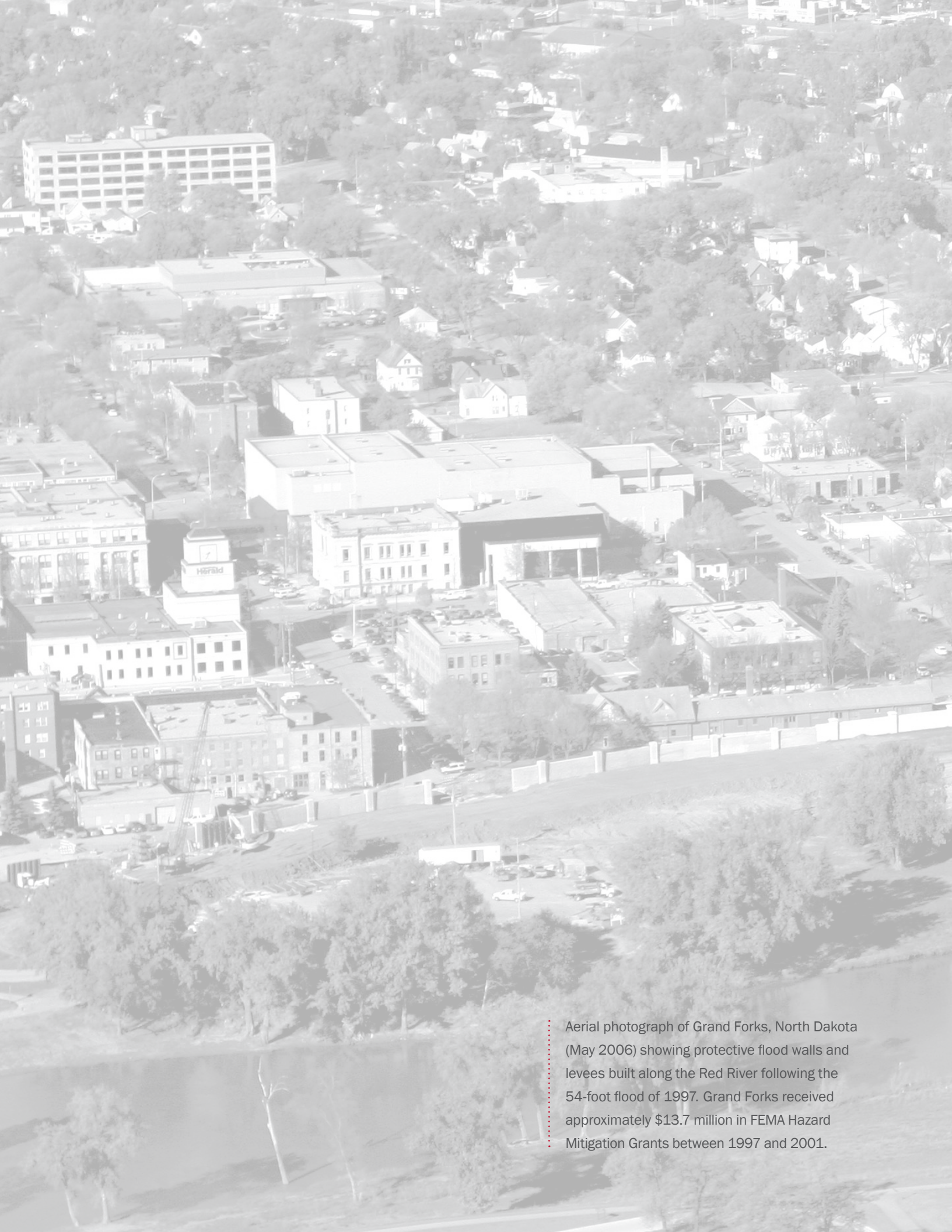


Mitigation Works



FEMA



Aerial photograph of Grand Forks, North Dakota (May 2006) showing protective flood walls and levees built along the Red River following the 54-foot flood of 1997. Grand Forks received approximately \$13.7 million in FEMA Hazard Mitigation Grants between 1997 and 2001.

By encouraging and supporting mitigation efforts, FEMA leads our nation in reducing the impact of disasters. Mitigation saves money. Every dollar invested in mitigation saves the nation an average of four dollars.

Source: Three-year study by the Multihazard Mitigation Council of the National Institute of Building Sciences, December 2005.

Mitigation Works

Nature brings threats to life and property. Shared investment strengthens our ability to withstand them.



In 2007, Port Neches, Texas, used \$1.5 million in Hazard Mitigation Grants to wind-retrofit important community buildings with guidance from FEMA and building experts. The police station, public works building, library, community center, fire station, city hall, and senior center were all secured. When Hurricane Ike struck in 2008, securing buildings took only the push of a button, and community officials were able to focus their efforts on getting people to safety.

Mitigation is *Partnership*

Reducing the impact of natural disasters requires collaboration. When communities, business, and government work together, risk can be understood. From that understanding, the best decisions can be made—and actions taken—to reduce or eliminate risk.



In April 1997, the Red River flooded its banks and 8,600 homes in Grand Forks, North Dakota. Afterward, State officials worked closely with local leaders to identify and help more than 700 families living in North Dakota's most vulnerable areas to move out of harm's way with FEMA Mitigation grant funds. When the Red River flooded its banks again in 2006, the impacts of mitigation efforts were clear.

Mitigation is *Investment*

Creating resilient communities—that are able to not only survive hazards, but come through them safely, quickly, and securely—requires investment.

Building safe rooms, making seismic retrofits for earthquake resistance, constructing floodwalls, and planning other structures to protect lives is important work. But investment in mitigation is not just a focus on “bricks and mortar.” It’s also: investing in technology and analyzing risks; applying proven principles of floodplain management; creating stronger building codes and guiding smarter development; building strong relationships with communities; and much more.

Mitigation investment is, ultimately, a commitment to devote human and financial capital to strengthen a community—and prevent hazards from becoming disasters.



A series of devastating tornadoes ripped through Oklahoma City in May 1999, leaving 44 people dead and more than 8,000 buildings damaged or destroyed. Four years later, another tornado struck in May following the same path, but causing far less damage. After the 1999 tornadoes, Oklahoma City and the State committed their own funding, along with Federal support, for advanced safe room construction built in compliance with FEMA guidelines.

Mitigation is *Expertise*

By incorporating the latest advancements in building design and technology—and by applying lessons learned from prior disasters—we can create safer, stronger, more resilient communities.

Professionals in a variety of disciplines provide the expertise to make communities safer. Engineers, architects, hydrologists, geologists, urban planners, digital cartographers, and others all play vital roles.

Their work provides the evidence-based knowledge needed to understand risk and take action to reduce it, including: properly elevating homes in flood prone regions; strengthening buildings in hurricane zones; retrofitting structures for improved earthquake resistance; providing funds to manage wildfire risk; and making building codes for new construction more vigorous.



Spring floods in 1979 pushed the Illinois River over its banks, causing a 29-foot flood and \$30 million in total damages to the area around Peoria County, Illinois. Following this disaster, the county began working in partnership with FEMA to develop hazard mitigation plans and reduce its flood risks. By 1985, the county began purchasing low-lying properties that flooded repeatedly. In all, 120 properties were purchased and restored to open space. Following Hurricane Ike in 2008, severe rains caused a 27-foot flood, but, this time, Peoria County had less than \$500,000 in damages.

Mitigation is Action

All the knowledge, all the planning, all the experience only matter when put into action.

More than 20,500 communities, working together with State and local agencies, actively manage their flood risk with flood hazard maps. More than 5.6 million Americans protect their homes and families from financial loss with insurance from the National Flood Insurance Program. Communities nationwide enforce strong hazard-resistant building code regulations and follow comprehensive hazard mitigation plans to guide development. And, thousands of families are making their homes stronger and safer using building techniques that are resistant to floods, earthquakes, hurricanes, and other natural hazards.

That's mitigation in action. That's mitigation at work.



..... Risk analysis, risk reduction, and risk insurance
..... programs work together—to provide the mix
..... of expertise, tools, and support communities
..... need to understand and address their unique
..... mitigation challenges.

The FEMA Mitigation Directorate: Providing guidance, incentives, and resources

FEMA's Mitigation Directorate has the lead role in helping communities address and reduce their disaster risks.

This is accomplished through three primary activities that help States and localities achieve the highest level of mitigation: risk analysis, risk reduction, and risk insurance.

Through these activities and the Directorate's day-to-day work across the country, communities are able to make better mitigation decisions before, between, and after disasters.

Our Model for Success

Risk Analysis

Mitigation begins with a thorough assessment of the potential and actual impact a natural disaster could (or did) have on a particular community. Through its mapping programs, FEMA Mitigation combines flood hazard mapping, risk assessment tools, and mitigation planning. After a flood, earthquake, or other natural hazard event occurs, FEMA Mitigation gathers and analyzes critical data to aid in future mitigation efforts. It all enables communities to be better informed—and better protected.

- FEMA mapping programs are compiling updated digital flood hazard maps and data that will help inform mitigation decisions for more than 90 percent of the population.

Risk Reduction

FEMA Mitigation helps communities reduce risk through sound land-use planning principles, floodplain management practices, and vital financial assistance. Risk is also reduced through promoting stronger and safer construction and rebuilding methods, which can then be legislated or regulated on State and local levels.

Through a variety of grant programs, the Directorate funds activities to reduce disaster losses, including relocating or acquiring properties in floodplains, adopting and enforcing disaster-resistant building codes, and reinforcing buildings in earthquake-prone areas.

- In fiscal year 2008, nearly 1,100 jurisdictions received financial assistance to implement mitigation projects, with total funding of nearly \$255 million; and more than \$2.5 billion in losses were prevented.

Risk Insurance

Flood insurance is a critical tool for communities and homeowners to help manage the financial risks of flood damage. Through the National Flood Insurance Program, FEMA Mitigation provides federally backed flood insurance sold by most major insurance providers. This insurance is offered in communities that agree to adopt proven, comprehensive floodplain management practices and flood-resistant building standards.

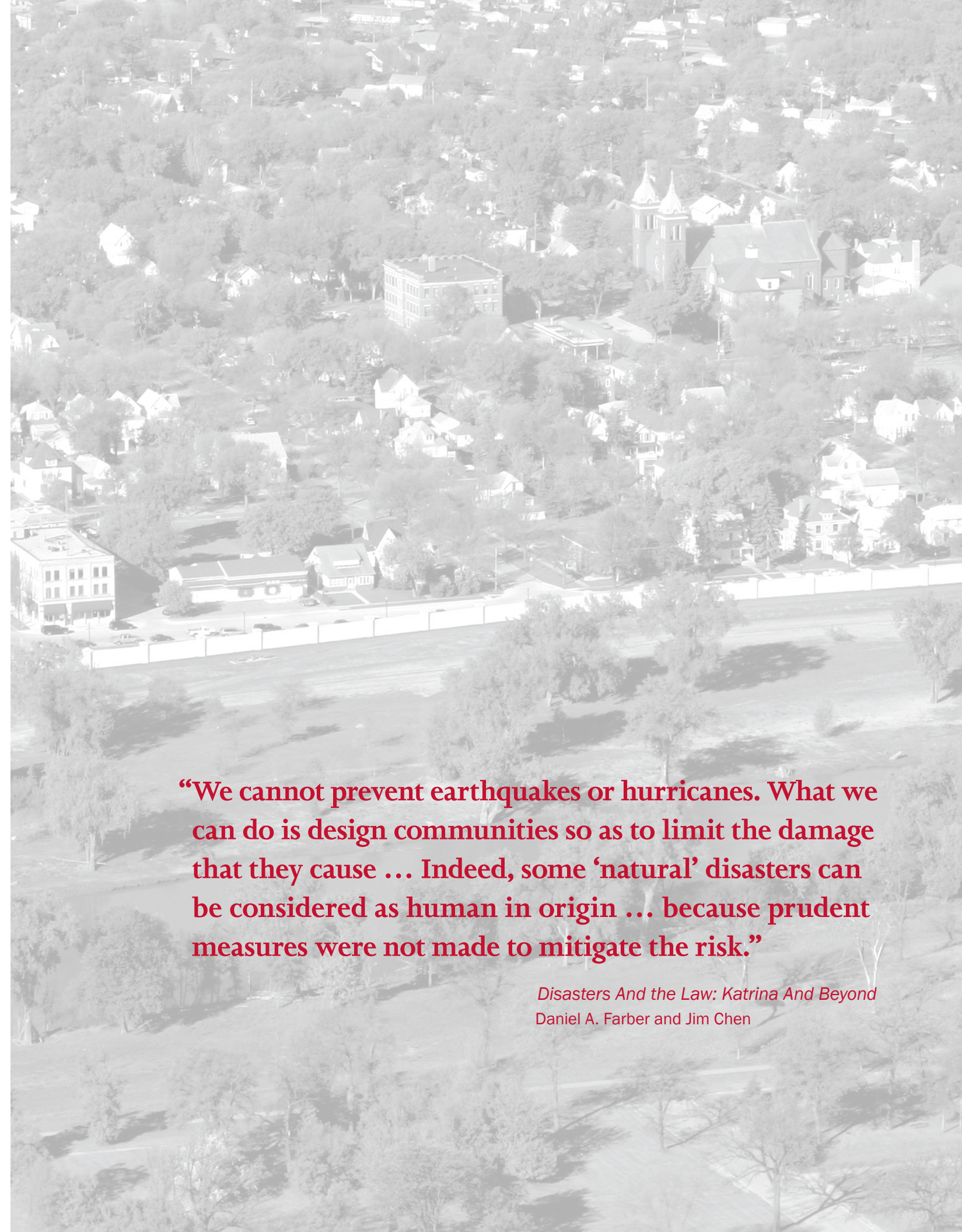
- Nationwide, more than \$1.1 trillion in coverage, and 5.6 million flood insurance policies are in force.

Disaster Support

After disasters, FEMA Mitigation provides critical services and expert personnel during response and recovery activities. Mitigation professionals assess the factors that contributed to damages, provide technical guidance to residents on rebuilding, assist with filing and closing flood insurance claims, and work with officials at all levels of government to incorporate mitigation considerations into short- and long-term recovery efforts.

Office of Environmental Planning & Historic Preservation (EHP Office)

Through the EHP Office, FEMA helps ensure that the environmental and cultural resources of an area are preserved to the extent possible before, during, and after disaster mitigation, response, and rebuilding activities. This office supports FEMA in fulfilling responsibilities under a variety of Federal laws, Executive orders, and policy regulations.



“We cannot prevent earthquakes or hurricanes. What we can do is design communities so as to limit the damage that they cause ... Indeed, some ‘natural’ disasters can be considered as human in origin ... because prudent measures were not made to mitigate the risk.”

Disasters And the Law: Katrina And Beyond
Daniel A. Farber and Jim Chen

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