

Making mitigation a reality

by Richard W. Krimm, Senior Policy Advisor, Federal Emergency Management Agency

When James Lee Witt became the Director of the Federal Emergency Management Agency (FEMA) in early 1993, he was committed in his belief that the Agency had to play a greater role in reducing the impact of natural disasters on the communities, wallets, and lives of the American people. To live up to his commitment, the Director had dedicated much of his time and energy to promote activities that serve to reduce our nation's vulnerability to disasters. This activity is known as 'hazard mitigation'.

In its simplest sense, *mitigation* is risk management. It is a term that we at FEMA use to describe actions that can be taken at the individual, local, State, and Federal levels to reduce the overall risk from natural disasters. It is getting a handle on the costs of disasters in our society, including not only moneys, but also suffering and economic disruptions. In recognition of these facts, Director Witt has moved aggressively to promote mitigation so that it becomes part of the very fabric of our communities and our lives.

Mitigation is good public policy. It saves lives, saves money and protects our communities from experiencing the hardship that is all too often associated with disasters. Fortunately, over the last few years in the United States, we have witnessed a shift in thinking that is slowly taking hold in our country. As the costs of disaster have been rising from events like the Midwest Floods of 1993, the Northridge Earthquake, and the floods in North Dakota, researchers, public officials, and the general public have been paying more attention to the need to evaluate and reduce the risks faced by our communities, particularly along coastal high-hazard areas and riverine communities. Awareness is arising about the value of cost-effective mitigation activities and sound floodplain management. And the concept of mitigation is resonating in our State houses, our communities, and in the minds of our citizens.

The reason that there is so much attention given to mitigation is the fact that each year natural disasters exact a tremendous toll on the United States. In fact the price tag has become so large that many in Congress, the insurance industry, the business community, and in society at large, are now questioning whether we can truly afford to continue business as usual.

When you look at the facts, this should not be surprising. Literally billions of dollars are lost annually as a result of natural disasters, both in terms of insured and non-insured property in the United States and its territories. From FEMA alone, disasters such as the Northridge Earthquake and the California Floods of 1995 and 1997, have cost the American taxpayer upwards of \$13 billion over the last four year period. And that figure does not include assistance provided by other Federal agencies, the States, local governments, or insurance, and it does not include all the indirect costs of natural disaster events such as economic disruption and business closures, lost worker productivity, instability in insurance markets, and impacts on health care and mental health services. The list goes on and on.

But this isn't even the most tragic part of the story. The human side of disaster losses is equally as staggering. Since 1993, over 1.4 million Americans have been victimised in natural disasters declared by the President. These disaster victims have lost their homes, their personal property, their jobs, and in some cases their lives. And since the President only declares disasters when an event is beyond the combined State and local capability, this figure underestimates the number of people impacted by natural hazard events by a matter of millions.

This does not paint a very pretty picture. But the fact is that the United States experiences more natural disasters than any other country in the world. And the types of disasters we face run the gambit of floods, hurricanes, earthquakes, wildfires, tornadoes, snow

storms, drought, volcanic activity and others.

But we are taking action to alleviate the sufferings from natural disasters.

Over the last four years, the emergency management system in the United States has taken a long, hard look at itself in an effort to redefine how it does business. And the conclusion we have come to is that while we don't know how to keep disasters from happening, we do know how to reduce the impact they have on our homes and businesses. Thus by emphasising risk reduction measures, we can begin to reduce the costs of natural disasters and alter forever the face of the American emergency management system.

At FEMA, this redefinition process came about when James Lee Witt became Director of the Agency. Upon arriving in Washington, Director Witt committed his energies toward changing our nation's focus to disaster mitigation. He made mitigation the cornerstone of FEMA, and reorganised the agency to better meet our mitigation goals.

Prior to 1993, FEMA had a handful of mitigation programs that were spread haphazardly through the agency. We had a hazard mitigation grant program which provided grants to States and local governments on a fifty per cent cost-share basis after natural disasters occurred. This activity was part of our disaster relief program. We had the National Flood Insurance Program that mapped our nation's floodplains, and made flood insurance coverage available in communities in return for their adoption and enforcement of minimum floodplain management standards. This activity comprised its own organisational element within the agency. We had the National Hurricane and the National Dam Safety Programs that provided technical and limited financial assistance to Federal, State, and local governments regarding their respective hazards. And we had the National Earthquake Program, that worked within the Federal community to coordinate research and development

activities to address seismic hazards. These three programs were located in the State and Local Programs Directorate, but operated largely independent of any other program activity.

This organisational set-up meant FEMA's mitigation programs were neither coordinated nor focused toward the same goals. This hampered the agency's ability to provide leadership in the field of mitigation, and reduced the impact of our programs on the external environment. The fractured organisational structure also made it difficult for us to consider the interaction between hazards in the design and operation of our programs. For example, this organisation made it difficult to develop construction standards for properties that were at risk from both flooding and earthquakes. To correct these problems, Witt pulled all of FEMA's mitigation programs into a single organisation, known as the Mitigation Directorate. This has made it much easier for FEMA to make mitigation the cornerstone of emergency management. For the first time, we were able to begin leveraging our varied program resources to meet common mitigation objectives. We were able to add multi-hazard components to our activities, and encourage our States and local counterparts to do the same. The reorganisation also allowed us for the first time to embark on a coordinated effort to reduce the unacceptable costs that disasters have on our nation each year, rather than simply support individual projects and activities on a piecemeal basis.

The timing for these changes could not have been better. With increasing pressure in the United States to have accountability in government and to do more with fewer resources, the Congress and the American people were clamouring for FEMA to begin to take action to reduce disaster costs. It became clear that we could no longer continue as we always had. We needed to look at how we could work together to reduce our Nation's exposure to risk. Fortunately, Witt's reorganisation of our resources helped us meet this new challenge.

So in our new structure, we moved aggressively to push mitigation messages and encourage risk reduction activities. Our goal was to make a real and measurable impact on our nation's risk profile, thereby reducing human suffering and property damage, and the need for Federal, State and local response resources. While the issues are complex,

FEMA's vision of the future is simple. We are looking forward to a time when people think of mitigation the same way they think of seat belt usage in their cars — as a necessity. We want people to consider risk-reduction needs as a part of their daily lives. We want our citizens to expect their local and State officials to take action to protect their homes, businesses, and infrastructure. And we want them to understand their risks to natural hazards and think of mitigation when they build or purchase property, remodel their basements, and vote in the election booth. And most importantly, we want individuals and communities to take appropriate action to reduce the loss of life, injuries, economic costs, and disruption that all too often accompany floods, wildfires, earthquakes and other hazards.

President Clinton and Director Witt have taken dramatic action to make this vision a reality. Since they came to Washington, they have promoted mitigation as a national priority. The clearest example of the leadership they have provided can be found in the National Mitigation Strategy and the Disaster Resistant Community Concept.

The National Mitigation Strategy was developed with input from people from across the country, and at all levels of government and the private sector. It encompasses an all-hazards approach to reducing the long-term risk from disasters. The strategy outlines ways in which we as a nation can utilise and better coordinate existing Federal programs, develop new incentives, and implement cutting-edge technologies to reduce losses from hazards such as floods, earthquakes, hurricanes, and wildfires. and in doing so, the document is now providing a vision for safer communities as our nation moves into the 21st Century.

The process of developing the National Mitigation Strategy was a true example of consensus building. In order to create the strategy, FEMA conducted a series of eleven mitigation forums across the country in order to obtain input from our partners and other stakeholders in reducing disaster losses. A list of 2400 names was assembled from across the country. This list served as our invitation list.

The next step was to plan for the actual events. In determining where to hold the forums, the primary planning concern was geographic distribution. Given the size of the United States, we had to make sure that the logistics of

getting to and from the forums were not prohibitively expensive or time consuming for the attendees to participate. For that reason, we decided on holding eleven forums around the country. There was one in each FEMA region and one in Hawaii in order to include input from the Pacific Island areas. The forums occurred over a three-month period. Over 2,000 people accepted the invitation to participate in the forums, and hundreds more had to be turned away due to lack of space.

The forums themselves were extraordinary examples of consensus building. For each event, we asked the attendees to provide their recommendations to help us meet one simple goal. The goal is to reduce by one-half the nation's damage from natural disasters. We also provided the meeting attendees with some support and information in order to facilitate discussion. We opened each session with a video on the concept of mitigation, and we provided everyone with a list of what we now call the 'ten basic principles of mitigation'. These principles are as follows.

1. Risk reduction measures ensure long-term economic success for the community as a whole rather than short-term benefits for special interests.
2. Risk reduction measures for one natural hazard must be compatible with risk reduction measures for other natural hazards.
3. Risk reduction measures must be evaluated to achieve the best mix for a given location.
4. Risk reduction measures for natural hazards must be compatible with risk reduction measures for technological hazards and vice versa.
5. All mitigation is local.
6. Disaster costs and the impacts of natural hazards can be reduced by emphasising pro-active mitigation before emergency response — both pre-disaster (preventive) and post-disaster (corrective) mitigation is needed.
7. Hazard identification and risk assessment are the cornerstones of mitigation.
8. Building new Federal, State and local partnerships, and public-private partnerships, is the most effective means of implementing measures to reduce the impacts of natural hazards.
9. Those who knowingly choose to assume greater risk must accept responsibility for that choice.

10. Risk reduction measures for natural hazards must be compatible with the protection of natural and cultural resources.

The ten principles may seem basic, but in many ways they are new in the United States. They are changing the way in which our nation approaches both mitigation and the entire field of emergency management. For this reason, it is important that we defined them as the framework for all of the discussions during the mitigation meeting.

Once we reached common understanding of the guiding principles of mitigation, we moved on to a facilitated discussion involving all of the participants. In the open forum, we asked attendees to provide their thoughts in order to answer the following six questions.

1. How would you recommend we inform people about their risk and possible mitigation measures meant to reduce that risk?
2. What sort of timeline would be most appropriate for us to reach our goal of reducing natural hazard damages by one-half?
3. What mitigation measures have proven to be the most successful and effective and why?
4. What incentives can be used or created to encourage mitigation measures?
5. Can mitigation be voluntary, or must it be required? and;
6. How would you recommend mitigation measures be financed?

These questions generated about 300 pages of input between the eleven meetings. This input was then used as the basis for developing the National Mitigation Strategy. Using this raw data, staff in the Mitigation Directorate spent the next three months developing a draft strategy document, which was circulated to Federal and State agencies and key partner organisations for comment. Once all the comments were received, we revised the Strategy document to reflect the new information.

On three separate occasions, over a six-month period, we sent drafts of the Strategy out for comment. Throughout this lengthy process, efforts were made to incorporate the thoughts and ideas of all parties and seek resolution of outstanding issues through consensus, so that everyone could have their interests represented in the final product. Unfortunately, we did experience a number of delays and problems along the way that hampered our efforts. In

retrospect, the review process we established was not as coordinated as we would have liked. However, in December 1995, the first copies of the National Mitigation Strategy were distributed in time for a National Mitigation Conference. Because we spent so much time and effort to be inclusive with the strategy, we were able to prepare a vision for mitigation that transcends the Federal government. This was critical to the strategy's success, because while FEMA can provide leadership in raising the visibility and importance of mitigation, successful implementation of its principles was dependent on the actions of many others at the Federal, State, local, and private sector levels.

As a result, we had to draw everyone into the partnership. By doing so, we have developed a strategy that is not only a FEMA document outlining what government will do, but it is a national strategy designed to be implemented at all levels of government and the private sector. If we could go back and do it again, we would put together a working group to actually draft the document. That way, instead of FEMA having drafted the document in a vacuum, a sampling of all the stakeholders could have participated in putting to pen to paper, further adding to the national focus of the document.

The National Mitigation Strategy is a 15-year plan, encompassing over sixty objectives designed to bring about a safer and more disaster resistant nation. The cornerstone of the strategy is the growing acceptance by all Americans of the need to take personal responsibility for making their communities safer from natural disasters. Toward this end, the ultimate goal of the Strategy has two components:

1. To substantially increase public awareness of natural hazard risk so that the public demands safer communities in which to live and work.
2. To significantly reduce the risk of loss of life, injuries, economic costs, and destruction of natural and cultural resources that result from natural hazards.

In order to achieve these goals, the Strategy is founded on the need to strengthen partnerships and create partnerships where none currently exist, in order to empower all Americans to fulfill their responsibility for building safer communities. These partnerships are needed to address the five major elements of the strategy which are as follows:

Hazard identification and risk assessment

We must conduct studies to identify hazards and assess the risks associated with those hazards for communities throughout the nation.

Applied research and technology transfer

We must encourage applied research that will develop the latest technology in response to natural hazard risks, and promote the transfer of that technology to users like State and local governments, the private sector, and individual citizens to support the National Mitigation Goal.

Public awareness, training and education

We must create a broad based public awareness and understanding of natural hazard risks that leads to public support for actions to mitigate those risks. We must also create mitigation training programs that can be used in schools and communities to support public actions.

Incentives and resources

We must provide incentives to encourage mitigation activities, and we must redirect resources from both the public and private sectors to support all elements in order to achieve the National Mitigation Goal.

Leadership and coordination

We must provide leadership in the achievement of the National Mitigation Goal, provide coordination among Federal agencies to promote hazard mitigation throughout all Federal programs and policies, and provide coordination with other levels of government and the private sector.

The strategy sets forth a series of strategic objectives by which to measure the Nation's success in achieving the National Mitigation Goal, and offers the basis for establishing priorities for use of limited resources in fulfilling its major elements. Most important in this regard is the *Mitigation Action Plan* (MAP) that highlights actions Americans and their governments must take to successfully launch the National Mitigation Strategy.

The MAP proposes a number of critical actions to make the communities in our country more disaster resistant. For example:

- Federal agencies will apply the best mitigation practices to their own facilities, complete a national natural hazards risk assessment, develop partnerships to advance research, standards development, and cost-

effective measures, provide incentives and spearhead a national public awareness campaign

- State and local governments should develop sustained administrative structures and resources for mitigation programs, adopt and enforce building codes and land use measures, and conduct ongoing public information campaigns on natural hazard awareness and mitigation
- private businesses and industries need to accept responsibility for being aware of the natural hazards that threaten their facilities and investments, reducing their risks, and taking an active role in their communities to encourage mitigation
- individual citizens should accept responsibility for becoming aware of the natural hazards that affect them and their communities, and for reducing their degree of vulnerability.

Finally, the strategy includes provisions for evaluation, not just of the achievement of strategic objectives, but of mitigation itself by providing a methodology and an implementation plan to develop a body of clear evidence that mitigation works. The strategy calls for the central collection of these evaluations and the dissemination of the results to policy makers and the public.

In many ways, the National Mitigation Strategy serves as our nation's framework for addressing its level of risk and reducing its susceptibility to natural disasters. Through its implementation, we will be able to better protect our ways of life and reduce the unacceptable cost of disasters.

That is not to say the strategy is perfect by any means. When we released the strategy at the National Mitigation Conference in 1995, we provided our country with the vision of the future. What we didn't do enough of, however, was lay the road map showing how to get there. We did lay out a Mitigation Action Plan that outlined a series of objectives with associated time lines, however, the strategy did not assign any responsibility for making it happen.

The strategy we developed did little to outline how elements of the Strategy can be pursued by Federal, State, local and private sector interests. As a consequence, we had to spend nearly a year-and-a-half after the strategy's release developing an implementation plan that provided such guidance. Secondly, if we could do it over again,

FEMA would want to include a discussion about the need for specific legislation to support national mitigation objectives. For instance, we would need to develop a linkage between State and local mitigation activity and the cost-share they receive from the Federal government for disaster relief. The strategy should also have contained specific reference to the need for an Executive Order from the President directing the entire Federal community to include mitigation in their work and planning activities. Despite these missed opportunities, I believe we have made a great deal of progress to begin meeting the objectives outlined in the Strategy.

We are using the strategy as a tool to start a new initiative known as *Disaster Resistant Communities*. The idea is to work at the community level in advance of a natural disaster to promote mitigation. The idea is to work at the community level to build community partnerships, identify hazards and community vulnerability, prioritise hazard risk reduction actions and communicate success. Through these efforts we believe the community will become less vulnerable to the hazards it faces. FEMA will provide the community with pre-disaster mitigation funding and encourage other Federal agencies to do the same. In return, we expect the community to use that funding to leverage State, local and private sector contributions to take care of mitigation needs at the local level. There are three primary elements of the Disaster Resistant Community initiative. They are *community focus, private sector involvement and use of incentives*.

The Disaster Resistant Community initiative is focused on promoting mitigation at the local level. In the United States, we can do all we want at the national level to promote mitigation, but those at the local level need to identify their local priorities and commit local resources to make it happen.

In its simplest sense, building codes, land-use decisions, and the monitoring of construction practices occur primarily at the community level. This means unless we pay attention to the community level in this equation, we will never meet our mitigation objectives. That is why in the Disaster Resistant Community initiative, we will be working with local governments to reduce their risk from natural disasters. We will meet with local officials and community leaders in their communities, provide them with technical support, encourage them to

take the lead in assembling the stakeholders and identifying mitigation priorities, and allow them to manage the actual project.

A second pivotal element of the Disaster Resistant Community initiative is the involvement of the private sector. Natural disasters cost the private sector billions of dollars annually due to damaged facilities, lost productivity, lost sales and revenue and increased absenteeism among workers. And the impact goes well beyond their physical plant. For example, when power is lost company machinery cannot operate, when an organisation's suppliers and distributors experience losses those suppliers and distributors cannot support company production or sales, and when roads and bridges wash-out or fail private sector organisations can't move their goods to market. Based on our experience, the most successful mitigation initiatives are ones in which the private sector can come to recognise the benefits they can accrue with hazard mitigation, and to help make it happen.

A critical element of the Disaster Resistant Community initiative lies in the creation of incentives to encourage mitigation. Over the past few years, we have learned that mitigation is a dollars-and-cents issue. Stories about avoided losses or the suffering felt by others does not do the job. Local citizens, the private sector and local governments need to understand what is in mitigation for them before they are willing to mitigate natural disasters. Toward this end, much of the work we are doing with our State, local and private sector partners has revolved around developing incentives such as:

- reductions in local property tax rates for structures built to certain hazard-resistant standards
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- insurance rate discounts or deductible waivers in return for mitigation actions similar to what FEMA does under its National Flood Insurance Program
- developing a linkage between a community's bond rating and its investment in risk-reduction activities
- increased or decreased cost-share arrangements for States and communities depending on mitigation efforts
- low or no-interest loans to complete mitigation work

- reductions in mortgage interest rates charged to people and companies that build their facilities beyond code requirements.

At this time, we are developing these and other incentives that will encourage activities to reduce the impact of natural hazards on the lives of our citizens.

The United States is on the cusp of a much brighter and safer future through hazard mitigation initiatives. Progress in the development of all-hazard mitigation technologies and standards is finally

beginning to pay dividends. The string of large disasters over the last decade has helped raise public awareness of natural hazard risk higher than ever before.

Fiscal pressures have made the reduction in disaster losses more important than ever. And we are seeing real cost savings due to past investments in mitigation. But there are still many obstacles to overcome. We as a society need to change the way we make our decisions on land use issues, alter community building practices, and promote

land-use decisions that reduce the long-term risk to people, their property, and their communities. We have a long way to go in educating people about the risks they face, and how they can take action to counteract them. We still need to develop more compelling incentives and disincentives to encourage mitigation actions at the local level of government. We must also internalise the need for risk reduction as a cultural value, so people begin to demand safer communities in which to live and work.