



Integrating Hazard Mitigation into Local Planning

Welcome!

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Purpose of Module

Discuss the benefits of integrating hazard mitigation planning into the local community's entire network of plans

- Communities are driven by a network of plans
- Hazard mitigation considerations can help protect a community's investments and should be integrated into all community plans and the overall decision-making process



Learning Objectives

1. List references for FEMA hazard mitigation plan requirements
2. Describe the concept of a safe growth audit and how it can be applied in the local community
3. Describe ways to integrate hazard mitigation throughout the community's planning process
4. List common barriers to integration of hazard mitigation in the planning process

HAZARD MITIGATION AND HAZARD MITIGATION PLANNING

Key Terminology

Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from hazards

Local
Planning and
Regulations

Structure and
Infrastructure

Mitigation
Ideas

Natural
Systems
Protection

Education and
Awareness
Programs



REVIEW: Local Planning & Regulations



Severe Wind - Review building codes to ensure they are adequate to protect older structures from wind damage



Flood - Enforce acceptable land uses to alleviate damage in flood hazard areas



Drought - Develop agreements for secondary water sources that may be used during drought conditions



Wildfire - Use zoning or special wildfire overlay district to designate high-risk areas and specify conditions for use and development



REVIEW: Structure and Infrastructure



Severe Wind - Install Safe Rooms



Flood - Remove existing structures from Flood Hazard Areas



Drought - Retrofit water supply delivery systems



Wildfire - Retrofit at-risk structures with ignition-resistant materials



REVIEW: Natural Systems Protection



Flood - Preserve floodplains as Open Space



Drought - Encourage drought-tolerant landscape design



Wildfire - Implement a fuel management program to reduce hazardous vegetative fuels on public lands, near essential infrastructure



REVIEW: Education and Awareness



Severe Wind - Educate homeowners on the benefits of wind retrofits such as hurricane shutters and clips



Flood - Educate property owners about securing debris, propane tanks, or yard items that may pose a hazard



Drought - Educate farmers on soil and water conservation practices



Wildfire - Have your community join the “Firewise Communities” program to learn and implement strategies to protect homes and infrastructure

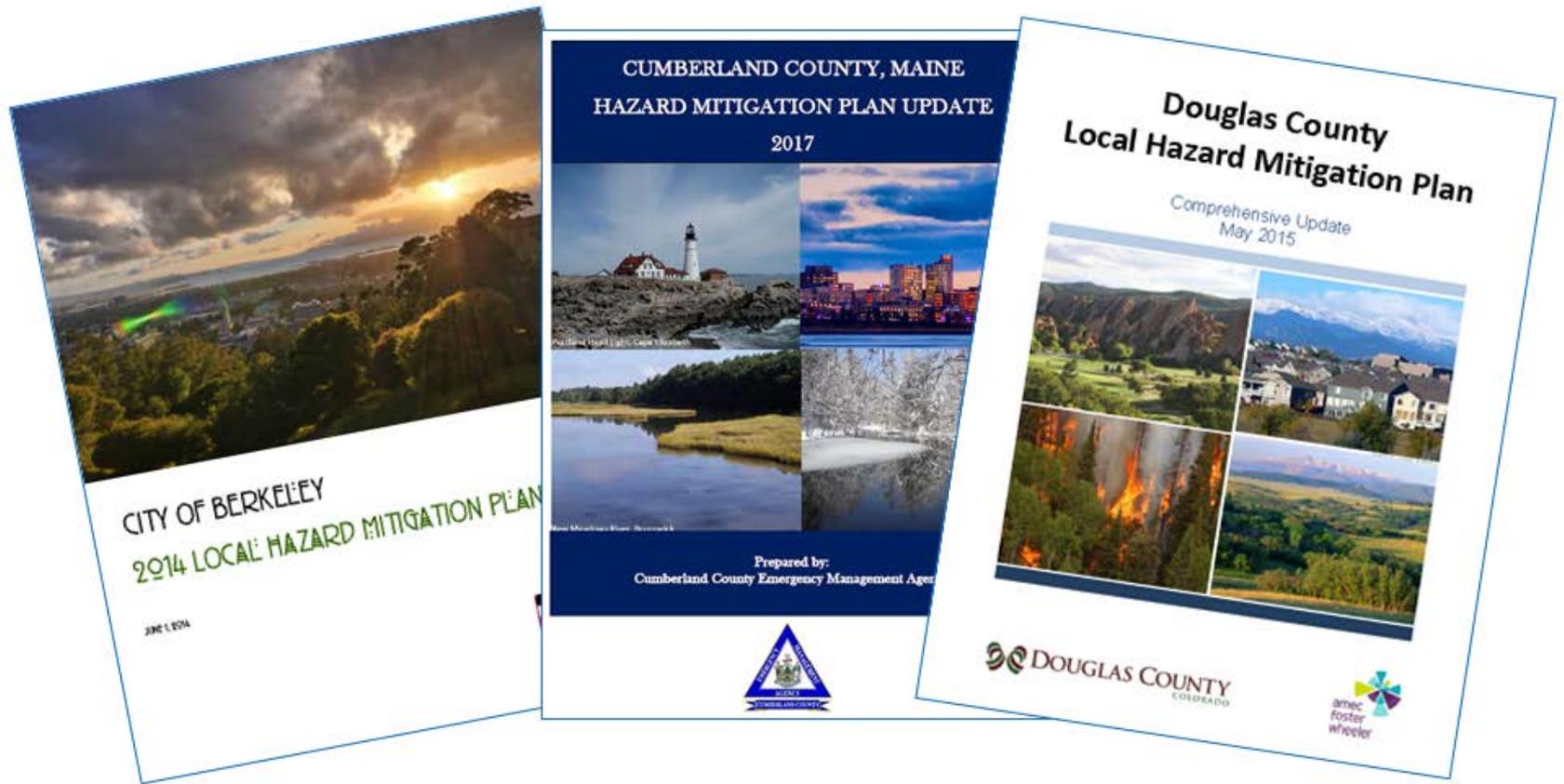


Key Terminology

Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from hazards

Hazard Mitigation Plan (HMP) is a community-driven, living document that communities use to reduce their vulnerability to hazards

Hazard Mitigation Planning Can Inform Local Community Planning



Example of How Mitigation Planning Helped Protect a Community



Example of How Mitigation Planning Helped Protect a Community

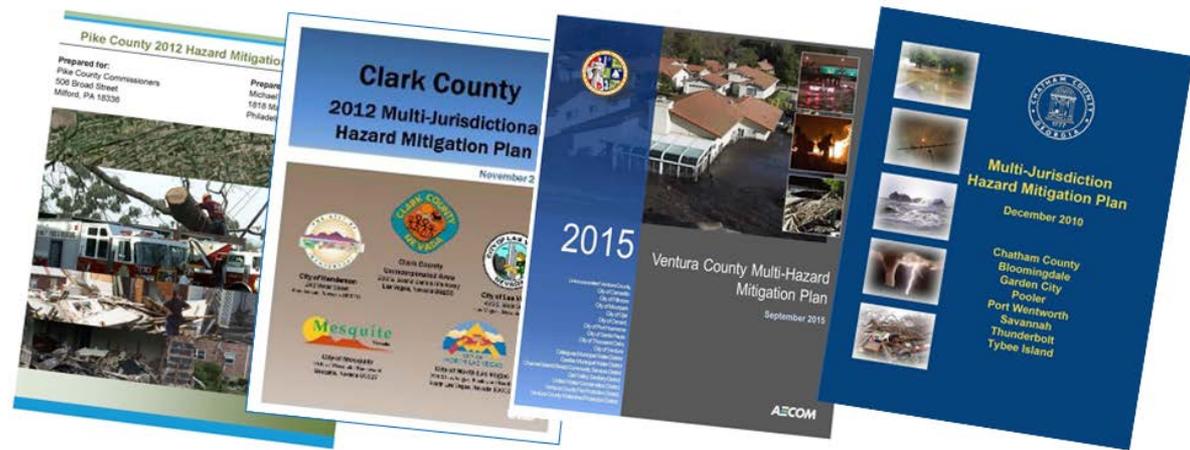


City of Moore, Oklahoma, adopts new building codes based on research and damage evaluation after a tornado



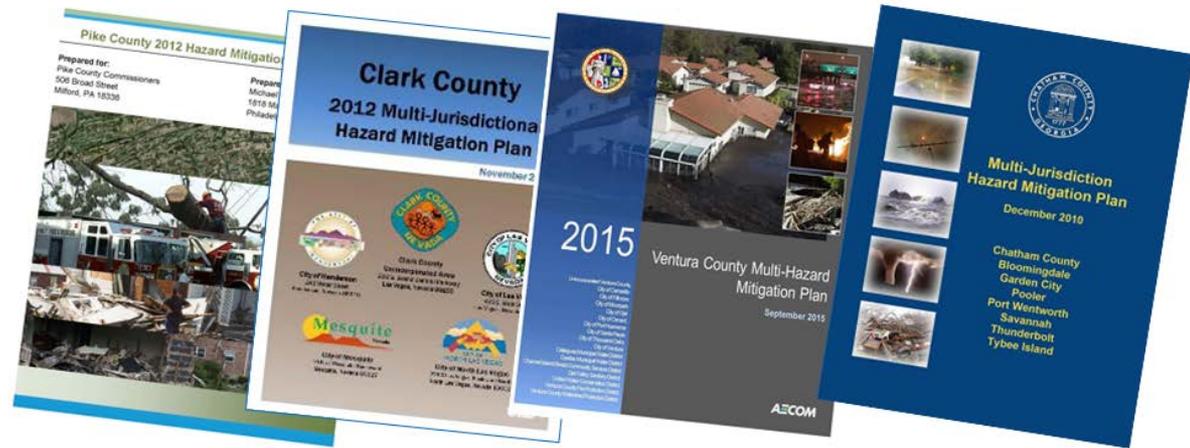
Hazard Mitigation Plans

- Help establish safer and more resilient development practices and guidelines
- Are required as a condition for receiving certain types of non-emergency disaster assistance, including funding for mitigation projects
- Guide local governments to take steps in advance to reduce potential disaster damage levels



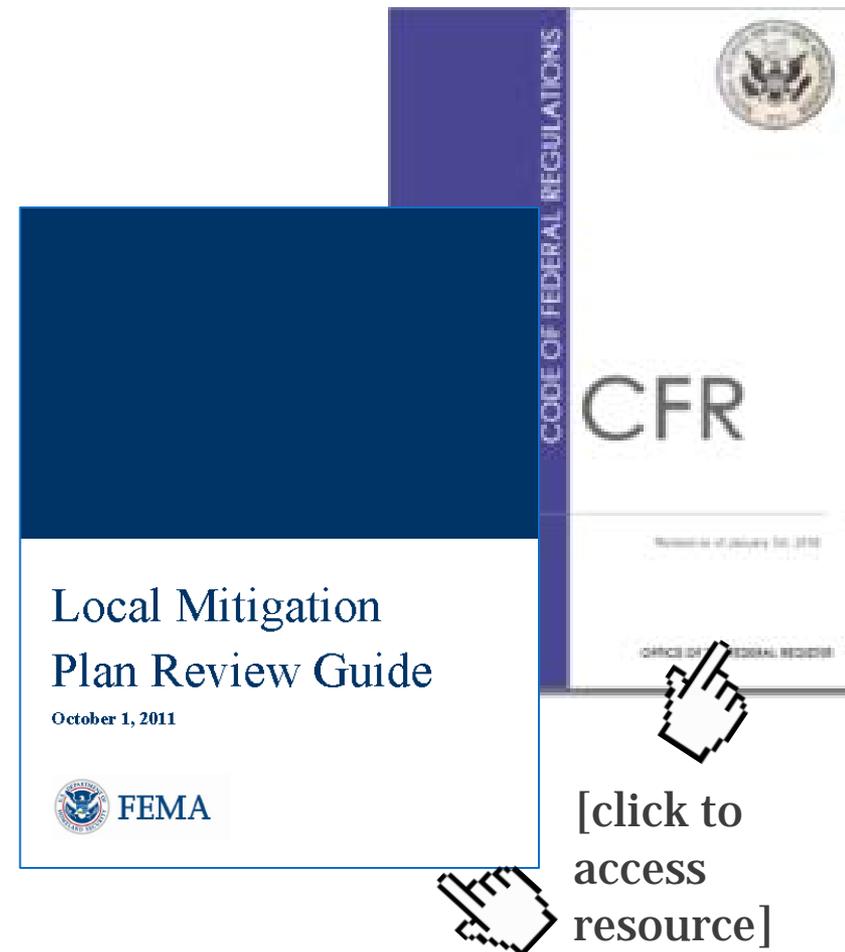
Hazard Mitigation Plans (cont.)

- Are most effective when implemented under a comprehensive, long-term mitigation plan
- Are key to breaking the cycle of disaster damage, reconstruction, and repeated damage

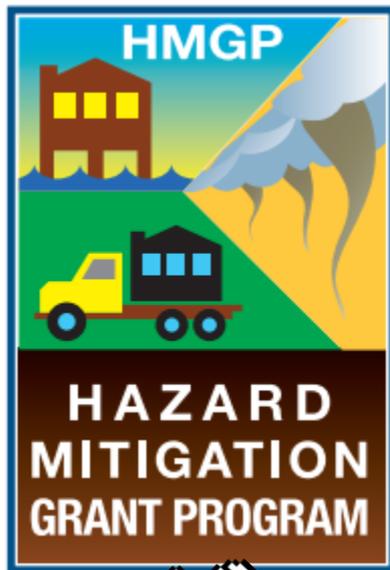


FEMA Local Hazard Mitigation Plan Requirements

- Regulations for Local Hazard Mitigation Plans are found in **44 CFR 201.6**
- The **Local Mitigation Plan Review Guide** serves as the official source for defining the requirements of original and updated Local Mitigation Plans



Financing the Development of a Hazard Mitigation Plan



[click for more information]

Hazard Mitigation Grant Program (HMGP) is one of several FEMA Hazard Mitigation Assistance funding programs

- Provides grants to states, local governments, and Indian tribes for long-term hazard mitigation projects *after a major disaster declaration*
- Can help finance a hazard mitigation plan
- Is usually available through a state's emergency management agency

HAZARD MITIGATION PLANNING

Resources

FEMA, *Local Mitigation Planning Handbook*

- Tool for local governments to use in developing or updating a local hazard mitigation plan to meet 44 CFR §201.6 requirements
- Offers practical approaches and examples for how communities can engage in effective hazard mitigation planning



Local Mitigation Planning Handbook

March 2013

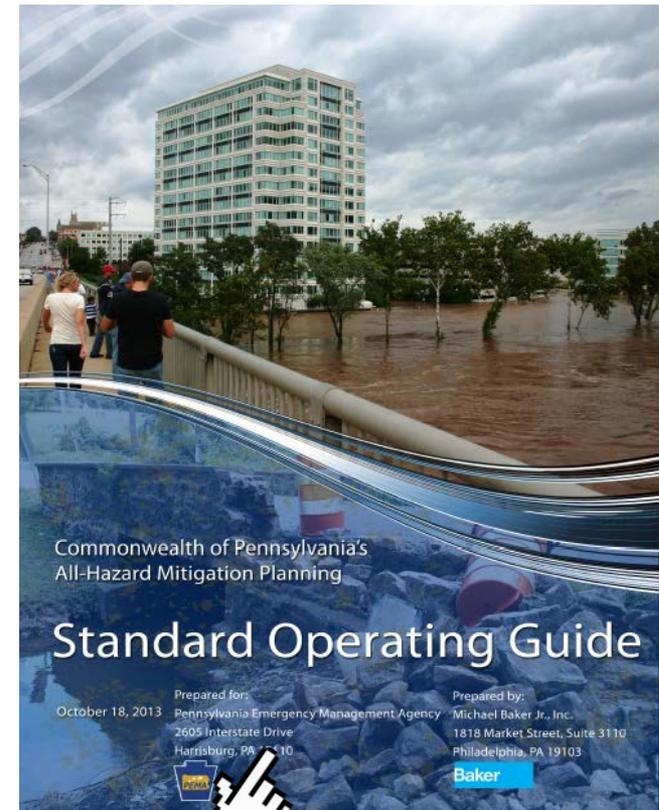


[click to access Handbook]

Pennsylvania Standard Operating Guide

All-Hazard Mitigation Planning Standard Operating Guide

- Clarifies existing guidance
- Provides communities more opportunities to excel technically in the preparation of Hazard Mitigation Plans



[click to access guide]

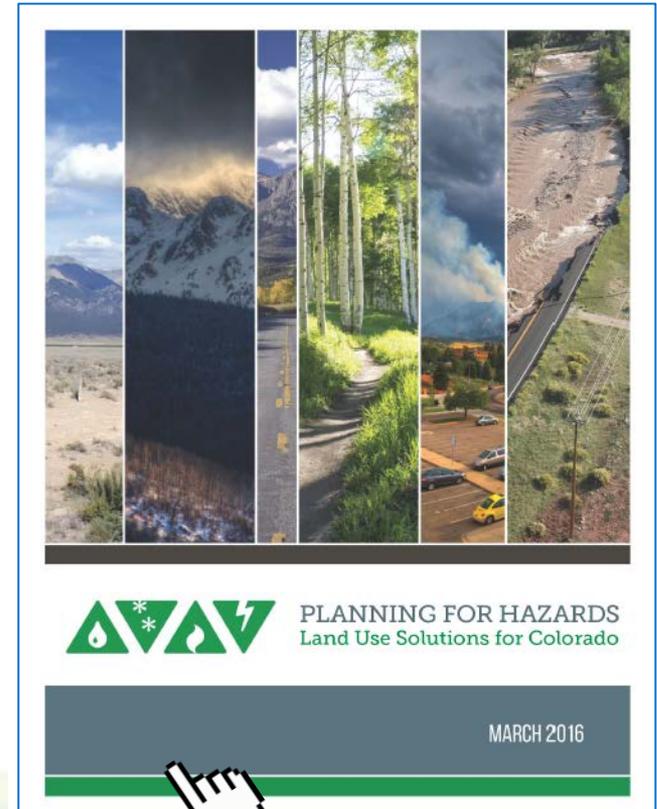


Planning for Hazards: Land Use Solutions for Colorado

Provides detailed, Colorado-specific information about how to:

- Assess a community’s risk level to hazards and
- Implement numerous land use planning tools and strategies for reducing a community’s risk

 [click to access website]



 [click to access guide]

SAFE GROWTH AUDIT

Key Terminology

Safe Growth

- Goal is to build environments that are safe for current and future generations and to protect buildings, transportation, utilities, and the natural environment from damage

Resilience

- The capacity to absorb severe shock and return to a desired state after a disaster
- It is fostered not only by government, but also by individual, organization, and business actions
- Godschalk, David R., et.al. 2009



[click to view video]

Safe Growth Audit: An Interview with Darrin Punchard, AICP

 American Planning Association

To Further Define Safe Growth, Consider its Opposite - Unsafe Growth

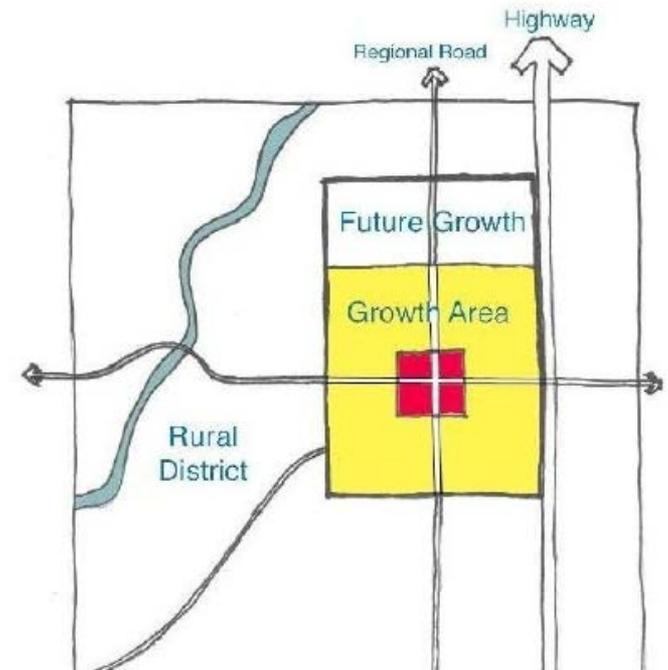
Considering an expected 20-year population growth:

- Will the existing future land-use plan put more people in harm's way?
- Will it result in more intense development in known hazard areas?
- Will current redevelopment policies increase the amount of property vulnerable to hazard risks?
- Will the implementation of the capital improvement program encourage unsafe development proposals by facilitating access to dangerous locations?

Safe Growth is an Essential Factor in Community Resilience

Safe Growth Principles

- Creating a vision of how the community intends to grow in a safe manner
- Guiding growth away from high-risk locations
- Locating critical facilities outside high-risk zones
- Preserving protective ecosystems



Source: Planning for Sustainability: 2009
Pennsylvania APA Conference

Safe Growth is an Essential Factor in Community Resilience (cont.)

Safe Growth Principles

- Retrofitting buildings and facilities at risk in redeveloping areas
- Developing knowledgeable community leaders and network
- Monitoring and updating safe growth programs and plans



Source: Planning for Sustainability: 2009
PA APA Conference

Safe Growth Audit

As communities grow and develop, they may become more vulnerable to natural hazards

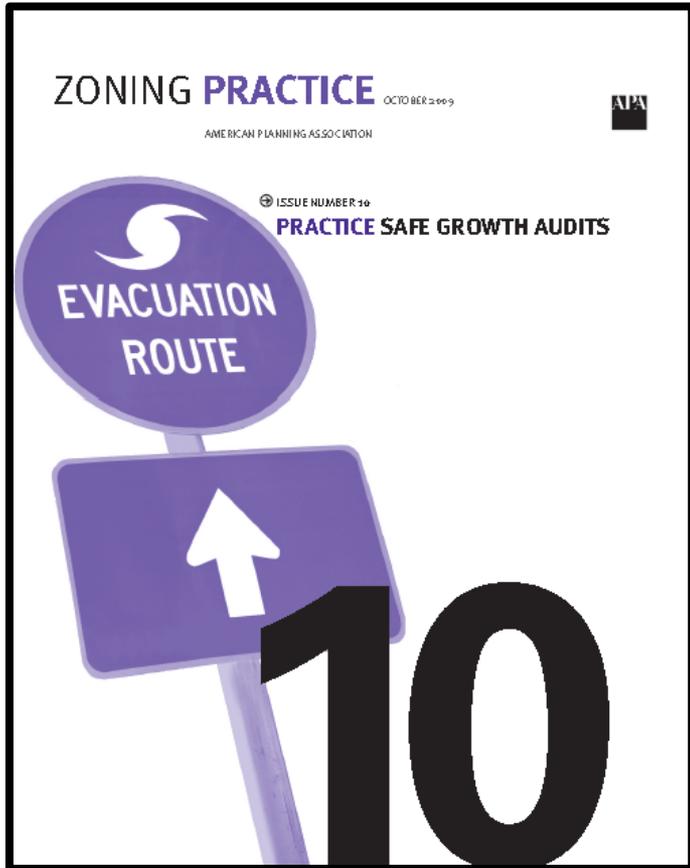
~ David R. Godschalk, FAICP

Safe growth audit is a method to analyze how the full slate of current policies, ordinances, and plans on community safety affects hazard risks due to growth



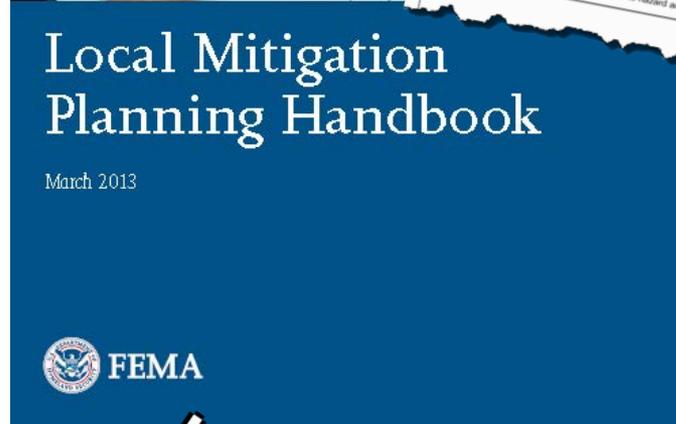
Tornado damage in Salisbury, PA - Liz Roll/FEMA - 5/31/1998
Flooding on Staten Island, NY – Hurricane Sandy – USGS 11/1/2012

Practice Safe Growth Audits



Safe Growth Audit
Use this worksheet to identify gaps in your community's growth guidance instruments and improvements that could be made to reduce vulnerability to future development.

Comprehensive Plan		
Land Use	Yes	No
1. Does the future landuse map clearly identify natural hazard areas?		
2. Do the landuse policies discourage development or redevelopment within natural hazard areas?		
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?		
Transportation		
1. Does the transportation plan limit access to hazard areas?		



Safe Growth Audit Worksheet

[click to access resource]

INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Key Terminology

Integration

- **Plan integration** is the process by which communities look critically at their existing planning framework and align efforts with the goal of building a safer, smarter community
- **Effective integration** occurs when it leads to community development patterns that do not increase risks from known hazards, or leads to redevelopment that reduces risk from known hazards

Discussion Question

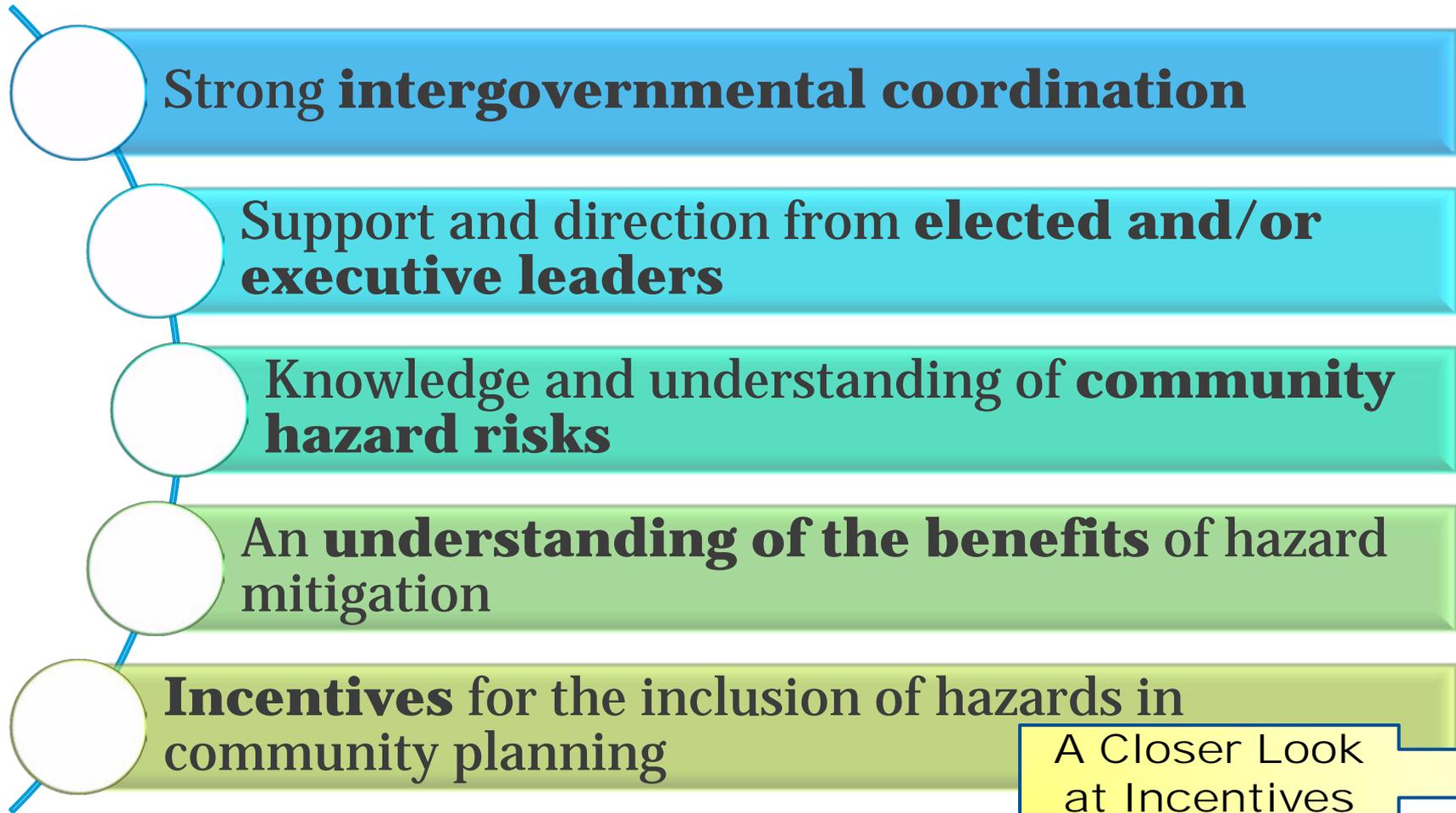


What are some factors that are important for effective integration of hazard mitigation into local planning?

For example, strong **intergovernmental coordination**, especially between emergency management and community planning



Factors for Effective Integration



Effective Incentives for Integrating Hazard Mitigation into Local Planning

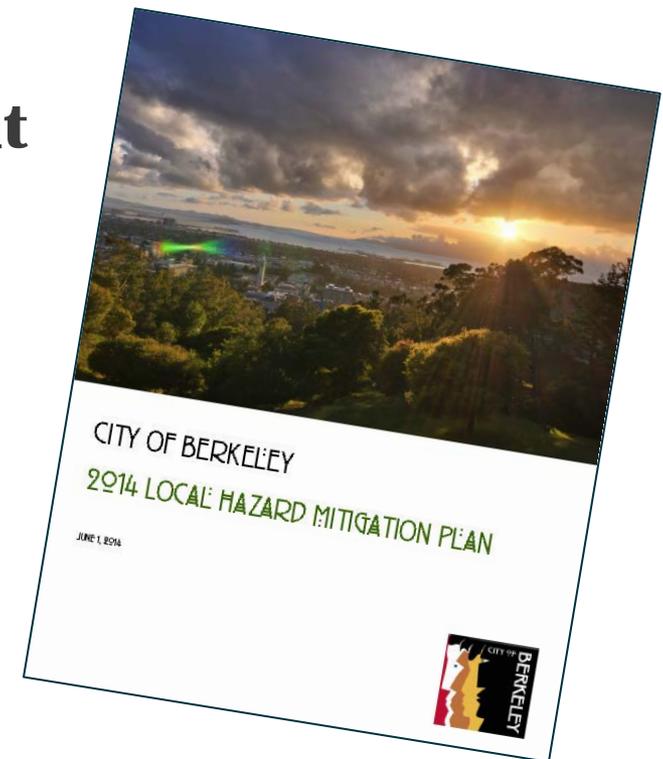
**Financial
Incentives**

**Regulatory
or Statutory
Mandates**

**Resource
Incentives**

Most Effective Method for Integrating Hazard Mitigation into Local Planning

- Integrate hazard mitigation goals, objectives, and actions **throughout every element** of a local comprehensive or general plan
- Develop and maintain a hazard mitigation plan as a **distinct element** to be included in a local comprehensive or general plan



Berkeley, California is an example of a community that has done both of these measures.

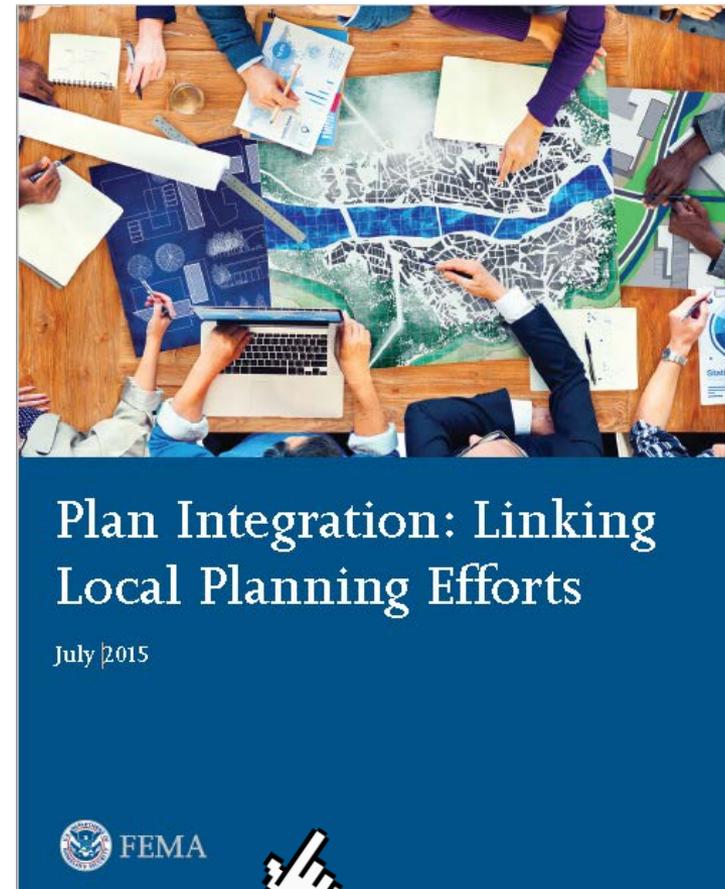
INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Resources

Plan Integration: Linking Local Planning Efforts

A tool developed to help a community:

- Analyze local plans to document existing integration
- Further integrate hazard mitigation principles and local planning mechanisms

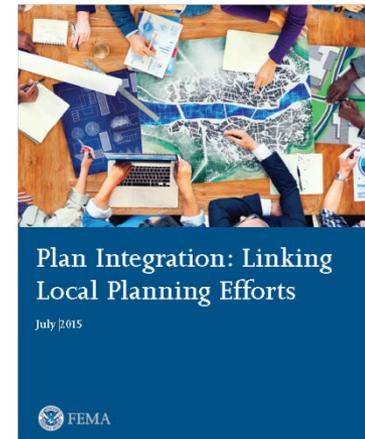


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Two Primary Ways to Effectively Accomplish Plan Integration

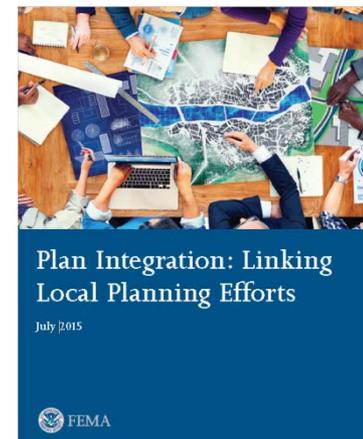
1. Integrate natural hazard information and mitigation policies and principles into local planning mechanisms and vice versa
2. Encourage collaborative planning and implementation and inter-agency coordination



A Closer Look

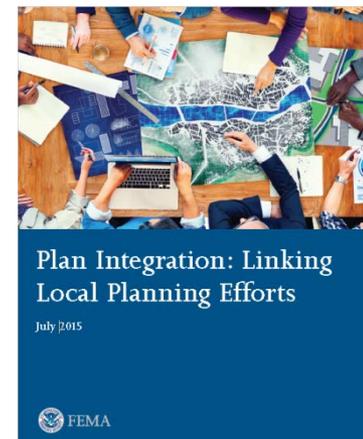
Two Primary Ways to Effectively Accomplish Plan Integration (cont.)

1. Integrate natural hazard information and mitigation policies and principles into local planning mechanisms and vice versa
 - Include information on natural hazards
 - Identify hazard-prone areas throughout the community
 - Develop appropriate goals, objectives, policies, and projects

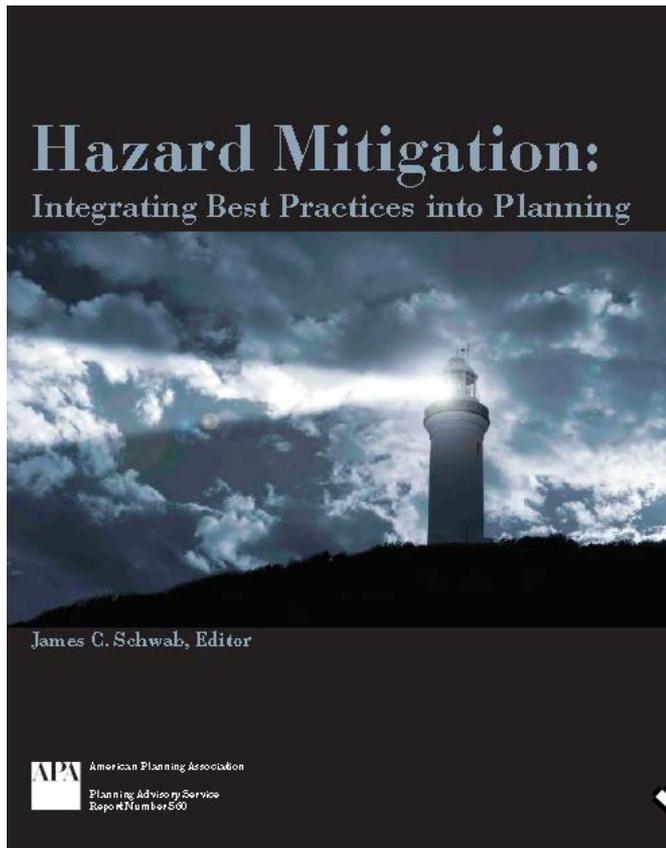


Two Primary Ways to Effectively Accomplish Plan Integration (cont.)

2. Encourage collaborative planning and implementation and inter-agency coordination
 - Involve key community officials with the authority to execute policies and programs to reduce risk
 - Collaborate across departments and agencies to help share knowledge and build relationships



Hazard Mitigation: Integrating Best Practices into Planning



- Planning Advisory Service Report published by the American Planning Association in partnership with FEMA
- Chapter 5: Integrating Hazards into the Implementation Tools of Planning (by David R. Godschalk, FAICP)



[click to access report]

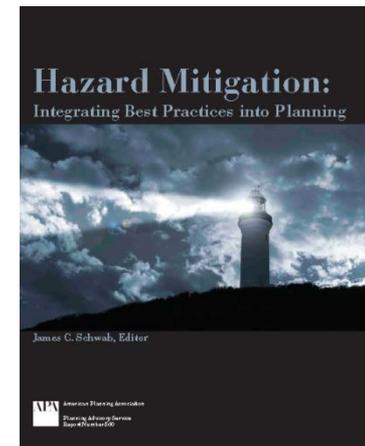


Goals of Integrating Hazards into Planning

Making sure only appropriate development with its risk minimized is allowed in known hazard areas

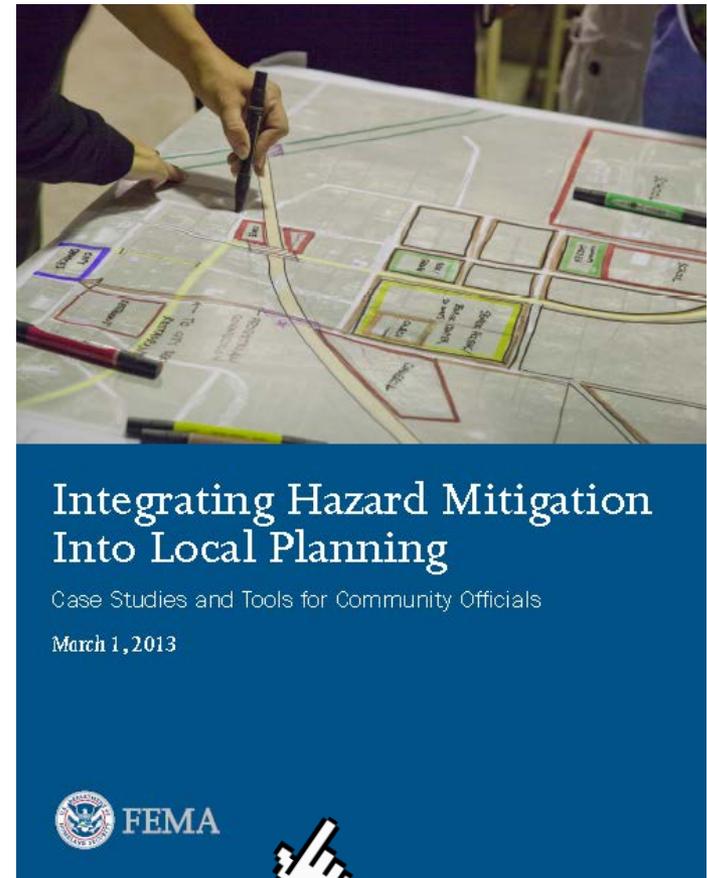
Keeping hazards from affecting existing developed areas

Strengthening existing development to resist hazards



Integrating Hazard Mitigation into Local Planning

- Primarily written for community planners
- Also helpful in communicating with other local leaders and public officials who have an important role to play in supporting the integration of hazard mitigation with other local planning



[click to access report]



How to Plan Resilient Communities Through Integration

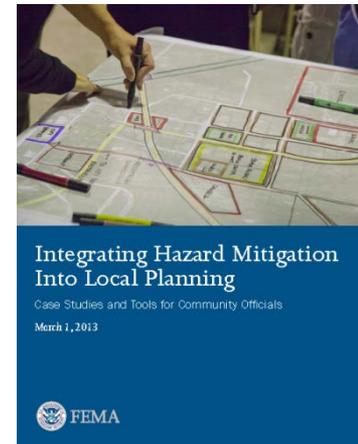
Step 1: Assess Your Community's Planning Framework with a Lens for Resilience

Step 2: Inform and Engage Local Leadership, Staff, and Stakeholders

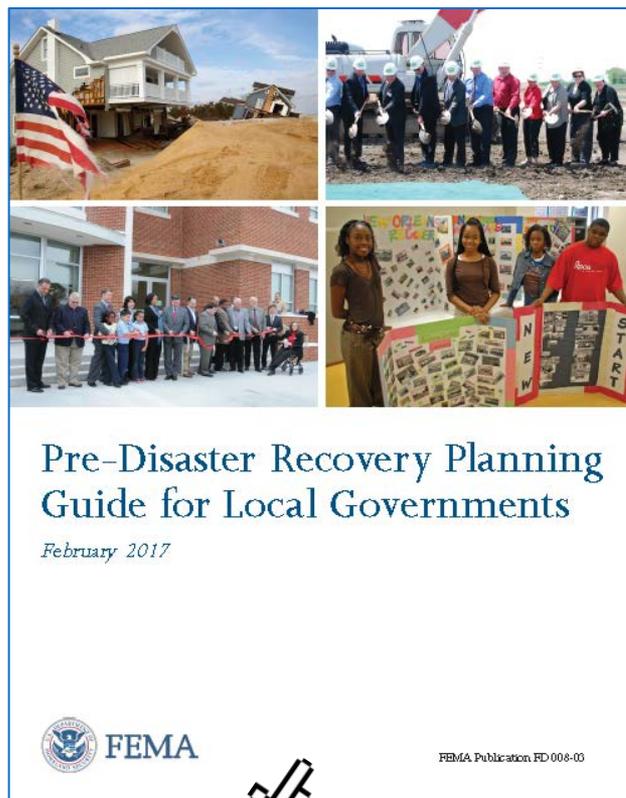
Step 3: Establish an Integration Agenda of Resilient Community Principles and Actions

Step 4: Be Opportunistic!

Step 5: Monitor, Measure, Report, Repeat



Pre-Disaster Recovery Planning Guide for Local Governments



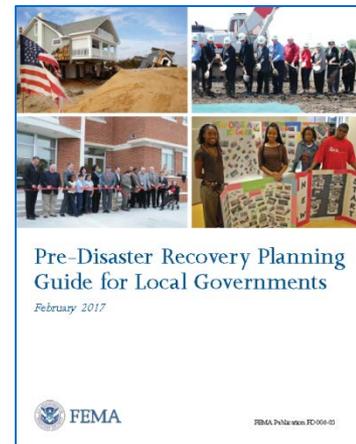
“The best way to integrate mitigation activities is to link the recovery plan with the local hazard mitigation plan”

[click to access Guide]

Recovery Planning is Closely Aligned with Hazard Mitigation

Pre-disaster recovery planning increases resilience by:

- Establishing partnerships, organizational structures, communication resources, and access to resources that promote a more rapid and inclusive recovery process
- Describing how hazard mitigation underlies all considerations for reinvestment
- Laying out a process for implementing activities that will increase resilience
- Increasing awareness of resilience as an important consideration in all community activities





**Recovery Pre-Disaster
Planning Guidance
KEY ACTIVITIES**

**Local Mitigation Planning Handbook
TASKS**

1. Define the Core Recovery Planning Team and Scope of Planning Activities
2. Develop and Implement a Stakeholder and Partner Engagement Strategy

1. Determine Planning Area and Resources
2. Build the Planning Team
3. Create an Outreach Strategy

3. Determine the Community's Risks, Impacts, and Consequences
4. Assess Community's Capacity and Identify Capability Targets

4. Review Community Capabilities
5. Conduct a Risk Assessment

5. Determine Leadership Positions and Define Operations
6. Establish Processes for Post-Disaster Decision-Making and Policy Setting

5. Conduct a Risk Assessment
6. Develop a Mitigation Strategy

7. Write the Local Pre-Disaster Recovery Plan

6. Develop a Mitigation Strategy

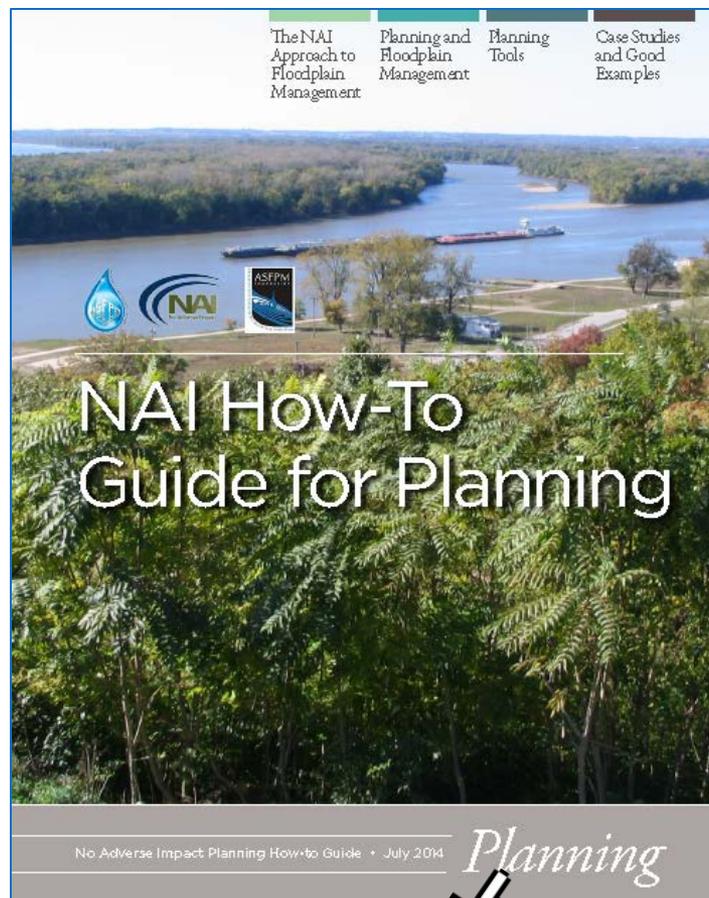
8. Approve the Pre-Disaster Recovery Plan and Associated Regulations

8. Review and Adopt the Plan

9. Identify Ongoing Preparedness Activities

7. Keep the Plan Current
9. Create a Safe and Resilient Community

NAI How-To Guide for Planning



- Identifies ways a community can incorporate the **No Adverse Impact** (NAI) concepts into its planning activities
- NAI floodplain management takes place when the actions of one property owner are not allowed to adversely affect the rights of other property owners

[click to access guide]



No Adverse Impact (NAI) Principles

No Adverse Impact

Every effort should be made to stop disaster damage before it occurs

Damage caused by human occupancy of hazardous areas must be reduced or eliminated

Disaster relief and recovery processes should be designed and engineered to be fair, efficient, and sustainable

How to Integrate NAI into Mitigation Planning

Step 1

Organize

Step 2

Involve the Public

Step 3

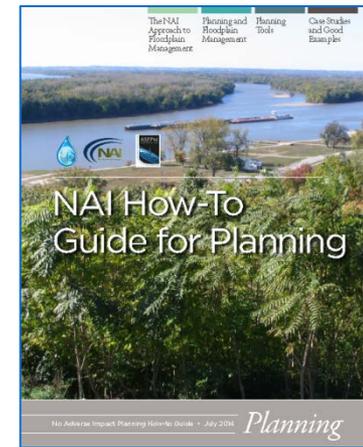
Coordinate

Step 4

Assess the Hazard

Step 5

Assess the Problem



How to Integrate NAI into Mitigation Planning (cont.)

Step 6

Set Goals

Step 7

Review Possible Activities

Step 8

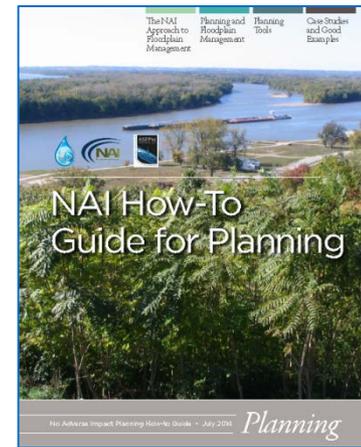
Draft an Action Plan

Step 9

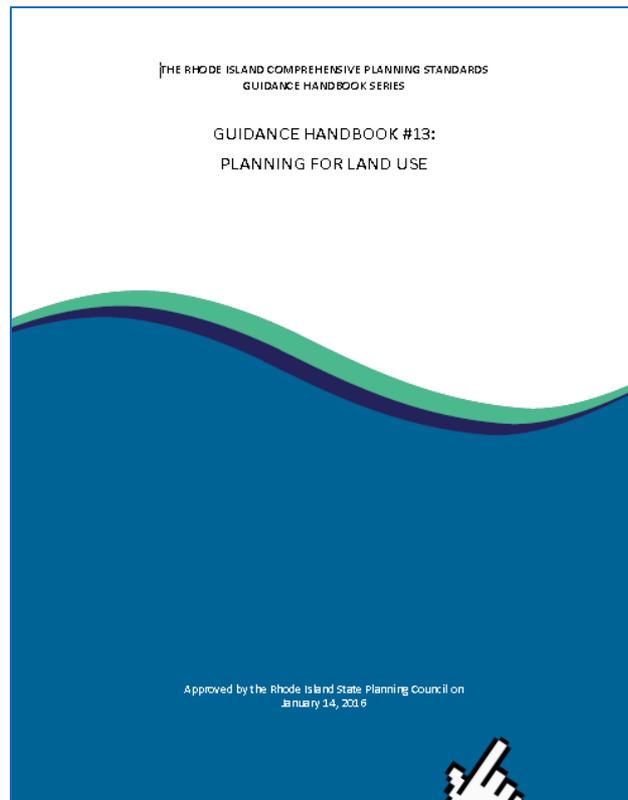
Adopt the Plan

Step 10

Implement, Evaluate, and Revise



Rhode Island Guidance Handbook #13: Planning for Land Use



STANDARD 13.4

ASSESS FUTURE DEVELOPMENT CAPACITY, BASED ON THE REGULATIONS OF THE EXISTING ZONING DISTRICTS, BY INCLUDING ESTIMATES OF:

- a. Total future population at anticipated build-out; and
- b. The year by which residential build-out is anticipated, based on historic trends

[click to access handbook]

INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Common Barriers

Discussion Question



What are some common barriers and obstacles to integrating hazard mitigation into local planning?

Perceived Barriers Among Land Use Planners

- Lack of public support or political will
- Limited budgets
- Competing priorities
- Limited actionable data
- Disconnect between emergency managers and planners
- Existing development and property rights
- Bias in favor of growth

Common Barriers to Integrating Hazard Mitigation into Local Planning

- Lack of awareness of hazard risks and mitigation solutions
- Mitigation not seen as a community priority
- Lack of political will to implement solutions
- Lack of incentives for integrated planning
- Lack of capacity or resources
- Insufficient framework for intergovernmental coordination
- Lack of essential networking



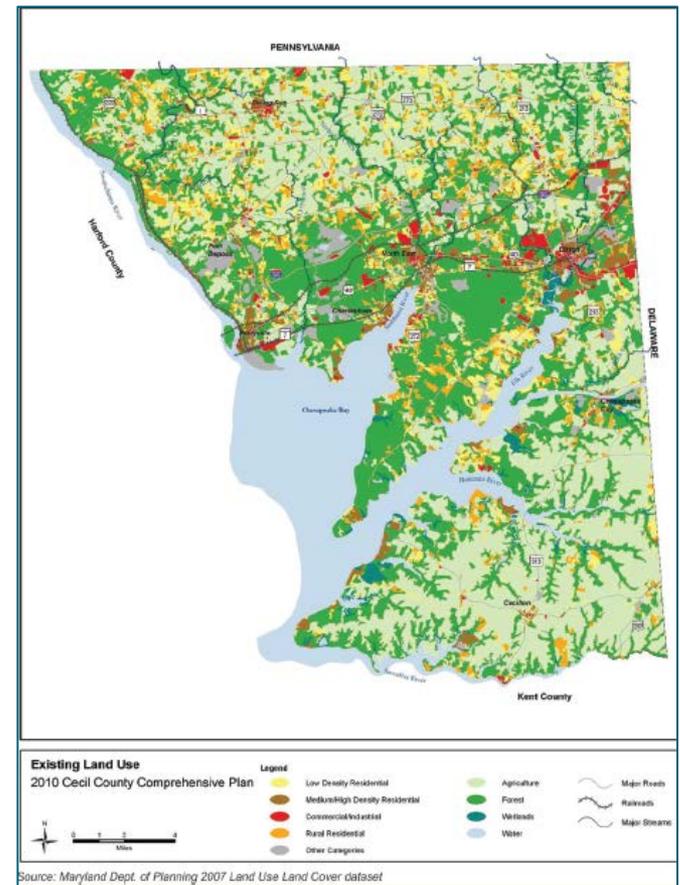
INTEGRATING HAZARD MITIGATION INTO LOCAL PLANNING

Case Studies

Case Study: Cecil County, Maryland

Lessons Learned

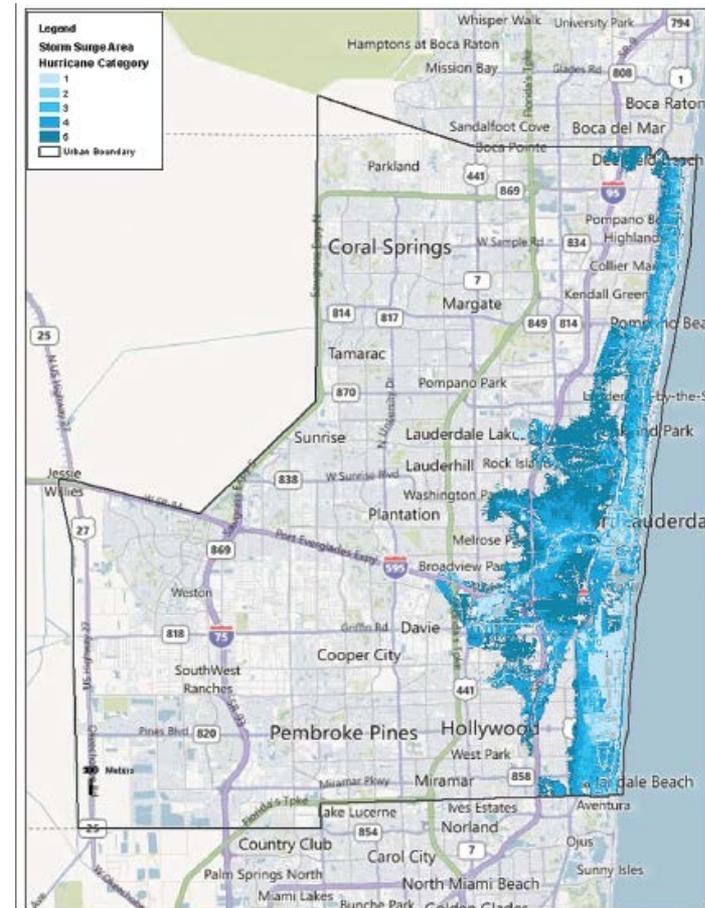
- Bring all parties to the table
- Remove barriers and encouraging open-minded conversation
- Identify in-house resources to help revise plans, ordinances, and policies



Case Study: Broward County, Florida

Lessons Learned

- Hazard mitigation principles are most effectively and realistically integrated on a daily basis
- Use hazard mitigation planning meetings as a forum to share best practices
- Include a wide range of stakeholders



Recommendations for Local Planners

- Become conversant with natural hazards and existing community vulnerabilities
- Build support for mitigation with local leaders
- Make disaster prevention a core value of the community
- Consider future conditions – physical and natural



Continued 

Recommendations for Local Planners (cont.)

- Implement a sustained, holistic approach
- Pre-plan for post-disaster redevelopment
- Take advantage of all the available resources



FEMA



American Planning Association

The Nature Conservancy



Recommendations for Disaster Risk Reduction Leaders



- Work in advance of events, rather than reacting to them
- Work with each other to educate policy makers about ways to build safer, more-resilient communities

Review of Key Learning Objectives

1. List references for FEMA hazard mitigation plan requirements
2. Describe the concept of a safe growth audit and how it can be applied in the local community
3. Describe ways to integrate hazard mitigation throughout the community's planning process
4. List common barriers to integration of hazard mitigation in the planning process

Thank You!



DISASTER
RISK REDUCTION
Ambassador Curriculum

- **Questions and/or comments**
- **Contact information**

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