



Planning and Designing Mitigation Projects

2019 CDBG-DR Problem Solving Clinic

Kansas City – Overland Park | July 30 – August 1, 2019

Welcome

- Session Objectives

- Increased knowledge of best practices in mitigation planning and project design
- Increased knowledge of useful resources for mitigation planning
- Increased knowledge of approaches and resources for protecting LMI and vulnerable populations in mitigation planning and implementation

- Speakers

- Marion McFadden, Enterprise Community Partners
- Joyce Coffee, Climate Resilience Consulting

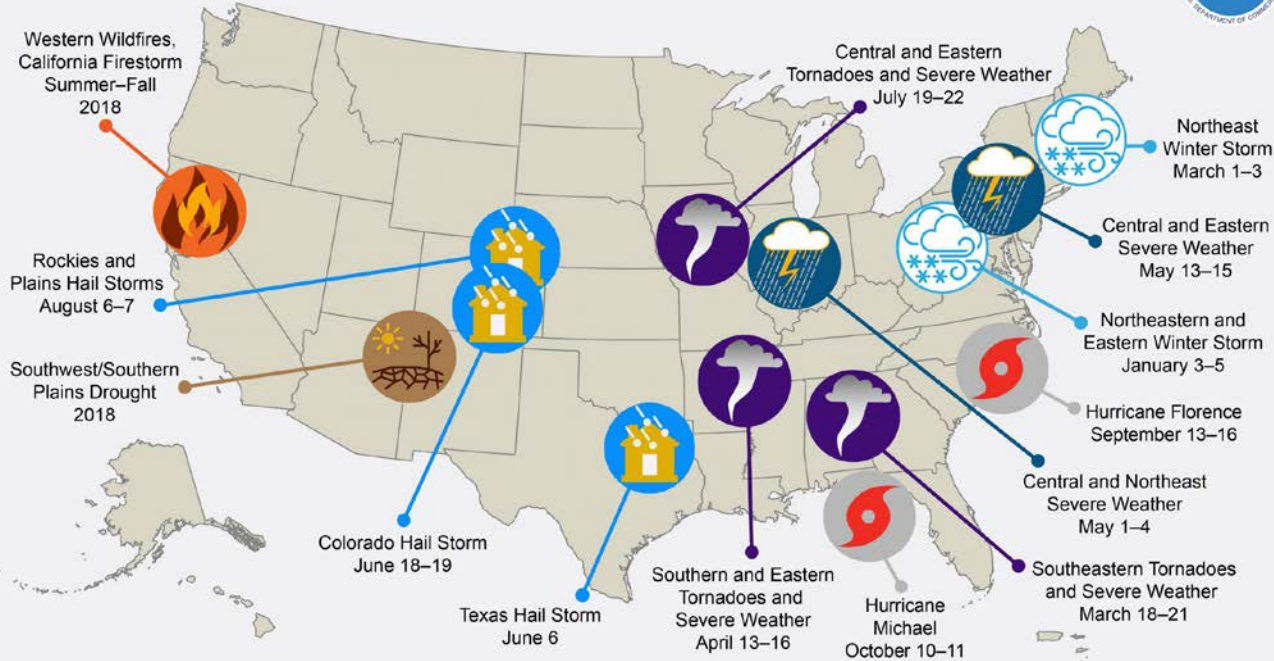
“Instead of repeated damage and continual demands for federal disaster assistance, resilient communities proactively protect themselves against hazards, build self-sufficiency, and become more sustainable.” (Godschalk et al., 2009)



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U.S. 2018 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the 14 separate billion-dollar weather and climate disasters that impacted the United States during 2018.

- Hail
- Wildfire
- River Flood
- Coastal Flood
- Wind
- Hurricane
- Tornado
- Severe Weather
- Winter Storm
- Drought
- Heat



Overview of Key Considerations in Mitigation Planning



Government Mitigation Planning Mechanisms

- Land use & urban planning
- Licensing & regulation
- Leadership & awareness
- Community engagement & service delivery
- Operations & workforce



Key Elements of Hazard Mitigation

- Be directly relevant to future natural hazard risks
- Indicate flexibility to adjust to changing risks
- Do no significant harm
- Use appropriate time-horizons for project planning
- Magnify collateral benefits: engage key influencers, draw in more resources, achieve near term and longer term progress
- Compare to business-as-usual- if the project were to not to exist, and/or were the asset not to be hazard resilient
- Demonstrate that various resilience options were considered and provide a justification for the option that was selected
- Integrate into long term planning
- Integrate into regional cooperation



Local Collaboration for Collateral Benefit



Interdepartmental Collaboration: National Disaster Resilience Competition



Related Resources

Playbook 1.0: How Cities Are Paying for Climate Resilience

Peter Plastrik, Joyce Coffee & John Cleveland
Innovation Network for Communities & Climate Resilience Consulting



July 2019

SAFER AND STRONGER CITIES

STRATEGIES FOR ADVOCATING FOR
FEDERAL RESILIENCE POLICY



Enterprise



REBUILD
BY
DESIGN



Types of Mitigation Activities and the Mitigation Planning Process



Eligible FEMA Hazard Mitigation Grant Program Projects

- Dry Floodproofing of Non-residential Structures
- Minor Localized Flood Reduction Projects
- Structural Retrofitting of Existing Buildings
- Non-structural Existing Building & Facility Retrofits
- Safe Room Construction
- Infrastructure Retrofit
- Structure Elevation
- Soil Stabilization
- Wildfire Mitigation
- Post-disaster Code Enforcement
- Hazard Mitigation Planning (counties)



Mitigation Planning

- Identifies cost-effective actions for risk reduction
- Focuses resources on the greatest risks and vulnerabilities
- Builds partnerships with people, organizations, & businesses
- Increases education & awareness of hazards and risk
- Communicates priorities to State & Federal officials
- Aligns risk reduction with other community objectives (e.g., economic development, open space, public safety, civic engagement)



Mitigation Best Practice

- Cost-effective
- Substantially reduce risk
- Multi-hazard
- Collateral benefits



**Helps Avoid Repetitive
Damage from Disasters**



**Improves
Resilience**



**Every \$1 Spent in Hazard
Mitigation Leads to \$6 in
Future Savings**



**Provides Long-term
Solutions to Problems**



**Supports Risk
Reduction Activities**



Standards for Construction, Operation and Maintenance



Standards Related to Future Risk & Mitigation Monitoring

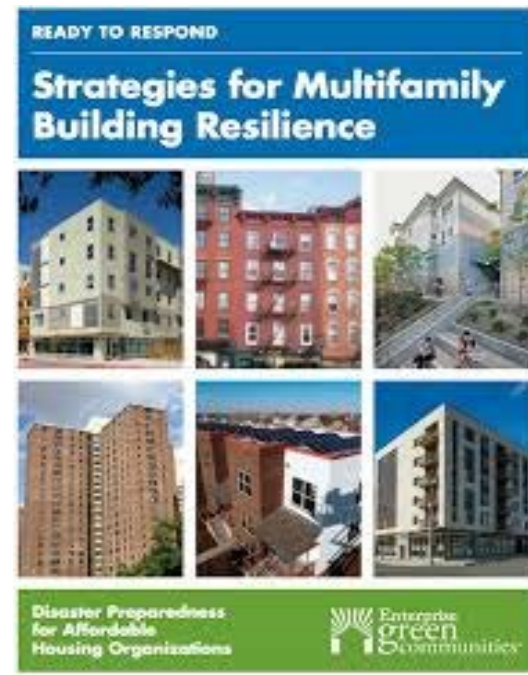
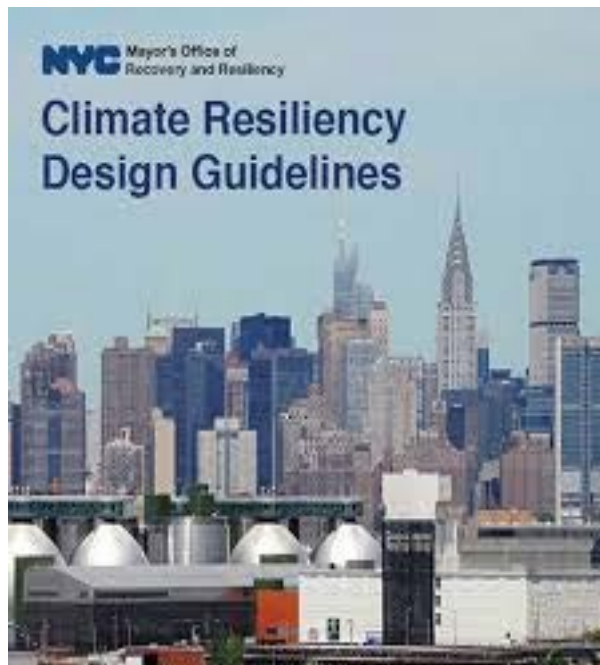


Technical Assistance for Mitigation

- Understand legal frameworks
- Overcome land use regulation barriers
- Incorporate innovations
- Increase coordination
- Encourage implementation of additional resilience



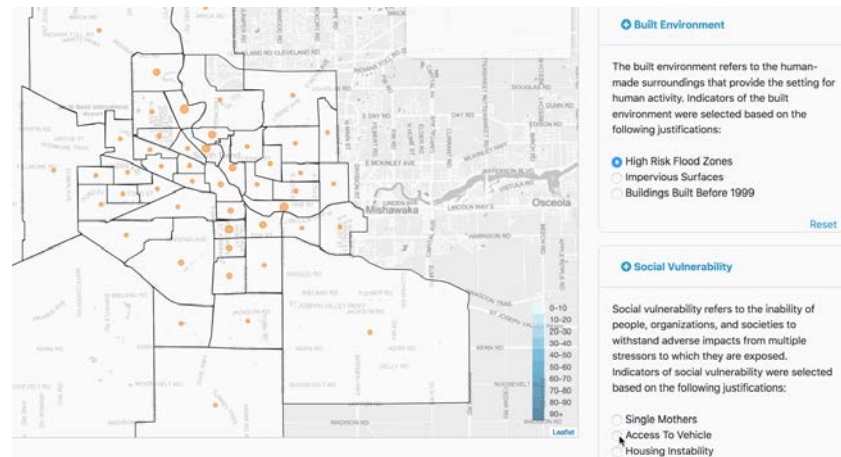
Related Resources



Protecting LMI and other Vulnerable Populations

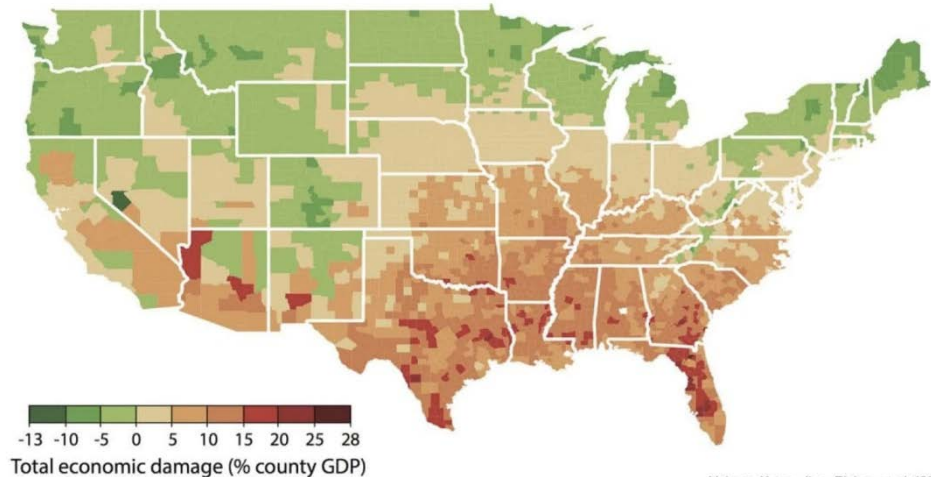


Identifying Vulnerable Populations



Hazards Conflate Vulnerability

Poorest 1/3 of U.S. counties sustain greater economic hardship from hurricanes, rising sea levels & high temperatures



Hsiang, Kopp, Jina, Rising, et al. (2017)



Protecting Vulnerable Populations in Mitigation Planning

- Preserve and protect most vulnerable populations
- Each consideration must include LMI livelihoods
- Resettlement is a local issue that must be balanced with preserving affordable housing
- Federal funding of resettlement means homes are demolished, land is owned by government or a nonprofit group and must remain in “open space” use forever



Incorporating Mitigation into Existing Long Term Plans, Codes and Regulations



Increase Recovery & Mitigation Dollars Impact Beyond HUD Grants



Norfolk: Opportunity Zones, USACE, FEMA, HUD, Private



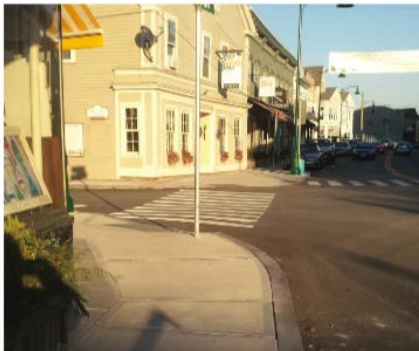
Hoboken: Rebuild by Design; Private Developer; 40% affordable; Stormwater resilience park



Related Resources



Planning Paves the Way to Community Resilience



Mystic utilities now buried beneath new sidewalks

through the acquisition of additional funding from the Federal Highway Administration's *TEA-21-Transportation and Community Systems Preservation* program to protect the electrical, telephone, and cable lines by burying them underground. By 2009, the planning that had been done on the overall project meant the community was also eligible for financial help through the *American Recovery and Reinvestment Act* to supplement the utilities retrofit portion received from FHWA. The disruption during construction was considerable and the expense enormous, but the project became a "once in a lifetime" effort to make the necessary improvements.

The Mystic Streetscape and Utility Relocation project, now nearly complete, brought dramatic improvement to this historic and economically vital area. Pedestrian safety has been improved with innovative sidewalk and crosswalk design. Renovations also improved drainage. Keeping with the character of the village, old-style street lamps replaced poles, wires were placed underground, and power

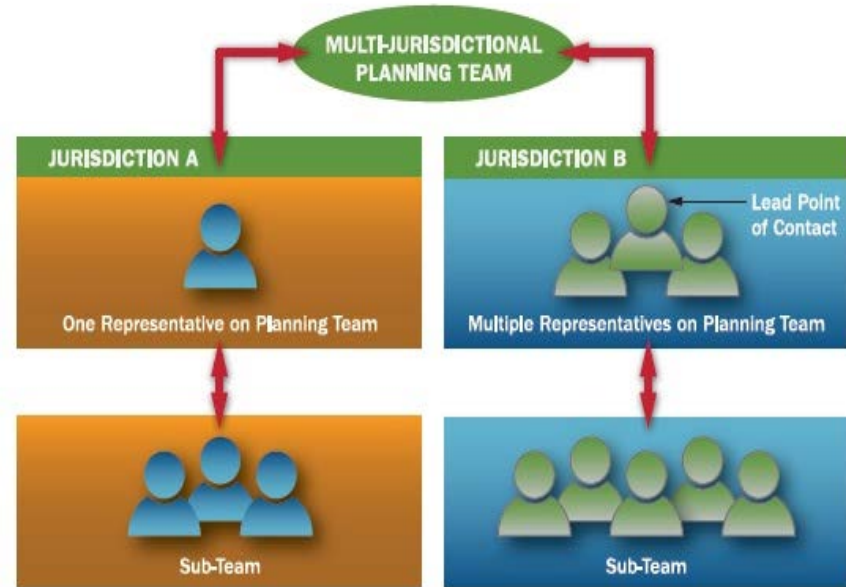


Regional Coordination Around Mitigation Planning and Implementation



Multi-Jurisdiction to Maximize Impact & Efficiency

- Improves communication/coordination among jurisdictions
- Enables comprehensive mitigation approaches
- Maximizes economies of scale
- Avoids duplication of efforts
- Provides supportive organizational structure



Related Resources



Mitigation Planning Discussion:

- Protecting Vulnerable Populations:
 - Challenges
 - Successes
 - Mitigation Opportunities
- Incorporating mitigation into long term plans and regulations
 - Challenges
 - Successes
 - Mitigation Opportunities



Thank you! Questions?

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