

# The Whole Community: Disaster Recovery & Mitigation






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Emergency Management and Homeland Security

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March 18, 2019

# Benefits of Hazard Mitigation



National Benefit-Cost Ratio Per Peril <small>*BCR numbers in this study have been rounded</small>		
Overall Hazard Benefit-Cost Ratio		
	Federally Funded	Beyond Code Requirements
 <b>Riverine Flood</b>	<b>7:1</b>	<b>5:1</b>
 <b>Hurricane Surge</b>	Too few grants	<b>7:1</b>
 <b>Wind</b>	<b>5:1</b>	<b>5:1</b>
 <b>Earthquake</b>	<b>3:1</b>	<b>4:1</b>
 <b>Wildland-Urban Interface Fire</b>	<b>3:1</b>	<b>4:1</b>

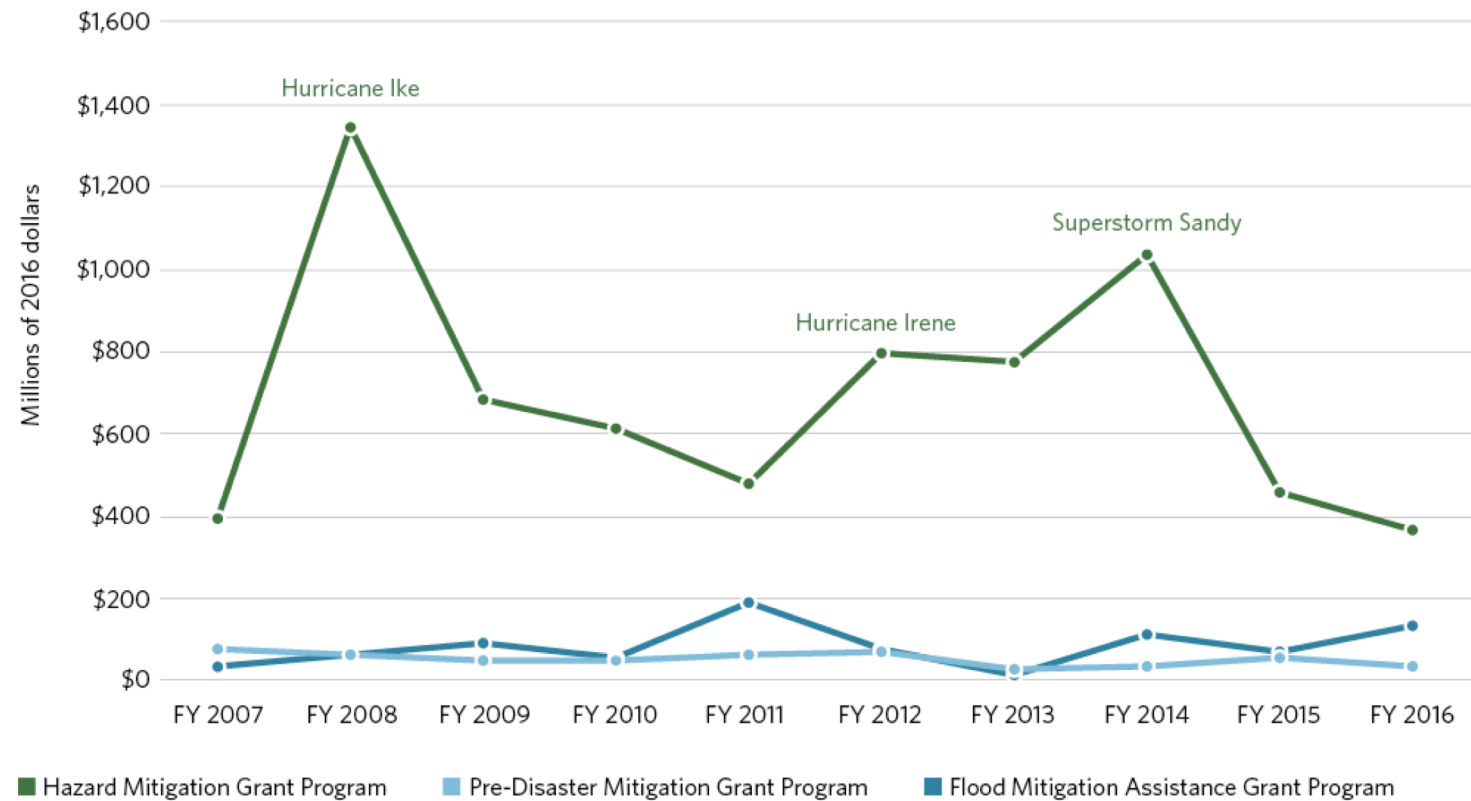
National Institute of Building Sciences, “Natural Hazard Mitigation Saves: 2017 Interim Report” (2018)

# Hazard Mitigation funding

Figure 2

## Episodic Nature of Disasters Drives Most FEMA Hazard Mitigation Grant Funding

Total funding by program, inflation-adjusted, federal FY 2007-16



Notes: Data reflect federal spending commitments, known as obligations, related to natural hazards in the 50 states and the District of Columbia and are presented according to the date that FEMA allocated funds to a project. The Repetitive Flood Claims and Severe Repetitive Loss grant programs are included within the Flood Mitigation Assistance Grant Program. Activities funded through FEMA's Public Assistance grant program are not shown because of data limitations.

Sources: Pew's analysis of data from the Federal Emergency Management Agency, "Hazard Mitigation Assistance Projects," accessed April 25, 2018, <https://www.fema.gov/openfema-dataset-hazard-mitigation-assistance-projects-v1>; U.S. Department of Commerce's Bureau of Economic Analysis

# Resilient Communities

Disaster resilience is the ability of communities to “mitigate hazards, contain the effects of disasters when they occur, and carry out recovery activities in ways that minimize social disruption and mitigate the effects of future disasters.”

(Multidisciplinary Center for Earthquake Engineering Research)





# “Window of Opportunity”

## Contributing Factors

- Funding sources
- Public awareness
- Political will
- Repair/rebuild activity

## Obstacles

- Race to return to normalcy
- Institutional disincentives
- Timing of knowledge and funding
- Property rights and development patterns
- Multiple recovery agendas



PAS REPORT 576

# PLANNING FOR POST-DISASTER RECOVERY: NEXT GENERATION

James C. Schwab, AICP, Editor

## Hazard Mitigation and Disaster Recovery Resources

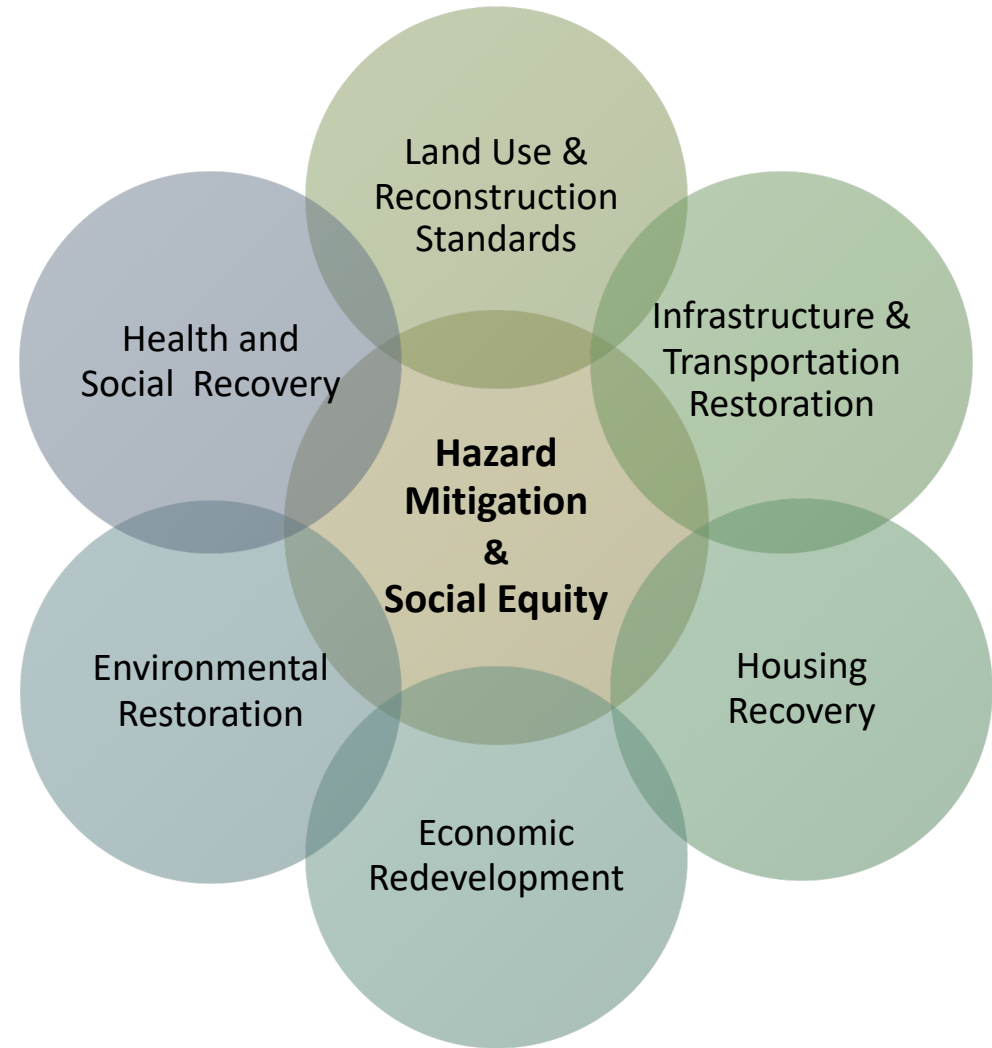
APA Hazards Planning Center

[www.planning.org/nationalcenters/hazards/](http://www.planning.org/nationalcenters/hazards/)

# Interrelated Policies

“As we looked into each issue, all we found were complex problems. They were all interrelated; each solution was dependent on other problems we were trying to solve simultaneously. It was like trying to untie a Gordian Knot”.

- Member of the Bring New Orleans Back Commission





# Modify building and development standards

Adopting stronger building codes

Site design requirements

Triggers for nonconforming structures/uses

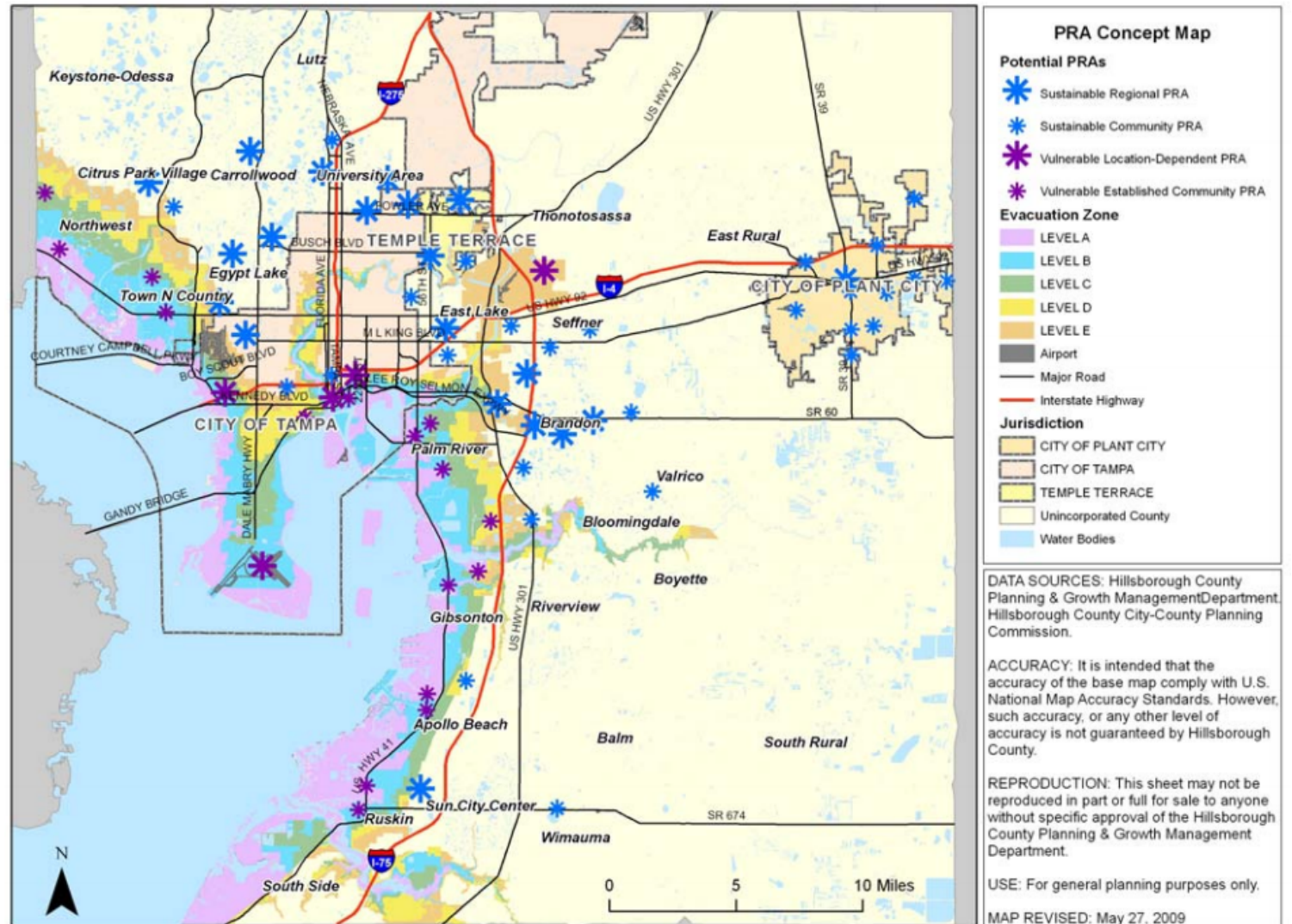


# Relocate development out of severely damaged areas

Property acquisition

Transfer of Development Rights

Changes to land use and zoning



Priority Redevelopment Areas

Source: Hillsborough County, 2010

# Encouraging mitigation during repair and rebuilding

Public education on the benefits of voluntary mitigation measures

Assistance in obtaining funding





# Including mitigation in infrastructure repair or replacement

Including mitigation in Public Assistance projects

Relocating or removing from high-risk zones

Including climate adaptation

Upgrading protection levels of mitigation structures, e.g. seawalls, levees, etc.



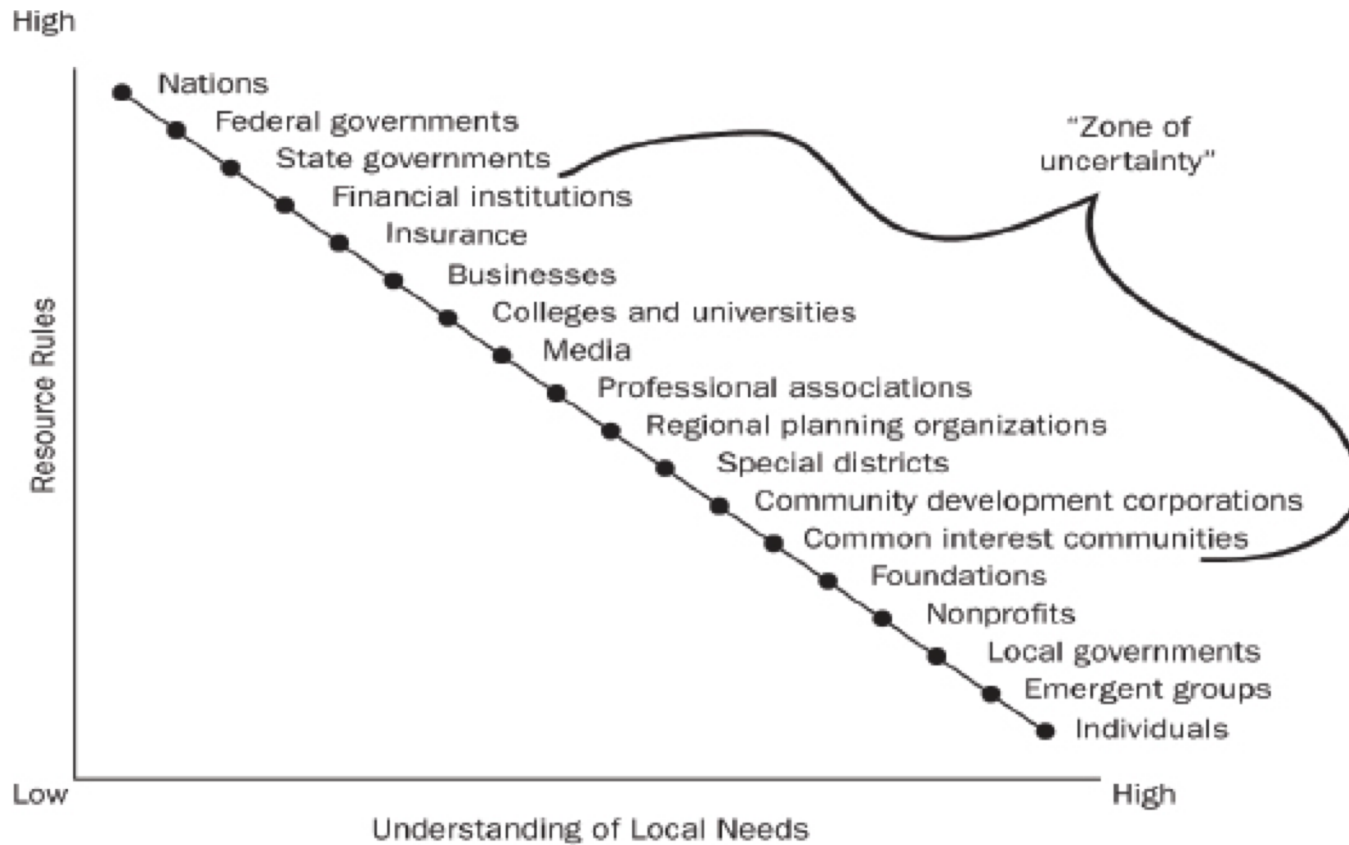
# Restoring natural functions that provide protection from hazards

Floodplains

Wetlands

Fire adapted ecosystems





# Whole Community