from public property
B	Emergency protective measures	Before, during, and after a disaster—to save lives, protect public health and safety, and protect improved public and private property
Permanent work		
C	Roads and bridges	Repair of roads, bridges, shoulders, ditches, culverts, lighting, and signs
D	Water control facilities	Repair of irrigation systems, drainage channels and pumping facilities (repair of levees, dams, and flood control channels fall under D, but eligibility is restricted)
E	Buildings and equipment	Repair or replacement of buildings, including contents and systems, heavy equipment, and vehicles
F	Utilities	Repair of water treatment and delivery systems, power generation facilities and distribution lines, and sewage collection and treatment facilities
G	Parks, recreational and other	Repair and restoration of parks, playgrounds, pools, cemeteries, beaches, and other public facilities not called for under the other categories

Source: FEMA, *Public Assistance Guide*, FEMA 322, June 2007, pp. 44–60.

Table 2. Emergency Protective Measures

Before and after event	After event
Warning devices: barricades, signs, and announcements	Search and rescue
Security: police and guards	Bracing and shoring damaged structures
Construction of temporary levees	Emergency repairs
Provision of shelter or emergency care	Emergency demolition
Sandbagging	Removal of health and safety hazards
Provision of food, water, ice and essential supplies	

Source: FEMA, *Public Assistance Policy Digest*, FEMA 321, October 2001, p. 42.

For example, responding to an "immediate threat," defined by the federal government as something that could happen within the next five years, communities may open the emergency operations center to coordinate preparation and response to the imminent disaster, activate emergency communications systems, provide emergency public transportation, and conduct post-disaster building inspection. Reimbursable costs associated with Category B include employee overtime, materials, equipment, and contracts awarded for eligible work.

As shown in Table 3, eligible applicants may be governmental entities or private, nonprofit organizations fulfilling a governmental function.

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Table 3. Eligible Applicants for Federal Emergency Assistance	
Public entities	**Private or nonprofit**
Roads	Classrooms, supplies and equipment
Sewage treatment plants	Utilities (gas, water, power)
Airports	Fire stations, rescue squads
Irrigation channels	Hospitals and outpatient centers
Schools	Custodial care facilities
Buildings	Others: community centers, homeless shelters, libraries
Bridges and culverts	Museums, rehabilitation centers, senior citizen centers
Utilities	Sheltered workshops, zoos, health and safety service

Source: FEMA, *Public Assistance Policy Digest*, FEMA 321, October 2001, p. 37 and 39.

Direct federal assistance may also be offered when the severity of the disaster precludes response by local or state government. The state may request that Category A or B emergency work be performed directly by a federal agency. FEMA uses the National Response Framework and emergency support functions to assign the work, which may be performed by federal employees, or through a federal contractor.

On the basis of the severity of the event, the president may raise the federal cost share for Category A and B work up to 100 percent. For example, in the August 29, 2005, supplemental declaration for the state of Louisiana, President George W. Bush ordered 100 percent federal funding for emergency protective measures, including direct federal assistance, for the first seventy-two hours after the storm. This still leaves the state and local jurisdictions with a significant financial responsibility for the cost of response to and recovery from disasters. For example, after the first seventy-two hours, the state was responsible for 25 percent of the cost for the Coast Guard rescue work and the logistics support of the Army. In Louisiana, the state and federal governments disputed the $1.2 billion state cost share of federally provided emergency assistance, with the state auditing the federal purchases before agreeing to an amount.

Except for direct federal assistance, all other work is performed on a cost-reimbursement basis. This means that the government making the contract with the vendor, usually the local (municipal or county) government, must pay for all of the costs and then request reimbursement from FEMA for the federal share. Generally, FEMA pays about 80 percent of the requested amount pending an audit, at which time the balance owed is paid on the basis of a determination of "allowable costs." This means that the local government may have to wait several years to receive the full federal share of the cost of the work and, in some cases, for the state's share.

Disaster Impact on Local Financial Resources

Local governments in the United States rely on several sources of income. The most common are real-estate taxes, sales and use taxes, and the local share of state income taxes. They are required to balance their budgets, and they generally have little or no extra funding for disaster-related expenses. This means that as soon as personnel are placed on unexpected overtime or an emergency contract is made, the local government's budget is out of balance. Although the typical cost-share of disaster response expenses is 75 percent federal, 18 percent state, and 7 percent local, the local government must find the 7 percent in its existing budget by eliminating some other service or activity that was in the original plan.

Moreover, disasters often take revenue away from local governments. For example, areas that rely on tourism will see a decline in visitors immediately after a disaster, thereby reducing tourism-related revenues, such as the transient occupancy tax collected for hotel stays and sales tax generated through restaurants and shops. Even though FEMA employees may flood the area after a disaster, the federal government pays neither the local sales tax nor the transient occupancy tax for the hotel rooms.

Even communities without tourism as an economic engine will see changes in the revenue profile. Severe disasters may force businesses to close for a time, further reducing retail and business-to-business sales taxes. Real property may have to be reassessed downward on the basis of severe damage from the disaster. For example, if the building is destroyed by 50 percent or more, the property assessment may be reduced to the value of the land.

In addition, the local government may have costs not covered by the federal assistance programs, so it will have to pay all the expenses. This may include activities such as replacement of lost trees or cleanup of office spaces where hazard mitigation was not conducted.

Even when work is part of one of the eligible categories of work, the local government will have to find its 7 percent share from its disaster-depleted revenue, while at the same time trying to keep its employees paid. For a small community with little excess income, this may be devastating. Even New Orleans, with normal revenue of $39 million per month in taxes and fees, $13 million per month in sales taxes alone, was forced to lay off a substantial percentage of its employees in the immediate aftermath of Hurricane Katrina because of the significant loss of revenue. In fact, at one point its only revenue was $2 million per month from Harrah's Casino, which had a contractual obligation to pay its taxes to the city whether or not it was open.

Community Disaster Loans

Another type of federal assistance is the Community Disaster Loan Program. This loan is available to a community with a disaster-related drop in revenues of 5 percent or more that can demonstrate the need for federal assistance to maintain essential services. However, this assistance is limited to no more than 25 percent of the annual operating budget and to no more than $5 million. Under some circumstances, the loan may be converted to a grant after three years, but in the immediate recovery period, the loan remains part of the local government's financial portfolio and will impact its ability to borrow from other sources.

Preparing for Disaster Financial Recovery

Although disasters may not be preventable, local governments can take steps to lessen the impact of similar future events.

Mitigation

Disaster mitigation is a keystone of emergency preparedness. As one of the "four phases of emergency management," mitigation offers agencies the opportunity to take steps in advance of known threats that will lessen their impact on the residents and infrastructure of a community. Mitigation may include strengthening building codes, changing land-use and zoning regulations, and infrastructure development.

Financial mitigation is as important as physical mitigation to the well-being of the residents and the ability to recover community functions. Although few communities can afford to develop an adequate "rainy day" fund to protect themselves, reasonable steps can be taken to mitigate the financial impact of a disaster.

Threat Analysis

Every community should undertake a thorough threat analysis. Understanding the probabilities of various hazards impacting the community will guide the level of expenditure on mitigation activities. First, a community should inventory the hazards in the area: hurricane, earthquake, flood, wildland urban interface fire, and tornado or human-caused disruptions. Second, it should determine the likelihood and frequency of the hazard's occurrence. Third, it should inventory the impacts of the hazard to people and property.

The community should then develop its emergency plan on the basis of the hazards with a high frequency and significant impact. Hurricane Katrina caused the loss of four hundred thousand jobs along the Mississippi Gulf Coast alone. Biloxi suffered the loss of six thousand buildings, or about 20 percent of its homes and business structures.

Emergency Management

Communities should invest in professional emergency management. An emergency management staff should be hired, or developed, with the skills to create a meaningful emergency plan for the community and a functional emergency operations center. The staff should be empowered to train local government staff members in their emergency response roles. Annual exercises of the emergency plan keep it up to date and the staff knowledgeable.

In the post-disaster environment, the professional emergency manager will be able to negotiate with the state and FEMA on behalf of the local community to ensure that appropriate financial assistance is received. Development of an agreement with the state on the cost share and creation of an initial project worksheet are both crucial in obtaining the greatest state and federal assistance for disaster response and recovery.

Revenue Analysis

Communities should carefully evaluate their sources of revenue for disaster vulnerability. Real-estate and sales taxes are especially vulnerable to disaster interruption or reduction. Industries that produce the greatest revenue streams for a community should be encouraged to develop emergency response and business continuity plans and to obtain business continuity insurance policies to aid their rapid recovery to revenue generation.

For example, Biloxi, Mississippi, had as its three major sources of revenue the 4 percent tax on gaming revenues, ad valorem tax on real estate, and sales tax. The gaming tax accounted for about $20 million annually, about one-third of local revenue. Sales tax was one-quarter of its income, and the property tax was less then 20 percent. Moreover, about ten thousand jobs in Biloxi were related to gaming and tourism.

Hurricane Katrina hit Biloxi one month before the end of the fiscal year, so the greatest impact was felt in 2005–06. For that year, gaming revenue was down 45 percent, and sales tax was down 24 percent. The city was forced to suspend all nonstorm capital projects, reduce staffing, and decrease municipal programs and activities across the board, just when the demand for post-storm services was highest. Although Biloxi received more than $37 million in federal grant reimbursements that year, it represented only 75 percent of its storm-related reconstruction costs. The 25 percent "match" had to come from the community's storm-depleted revenue base.

A further impact was seen on Biloxi's bond rating. Due to its loss of revenue, the city's bonds went from an "A" rating to "BBB" post-Katrina. This means that all the bonds sold to pay for recovery carried a significantly higher interest burden than previous capital improvement bonds. Selling as much bonded indebtedness as the city needed to complete repairs was also difficult.

Public Education

Another important mitigation step is bringing residents and businesses into the preparedness process. The community should offer educational programs to encourage every community member to be self-sufficient for at least seventy-two hours. Community conditions may dictate a longer self-sufficiency period. The emergency management staff should ensure that residents are familiar with the threats to the community and knowledgeable about evacuation routes and probable shelter locations (at least by category, such as high school gyms) and have out-of-area phone contacts and a family emergency response plan. FEMA's community emergency response training offers excellent resources for community training and preparedness. Residents and businesses can take private mitigation steps to protect their own property before the disaster.

Business Pre-Disaster Mitigation

Mitigation is especially important for tax-and-fee revenue-generating members of the business community. Their ability to stay in business is an important part of community recovery. The jobs they support will help to keep the community intact, allowing employees to recover and keep their bills paid. The flow of tax revenue will support the local government's disaster recovery.

However, small businesses are inevitably hard hit by disaster. *USA Today* reported that 7,900 businesses in southeast Louisiana, including New Orleans, closed between the Katrina and the fourth quarter of 2006. "The smaller the company, the higher the failure rate," they noted. Remaining businesses faced daunting problems with insurance and the lack of employees, customers, and supplies. Even larger businesses suffer when employees are forced from their communities. A Public Entity Risk Institute study of small- and medium-sized businesses found that pre-disaster efforts at mitigation were a good predictor of staying in business after the disaster.

Insurance

Insurance offers the best opportunity for rapid financial recovery. Local governments should review their property insurance policies regularly to ensure that they are appropriate to the threat level and hazard type within the community. For example, FEMA flood insurance provides resources to quickly rebuild damaged facilities at a reasonable premium. If a public facility has once been flood damaged in excess of $5,000 value and received federal financial assistance for repair, flood insurance is required for that property. Workers compensation and liability insurance policies should be written to include disaster clauses. The risk management unit should be an active partner in emergency planning in every community.

FEMA assistance does not cover insured property until the proceeds of the policy are used. Communities should select deductibles and extent of coverage with FEMA's "duplication of benefits" policy in mind. Based on Stafford Act requirements, anticipated insurance proceeds are deducted from the eligible repair costs in determining FEMA's share.

Financial insurance policies are also an important part of the community's emergency plan. Various instruments are available to insure the community against an inability to repay certain debts and loans. Revenue streams may also be insurable. For example, the state of Mississippi lost $500,000 per day when Hurricane Katrina destroyed its floating casinos, putting fourteen thousand people out of work. Because taxes on the gaming industry represented 35 percent of Biloxi, Mississippi's, total revenue, the city held a $10 million business interruption insurance policy to protect their gambling revenues in the event the casinos did not operate due to disaster. This was a critical element in Biloxi's rapid recovery from Hurricane Katrina, as they ultimately collected more than $900,000 in gambling revenue losses through this policy.

Conclusion

Biloxi's experience demonstrates that pre-disaster planning and mitigation can result in the ability to recover, even after a catastrophic event. The inability to adequately mitigate against catastrophe can leave a community without revenue on which to base its recovery. Sales and property taxes are directly affected by natural disasters, as are the basic industries on which a community's prosperity is based. Communities should invest in adequate threat assessment, emergency preparedness, and response capabilities in concert with their major industries. They should also undertake physical and financial mitigation measures to lessen the damage and thereby speed the recovery of the community after disaster.

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