Planning for a Resilient Community
A 4-Hour Workshop for Planners

FEMA
Welcome and Introductions
Administrative Notes

- Restrooms
- Exits
- Cell phone courtesy
Please Introduce Yourself

- Name
- Job Title
- Employer

Describe the natural hazard that:

- poses the greatest risk where you live or work

OR

- has had the greatest impact on you personally or professionally
Purpose of This Workshop

To enhance the effectiveness of community planners and officials in creating safe, resilient communities through hazard mitigation.
Learning Objectives

At the end of this course, participants will be able to:

- Identify the role of the community planner in making communities more resilient
- Strengthen connections between mitigation and the goals of other local plans
- Explain the value of mitigation in improving community resilience
Organization of the Workshop

- Introduction
- Background
- Role of Community Planner in Risk Reduction
  - Plan
  - Mitigate
  - Advocate
- Planning during Disaster Recovery
- Conclusion
A Resilient Community

- Makes proactive investment and policy decisions
- Communicates risk and vulnerability to all
- Builds public and private sector capabilities and partnerships
- Resumes normal operations and recovers rapidly after hazard events

What are other features of a resilient community?
Mitigation Increases Resiliency

Planning

Educate public
Understand risk and capabilities
Build relationships
Reduce impacts/losses
Prevent future vulnerability

Actions

Planning

Resilient community

Less damage
Faster recovery

Mitigations

Planning for a Resilient Community

FEMA
Critical Connection

- Community Design
- Natural Hazard Impacts
Background
Natural Hazards

Hazards are sources of harm or difficulty

FLOODING  WILDFIRE  EARTHQUAKE  TORNADO  LANDSLIDE  SUBSIDENCE

TSUNAMI  EROSION  HAIL  VOLCANO  AVALANCHE  OTHER
Risk

Risk is the potential for damage, loss, or other impact created by the intersection of natural hazards with development.

Location

Construction

Site Design

Infrastructure
Disaster is the result of a hazard causing extensive damage.

Source: NOAA-NCDC, 2017
Resilience is the ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from disruption caused by a hazard

“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
Mitigation is the reduction or elimination of long-term risk to human life and property from hazards.
Mitigation Provides Opportunities for Coordination

EMERGENCY MANAGERS
- Preparedness
- Response
- Recovery

COMMUNITY PLANNERS
- Land Use
- Economic Development
- Housing
- Transportation
- Other Issues

*MITIGATION*
**Examples of Mitigation Actions:**

Local Plans and Regulations

<table>
<thead>
<tr>
<th>Comprehensive planning</th>
<th>Revise zoning ordinance</th>
<th>Update building code</th>
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*Images of meeting, zoning map, and construction site.*
Examples of Mitigation Actions: Structure and Infrastructure Projects

- Construct tornado saferoom
- Improve drainage to reduce flood threat
- Acquire and demolish structures in hazard-prone areas
Examples of Mitigation Actions: Natural Systems Protection

Implement erosion control measures

Create defensible space regulations

Protect and preserve natural areas
Examples of Mitigation Actions: Education and Awareness Programs

**Incentivize drought tolerant landscaping**

**Publish Web sites and maps**

**Educate the public about risks**

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**U.S. Drought Monitor**

**Texas**

*September 24, 2013*

(Released Thursday, Sep. 26, 2013)

Valid 7 a.m. EDT

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Abd Al-Aziz
U.S. Department of Agriculture

[http://droughtmonitor.unl.edu/](http://droughtmonitor.unl.edu/)
Disaster Mitigation Act of 2000

- Purpose is to reduce:
  - Loss of life and property
  - Human suffering
  - Economic disruption
  - Disaster assistance costs

- Requires mitigation plan approved by FEMA for mitigation grant eligibility

- Requires plan update every five years

The Act focuses on:
- Natural hazards
- Reducing the potential for damage to existing and future structures and infrastructure
44 Code of Federal Regulations (CFR) 201

- 201.4 and 201.5: State Mitigation Plans
- 201.6: Local Mitigation Plans
- 201.7: Tribal Mitigation Plans
Observed Challenges for Mitigation Planning

Lack of active participation in the process by

✓ Local land use planners
✓ Local leaders

Proposed mitigation measures

✓ Focus on emergency preparedness and response
✓ Not connected to other local planning efforts or ongoing programs
Experience

Have you been involved in developing a hazard mitigation plan in your community?
The Planner’s Role in Risk Reduction
What can a planner do?

**Plan**
- Participate in development of mitigation plan.

**Mitigate**
- Integrate policies and implement actions.

**Advocate**
- Champion mitigation goals.
Plan
Purpose of the Mitigation Planning Process

To identify policies and actions that will permanently reduce the risk of damage and loss

To improve the welfare of people and their communities

To enhance the ability of communities to recover from disasters

To establish partnerships for community resilience
The mitigation planning process is not new, not different

1. Build on existing data
2. Involve the public
3. Identify problems
4. Propose solutions
5. Adopt the plan
6. Implement and monitor
7. Evaluate and update
1. Facilitate the Planning Process

- Participate in all aspects of mitigation planning from goal setting through implementation of proposed mitigation actions
- Determine ways to coordinate with other local agencies and departments
- Ensure opportunities for public involvement are provided
2. Assess Existing and Future Vulnerabilities

**NATURAL HAZARDS**
- Location
- Extent (Magnitude/Strength)
- Previous Occurrences
- Future Probability

**COMMUNITY ASSETS**
- Population
- Built Environment
- Natural Environment
- Economy

Note: Adapted from U.S. Geological Survey and Oregon Partnership for Disaster Resilience Models.
Risk Assessment

Step 1: Describe Hazard

- Location
- Extent
- Past events
- Future probability

How would you go about collecting this information for hazards that impact your community? What sources would you use?
Step 2: Identify Community Assets

- People
- Economy
- Structures and infrastructure
  - Existing
  - Future
- Natural systems

What information can planners contribute to the identification of community assets?
Risk Assessment

Step 3: Analyze Risk

- Exposure analysis
- Historical analysis
- Scenario analysis
Risk Assessment

Step 4: Summarize Vulnerability

Compare estimated losses across hazards.

Determine:

- Most significant problems
- Information that will be useful for decision-makers

Loss of life and injury
Damage to structures, infrastructure
Loss of services (drinking water, power)
Economic impacts
In what ways are structures and infrastructure in your community susceptible to damage from natural hazards?
3. Assess Community Capabilities

Assess capabilities to understand:

- Existing capabilities that mitigate risk
- Gaps or shortfalls in capabilities

Examples of capabilities:

- Plans
- Regulations
- Programs and policies
- Resources
- Enforcement
- Studies and data
Safe Growth Audits

- Consider impact of existing policies, ordinances, and plans on community safety
- Identify changes that would reduce vulnerability
- Resources:
  - Worksheet 4.2 in Local Mitigation Planning Handbook
  - APA Zoning Practice (2009)
4. Identify Potential Solutions

**FIRST**

Understand risk and community capabilities

**THEN**

Propose mitigation actions to reduce risk
Evaluate a Comprehensive Range of Potential Solutions

- Local plans and regulations
- Structure and infrastructure projects
- Natural systems protection
- Education and awareness programs
**Activity:** Develop a comprehensive range of actions for an assigned problem statement
## Mitigation Planning Outcomes

### Direct Outcomes
- Understanding of risk and vulnerability
- Action plan for reducing risk
- Eligibility for FEMA mitigation assistance grants

### Indirect Outcomes
- Improved communication and coordination
- Increased public awareness of risks
- Enhanced opportunities for other project grants
- Increased capacity
Develop a coordinated process to determine:

- How changes in development affect risk
- If mitigation activities are being implemented as planned
- If community priorities have changed
- When the plan should be updated
Mitigate
Benefits of Integrating Plans

- Leverage resources
- Achieve multiple objectives
- Increase political acceptance of mitigation objectives
- Send consistent message
Planner’s Role in Implementation

Mitigation Projects

✓ Permitting
✓ Designing
✓ Grant writing

Regulatory Strategies

✓ Develop language
✓ Guide through approval process
✓ Ensure consistency with other plans and policies
Comprehensive Land Use Plan

● Provides three opportunities for integration
  ▸ Integration of natural hazard information into the comprehensive plan
  ▸ Collaborative planning and implementation
  ▸ Coordinated plan reviews and updates
Integration with Community History or Future Land Use Elements

- Community history
- Future land use
Integration by Plan Element

- How might the hazard mitigation plan be related to one of these elements of the comprehensive plan?
- Conservation and natural resources
- Public facilities and services
- Transportation
- Housing
- Historic preservation
- Economic development
- Recreation and open space
- Environment
- Public safety
- Hazards
What does it mean for a community to mitigate to an acceptable level of risk?

Who decides what level of risk is acceptable?
Zoning or Development Ordinance

Planning for a Resilient Community
In what ways can enforcing floodplain development regulations be challenging?
Government Expenditure Plans

- Use the Capital Improvement Plan to implement mitigation actions pertaining to infrastructure, public buildings
  - Identify locations and estimate cost of hurricane straps, lightning rods, safe rooms
- Recommend financial incentive (e.g., tax break) for private property owners that incorporate hazard mitigation techniques into structure design
Please share an example of a community that uses the Capital Improvement Plan or annual budget to support mitigation activities.
Transportation Plan

Planning for a Resilient Community
Water Quality Plan
How effectively do your existing plans incorporate mitigation concepts?

Which plans provide the most practical opportunities for integration?

What benefits do you see in integration?
Advocate
Develop Strong Message

- Identify and articulate issues related to risk
- Explain potential benefits and costs of actions
- Explain the potential sources of funding
- Align message with community values and other planning goals
Provide Leadership

Educate constituents

Build partnerships

Institutionalize concepts in planning discussions

Influence policy and decision-making
Activity: Win Support for a Mitigation Action
Planning During Disaster Recovery
Community Decision-making

- Return to normal
- Reduce future vulnerability
- Seize opportunity to achieve multiple objectives
Planner’s Role in Disaster Recovery

Plan

Mitigate

Advocate
Mitigation During Recovery Increases Future Resilience

Prevent repetitive damage

$1 spent on federal mitigation grants saves $6
Case Study: Happy Trails, St. George Utah
Post-Disaster Mitigation Opportunities and Challenges
Disaster Recovery Example
Planning Now for Post-Disaster Recovery

- Hazard Mitigation Plan
- Post-Disaster Recovery Plan
- Post-Disaster Recovery Ordinance
- FEMA Emergency Management Institute (EMI) Community Disaster Simulation Courses
Conclusion
Review Learning Objectives

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- **Explain the value** of mitigation in enhancing community resilience
Resources