G-318 Local Hazard Mitigation Planning Workshop

Administrative

- Emergency exits
- Restrooms
- Cell phones
- Break schedule

Workshop Goal

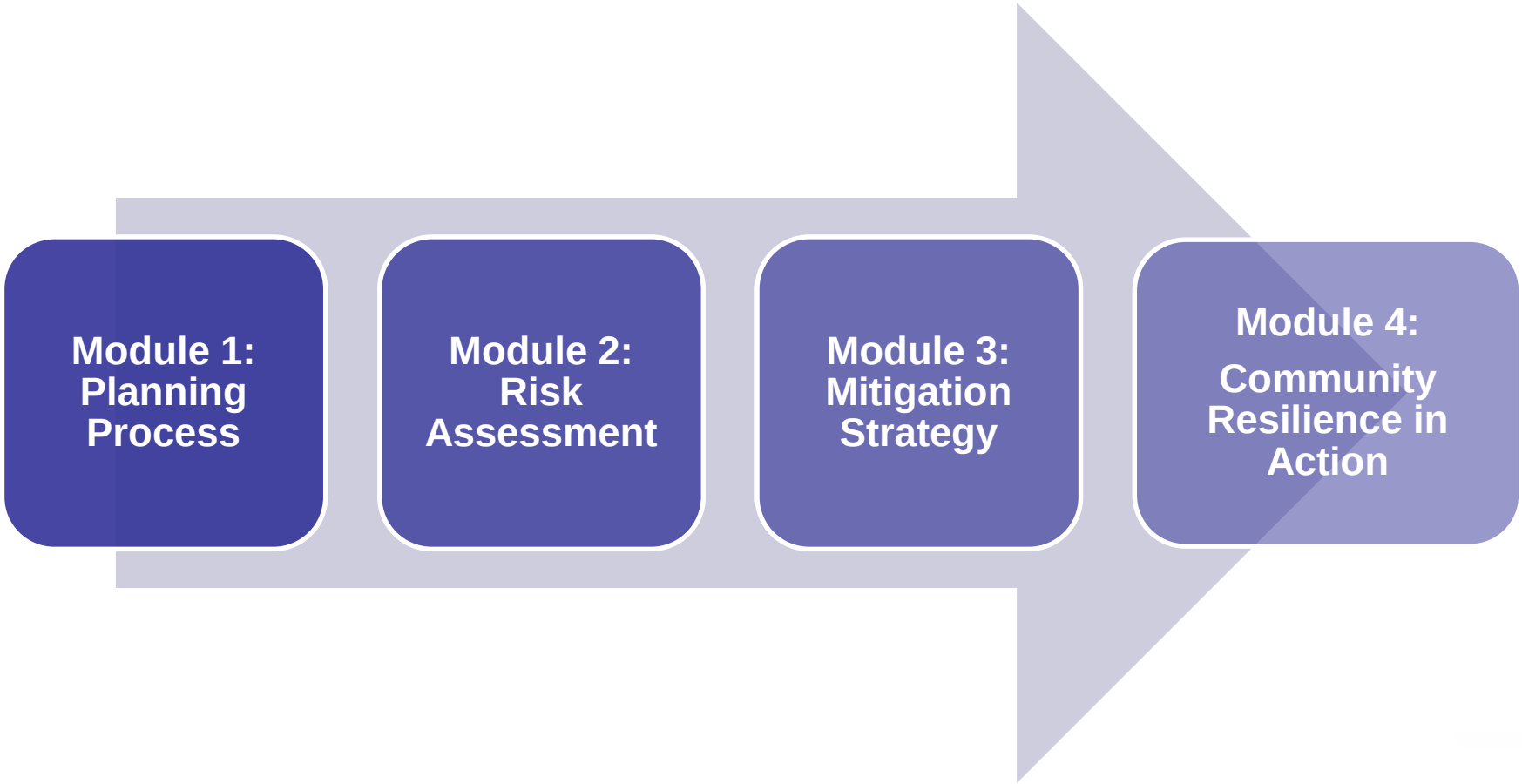
Provide plan developers with the information necessary to prepare and implement a local hazard mitigation plan or plan update

Workshop Objectives

Participants will be able to:

- Define hazard mitigation and identify the benefits of mitigation planning
- Engage community officials, stakeholders, and the public in a robust planning process
- Develop or update a local mitigation plan
- Identify resources available for mitigation planning and plan implementation

Workshop Organization



Module Goals

- Module 1: Planning Process
  - Participants will effectively engage their community in an open public involvement process that leads to the development of a comprehensive approach to risk reduction and an effective mitigation plan
- Module 2: Risk Assessment
  - Participants will conduct a hazard risk assessment that forms a basis for mitigation actions appropriate for their community

Module Goals

- Module 3: Mitigation Strategy
  - Participants will develop their goals and actions for reducing potential losses to long-term hazard risks based on existing local capabilities
- Module 4: Community Resilience in Action
  - Participants will have the knowledge, tools, and resources to effectively implement their community's hazard mitigation plan

Introductions

Participant Responsibilities

- Ask questions
- Share experiences
- Participate in discussion

Plan Development Resources

- Local Mitigation Planning Handbook
- Local Mitigation Plan Review Guide
- Region 1 Best Practice Guides
- Planning Webliography
- FEMA Mitigation Planning website: http://www.fema.gov/multi-hazard-mitigation-planning

Module 1:
Planning Process

Unit 1.1

Mitigation and Hazard Mitigation Planning

What Is Hazard Mitigation?

Protection

Prevention

Response

Recovery

Mitigation

Sustained action taken to reduce or eliminate long-term risk to human life and property from hazards.

Hazard Mitigation: Examples

Structural retrofitting, enforce building codes, land use planning, removal of structure from hazard area

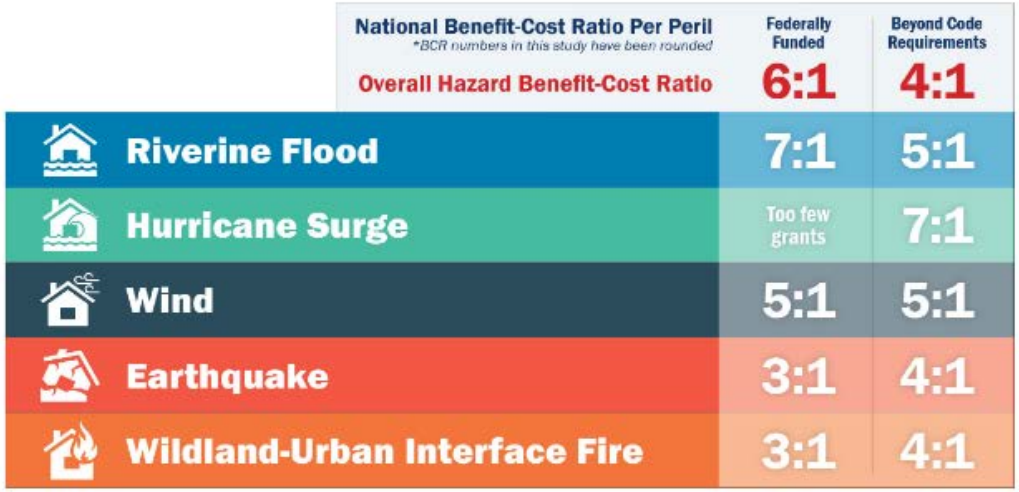
MITIGATION: Elevated Home by the River

MITIGATION: Property Acquisition

RESPONSE: Purchase of Police Command Vehicle

Mitigation Is an Investment

- Addresses the long-term root cause of vulnerabilities
- Prevent injury and loss of life
- Prevent damage to community assets (existing and future)
- Advance other community objectives



Hazard Mitigation Planning

Engages the whole community in a process to:

Why Mitigation Planning?

Planning enables communities to:

- Strengthen community disaster resilience
- Identify cost-effective actions to reduce risk
- Focus resources on greatest vulnerabilities
- Build partnerships
- Increase awareness of hazards and risk
- Communicate priorities
- Leverage emergency management with other community plans and goals

Federal Planning Regulations

Disaster Mitigation Act of 2000

- Requires an approved Hazard Mitigation Plan (HMP) to be eligible for Hazard Mitigation Assistance (HMA)
- HMPs must be updated every 5 years to maintain eligibility

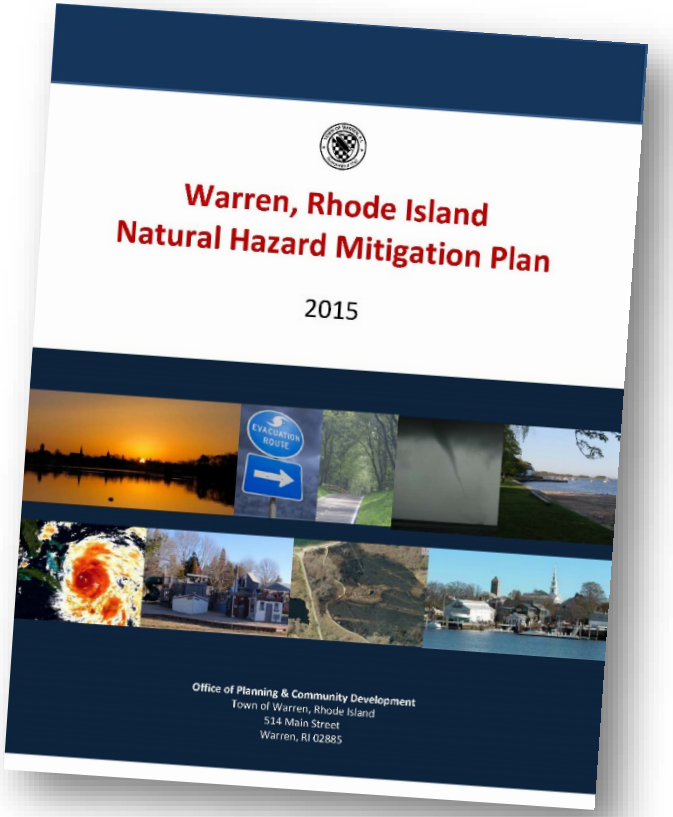
Title 44 Code of Federal Regulations (CFR) 201

- Identifies requirements for HMP approval

Hazard Mitigation Assistance (HMA)

Guiding Principles for HMPs

- This is your community's plan
- Focus on mitigation strategy
- Process is as important as the plan itself
- Relationship building

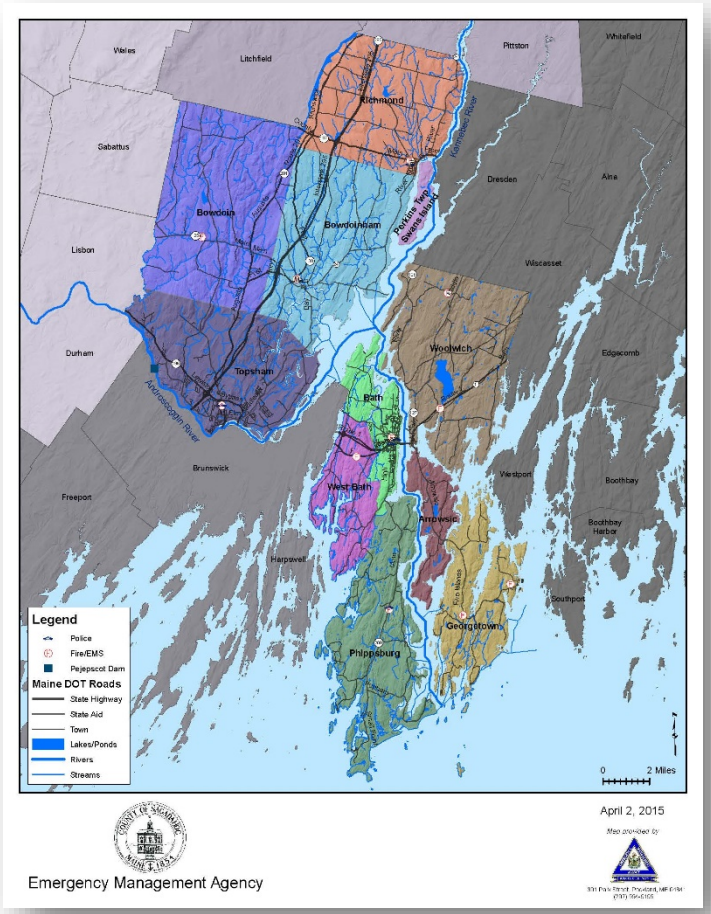


Unit 1.2

Establish the Planning Area

Determine the Planning Area

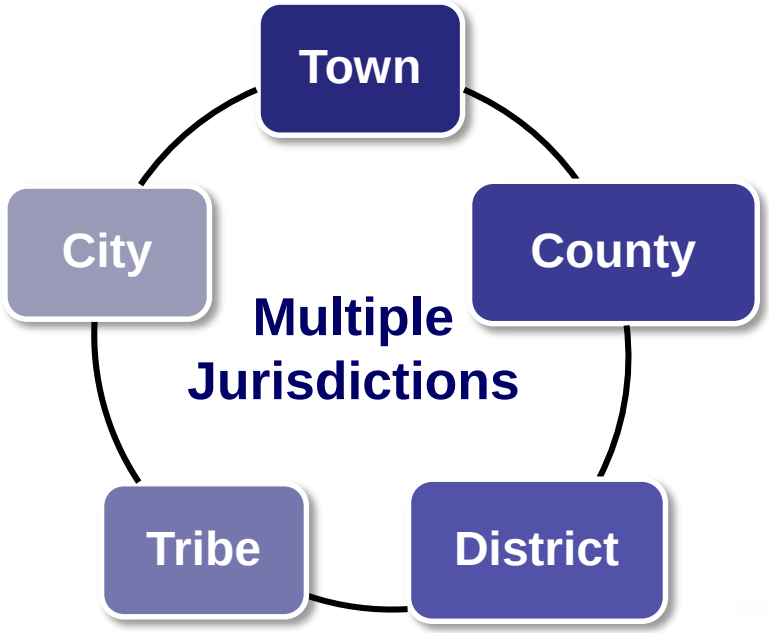
- What geographic area will it cover?
- What are the participating jurisdictions?
- Who will lead the project?



Single or Multi-Jurisdiction Plan

- Tribal governments must meet Tribal mitigation planning requirements

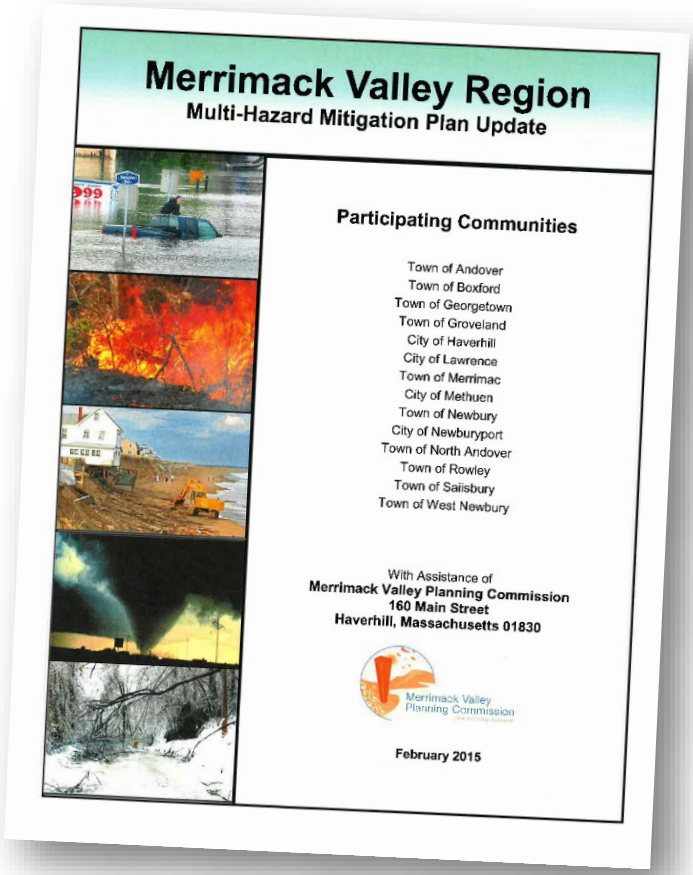
Single Jurisdiction



Multi-Jurisdiction Requirements

Each jurisdiction seeking plan approval must:

- Participate in the planning process
- Assess unique risks
- Identify specific mitigation activities
- Adopt the plan



Benefits of Multi-Jurisdictional Plans

- Improves communication and coordination
- Enables comprehensive and regional mitigation approaches
- Maximizes economies of scale by sharing costs and capabilities
- Avoids duplication of effort
- Provides organizational structure
- Broader opportunities for stakeholder engagement

Challenges of Multi-Jurisdictional Plans

- Reduces individual control over process
- Involves coordinating and timing the process with multiple jurisdictions (with past histories)
- Getting a detailed assessment of risks, specific mitigation actions, and involvement by jurisdictions
- Requires organization of large amounts of information into a single document

Leading the Planning Process

- Engage with local leadership
- Identify which local agency should lead the effort
- Involve local community planners and emergency managers - both have valuable knowledge and experience

Technical Assistance

You could seek help with:

- Assessing risks
- Facilitating meetings and outreach strategy
- Creating plan document

Regional Planning Agencies	**Universities**
Private Consultants	**State or Federal Agencies**

Tips for Consultant Selection

Private consultant should:

- Be familiar with applicable policies
- Understand importance of process
- Know mitigation concepts
- Recognize the role of local leadership
- Demonstrates successful history of HMP approvals

Community should:

- Check references
- Ensure experience
- Seek training in G-318

Unit 1.3

Build the Planning Team

Role of the Planning Team

- Engage community members
- Identify vulnerabilities of each jurisdiction
- Develop potential solutions for each jurisdiction
- Be champions for community resilience through the hazard mitigation planning process

Planning Team Members

Expertise in:

- People and social conditions
- Built and natural environments
- Hazards and disaster history

Responsibility for:

- Implementing programs and activities
- Making decisions on policies and resources

Planning Team and Other Stakeholders

Planning Team

Members of:

- Previous planning team
- Committee that oversees land use planning
- Local emergency planning committee
- Agencies that promote hazard mitigation
- Agencies that regulate development

Other Stakeholders

- Elected officials
- Business leaders
- Public agencies
- Cultural institutions
- Colleges and universities
- Nonprofit organizations
- Neighborhood groups

Opportunity for Involvement

Certain stakeholders must be given the opportunity to be on the planning team or otherwise involved in the planning process.

- Agencies involved in hazard mitigation activities
- Agencies that have authority to regulate development
- Neighboring jurisdictions
- Business, academia, other private and nonprofit interests

Tip: Consider tapping into existing outreach efforts!

Discussion Question

- What agencies, organizations, and officials would be valuable members of the planning team?

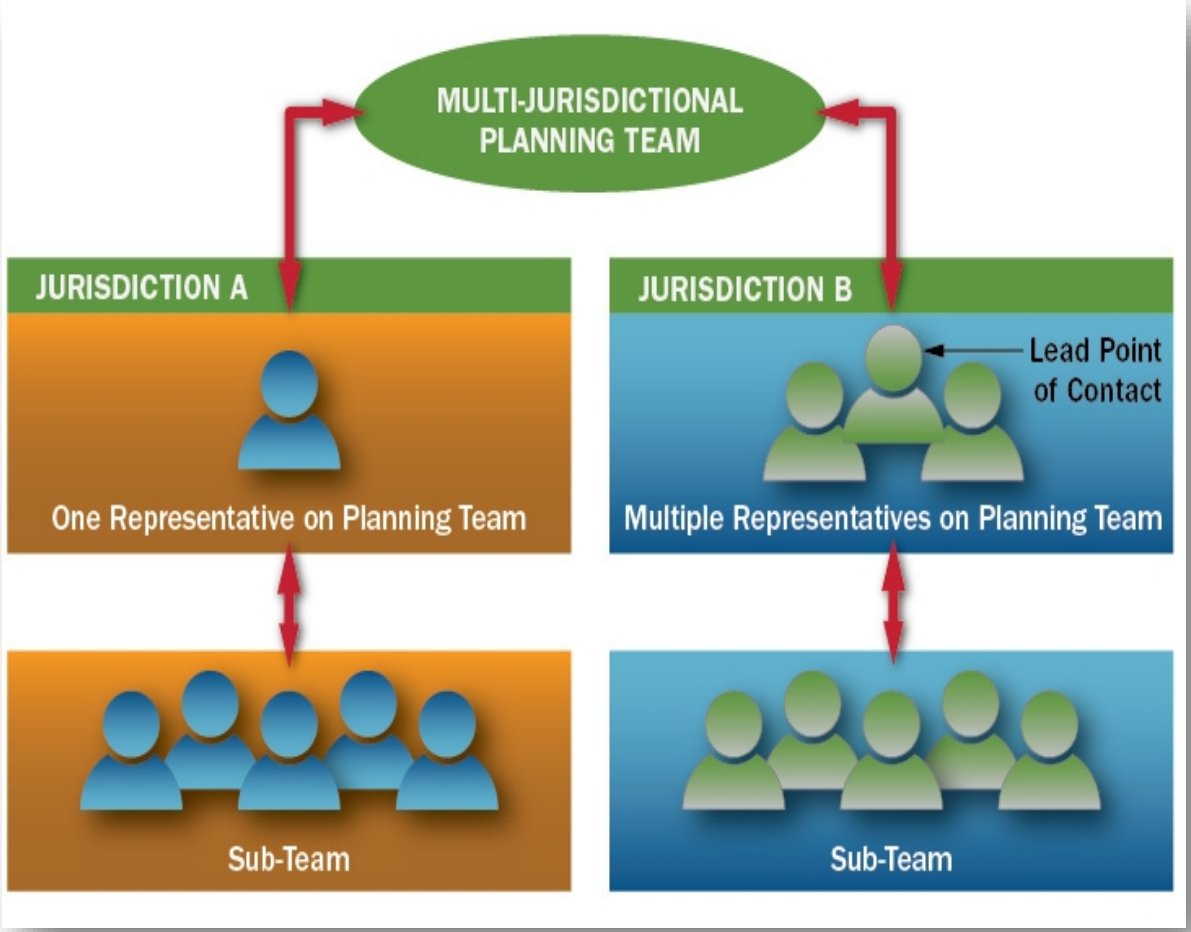
Promoting Participation

- Send formal invitation from elected official or department head
- Follow up with a phone call
- Plan meetings in multiple convenient locations
- Provide refreshments

Getting Buy-In

- Develop a mission statement
- Obtain official recognition of the planning team
- Build relationships to:
  - Increase coordination and commitment
  - Build resilience and enhance post-disaster response and recovery

Multi-Jurisdiction Planning Teams



Initial Planning Team Decisions

1) Confirm plan purpose and mission
2) Review the current plan and process
3) Refine plan scope and schedule
4) Establish responsibilities
5) Develop an outreach strategy

1. Confirm Plan Purpose and Mission

Protect life, property, economy, quality of life, and environment of Lincoln County from hazards and disasters.

2. Review the Current Plan and Process

Review of the plan can provide:

- Ideas for improvement
- Areas that may require more time and resources
- Assessment of current capabilities

In addition to the plan, also review:

- Opportunities for improvement recommended by FEMA in Plan Review Tool when plan was approved
- Status of mitigation actions identified in current plan

3. Refine Plan Scope and Schedule

Tasks	Target Completion Date
Notice to Proceed	September 1, 2017
Task 1: Hold Project Kickoff Meeting	October 15, 2017
Task 2: Invite Stakeholders and Engage Public	Continual
Task 3: Conduct Risk Assessment	January 15, 2018
Task 4: Develop Mitigation Strategy	March 1, 2018
Task 5: Plan Maintenance Process	March 15, 2018
Task 6: Review and Submit Plan	May 1, 2018

4. Establish Responsibilities

- Coordinate and assist with stakeholder and public involvement
- Make decisions on plan process and content
- Attend meetings
- Collect current best available information
- Review drafts and prepare for adoption and plan submittal

5. Develop an Outreach Strategy

1) Confirm plan purpose and mission

2) Review the current mitigation plan

3) Confirm plan scope and schedule

4) Establish responsibilities

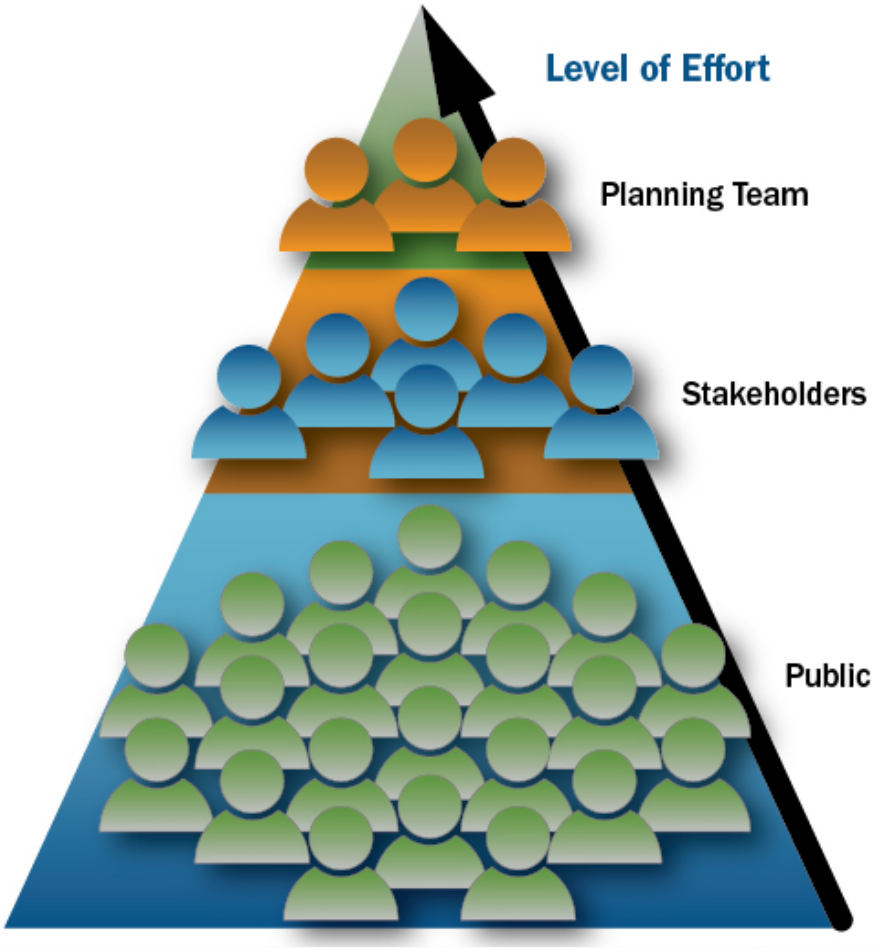
Next Unit:

Develop an Outreach Strategy

Unit 1.4

Develop an Outreach Strategy

Outreach Strategy Framework



Opportunity for Involvement

Planning Team

- Agencies involved in hazard mitigation activities
- Agencies with authority to regulate development

Stakeholders

- Neighboring jurisdictions
- Businesses
- Academia
- Other private and nonprofit interests

Public

- Residents
- Business owners
- Local workers

Types of Stakeholders

- Elected officials
- Business leaders and large employers
- Regional, State, and Federal agencies
- Cultural institutions
- Schools and universities
- Nonprofit organizations
- Neighborhood groups
- Watershed Associations

Benefits of Public Involvement

- Educates people about hazards and risk
- Incorporates different perspectives
- Improves plan quality
- Ensures transparency and builds trust
- Improves opportunities for implementation by building consensus
- Strengthens community disaster resilience

Role of Planning Team

- Develop outreach strategy for all stakeholders and jurisdictions
- Coordinate and facilitate communication
- Evaluate and incorporate feedback

Outreach Methods

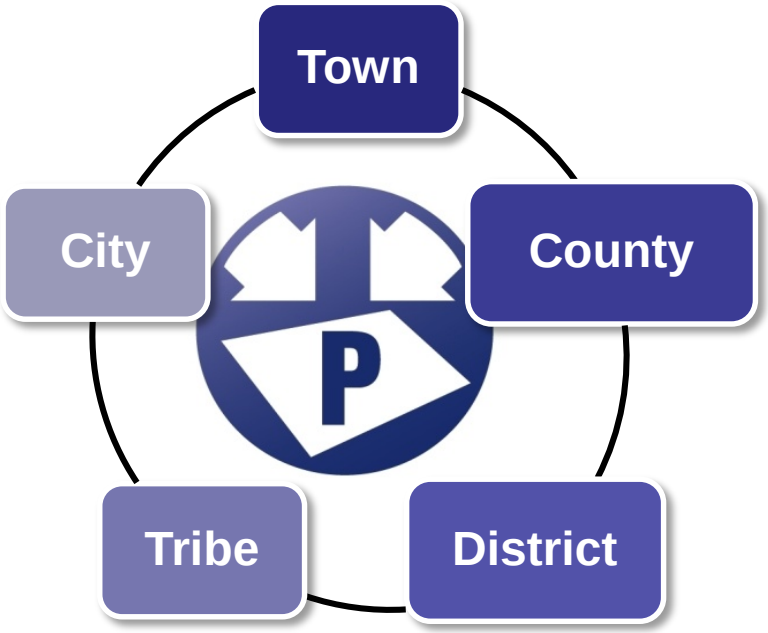
- Community events
- Interviews
- News media
- Presentations to governing bodies
- Questionnaires / surveys
- Forums and roundtables
- Social media and websites

Discussion Question

In your community, what types of public outreach and involvement methods have worked well?

Multi-Jurisdictional Outreach

Stakeholders



Planning Team

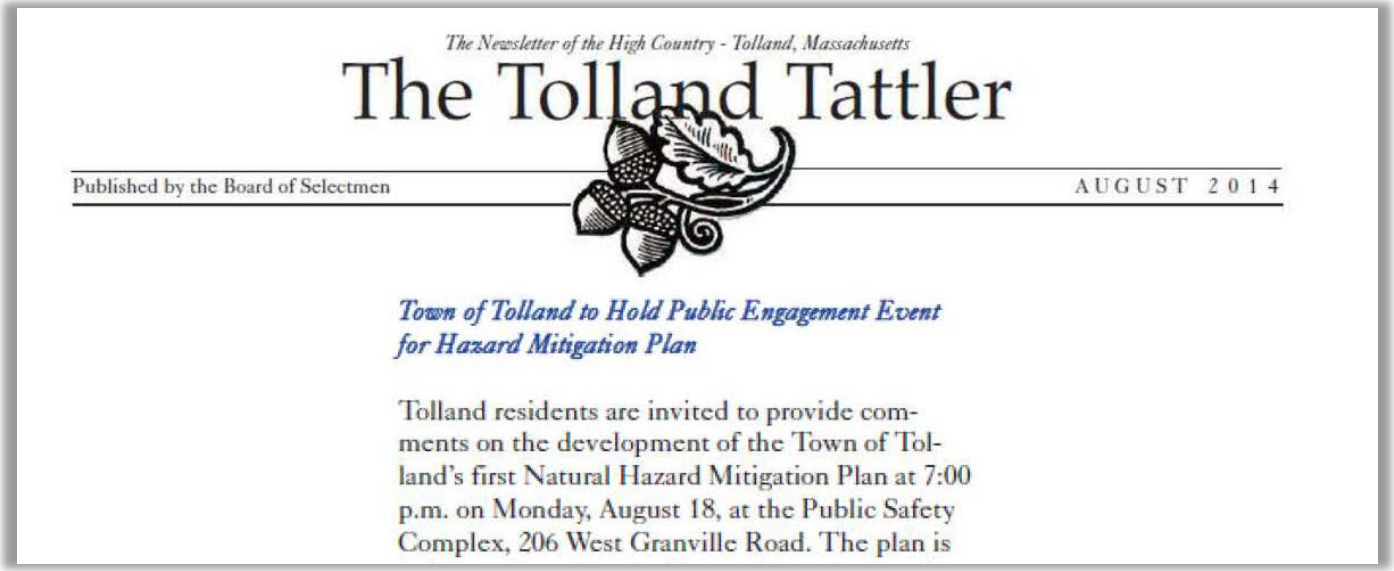
Public

Tips for Outreach Strategy

- Brainstorm outreach activities
- Determine outreach objectives and schedule
- Develop clear and consistent messages that align with community values
- Communicate and invite the public throughout the planning process
- Evaluate and incorporate feedback
- Celebrate success

Involve the Public Prior to Plan Adoption

- Make the final plan draft available for comment
- Consider existing policies for public review
- Use the adoption process to increase awareness



The Newsletter of the High Country - Tolland, Massachusetts

The Tolland Tattler

Published by the Board of Selectmen — AUGUST 2014

Town of Tolland to Hold Public Engagement Event for Hazard Mitigation Plan

Tolland residents are invited to provide comments on the development of the Town of Tolland's first Natural Hazard Mitigation Plan at 7:00 p.m. on Monday, August 18, at the Public Safety Complex, 206 West Granville Road. The plan is

Keep Public Involved After Plan Adoption

- Identify how to continue public involvement after plan adoption
- Use methods that were successful during the planning process

Document Who, What, and When

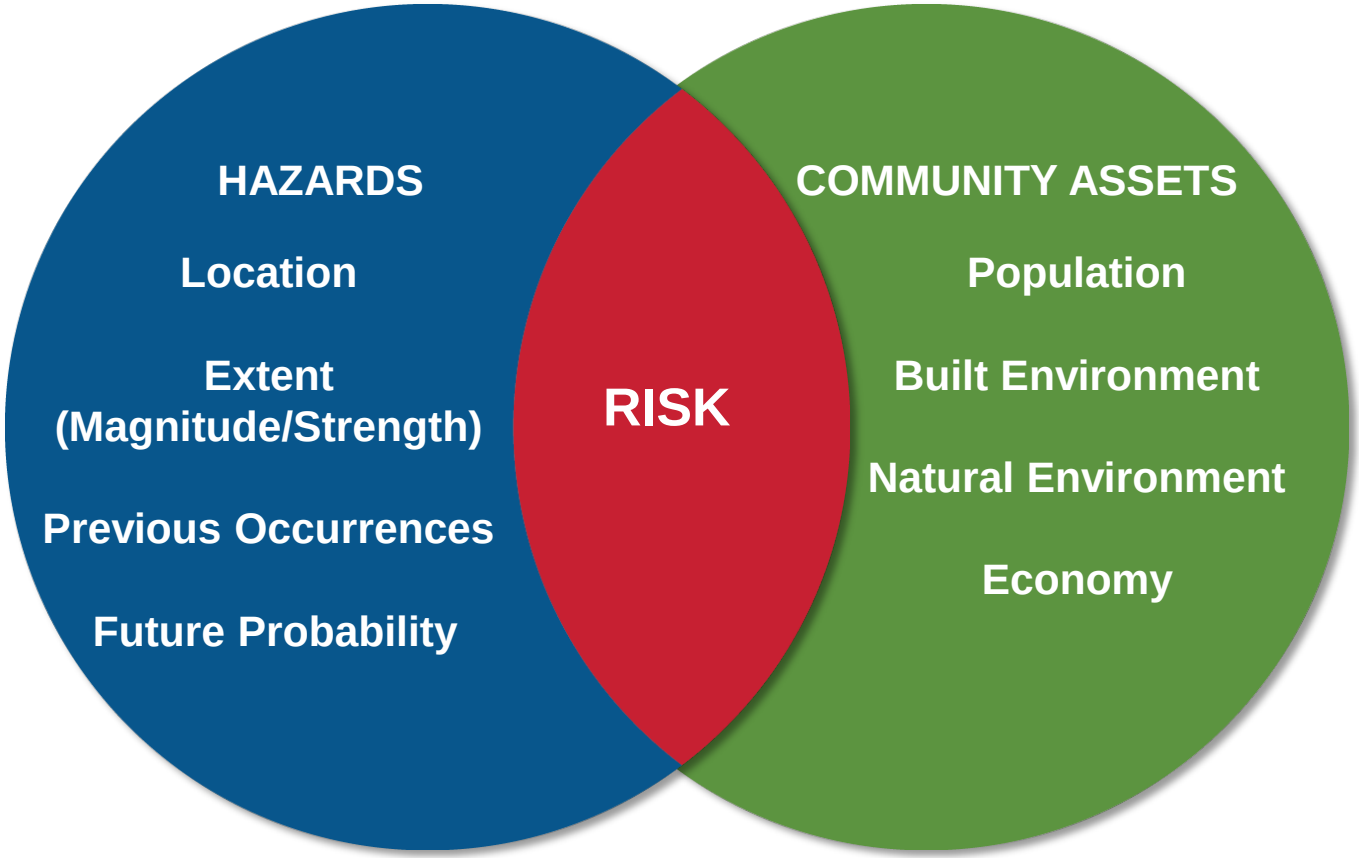
- Who was involved?
- How was the plan prepared?
  - Schedule
  - Activities
- How was the public involved?
- What future public involvement opportunities are scheduled?
- Plan updates must document the current planning process

Module 2:
Risk Assessment

Risk Assessment

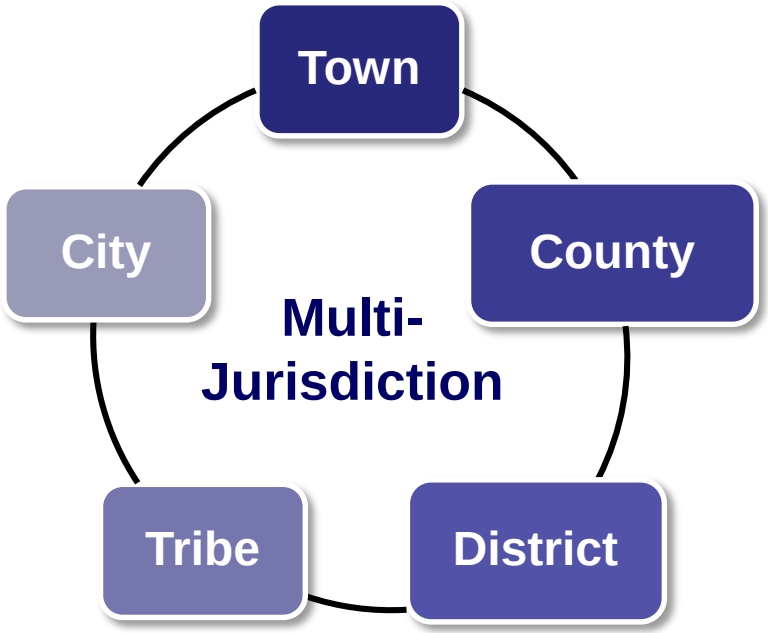
- Process that collects information and assigns values to risks to:
  - Identify or compare courses of action
  - Develop priorities
  - Inform decision-making
- Foundation for mitigation strategy to reduce future losses

Community Risk from Hazards



Multi-Jurisdiction Considerations

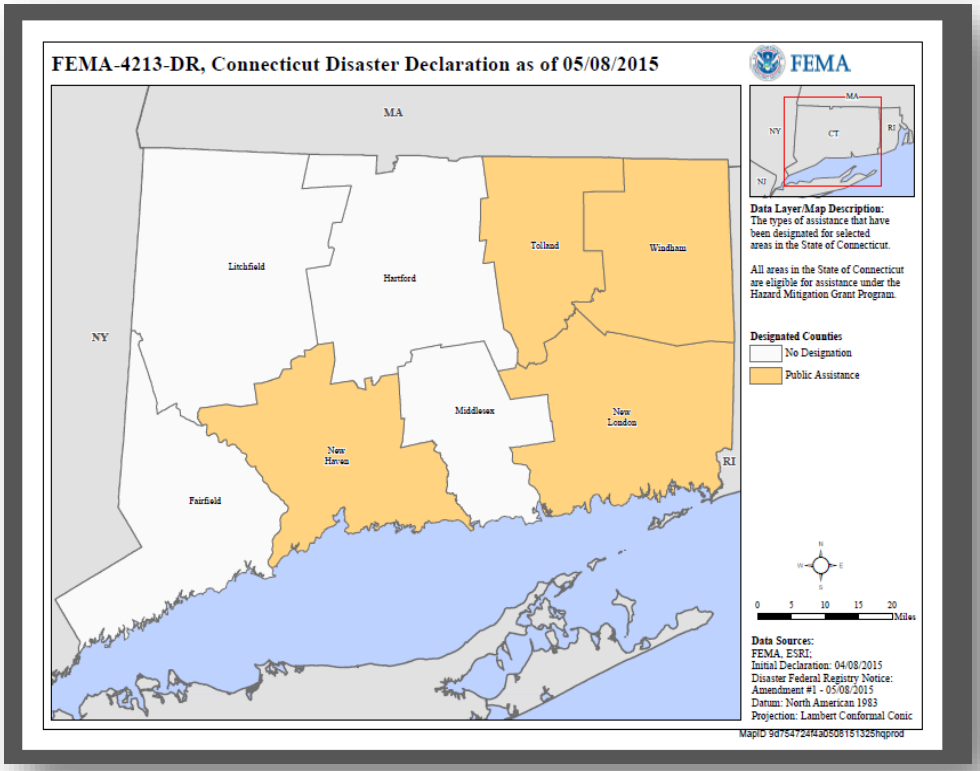
- Describe unique or varied hazards
- Assess assets and risks for each jurisdiction



Steps to Assess Risks

Updating the Risk Assessment

- Changes in hazards (example: disaster declarations)
- Changes in community assets
- Emphasis on changes in development



Step 1: Describe Hazards

Types of Hazards

Natural Hazard

Technological Hazard

Human-caused Hazard

Sources of Hazard Information

- State Hazard Mitigation Plan
- Disaster declarations
- Hazard-related reports/plans
- State agencies
- Colleges/universities
- Planning team and stakeholders

- Local records (newspaper, chamber of commerce, local historical society)

Discussion Questions

- What hazards affect your community?
- What information sources would you use for your plan?

Hazard Descriptions

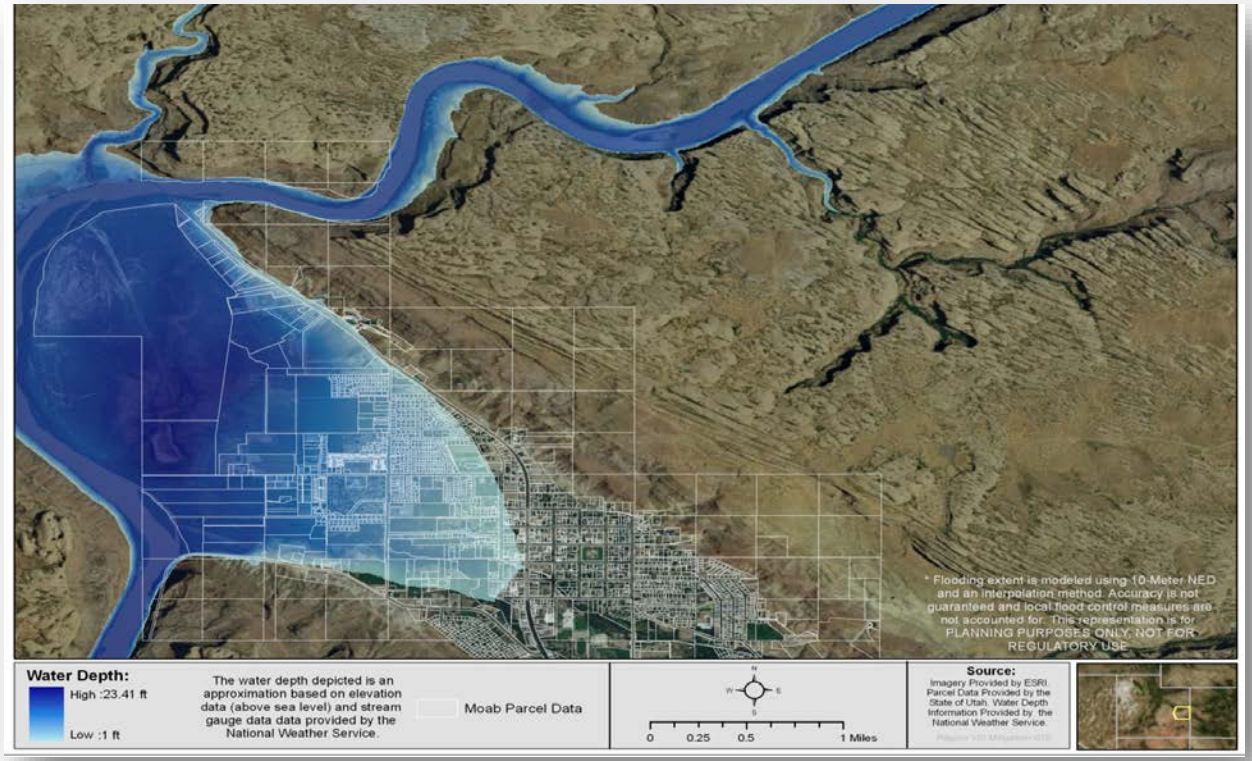
- Location
- Extent
- Previous Occurrences
- Probability of Future Events

Location


DFIRM (Digital Flood Insurance Rate Map):
Representation of the 100 YR Floodplain which is also known as the SFHA (Special Flood Hazard Area). Provided by Grand County, UT. Effective DFIRM.
Moab Parcel Data
N
W
E
S
0
0.35
0.7
1.4 Miles
Source:
Imagery Provided by ESRI. Parcel Data Provided by the State of Utah. DFIRM Data Provided by FEMA.

Extent

- Defined as the strength or magnitude of the hazard.
- Can be described in a combination of ways, depending on the hazard.



Previous Occurrences

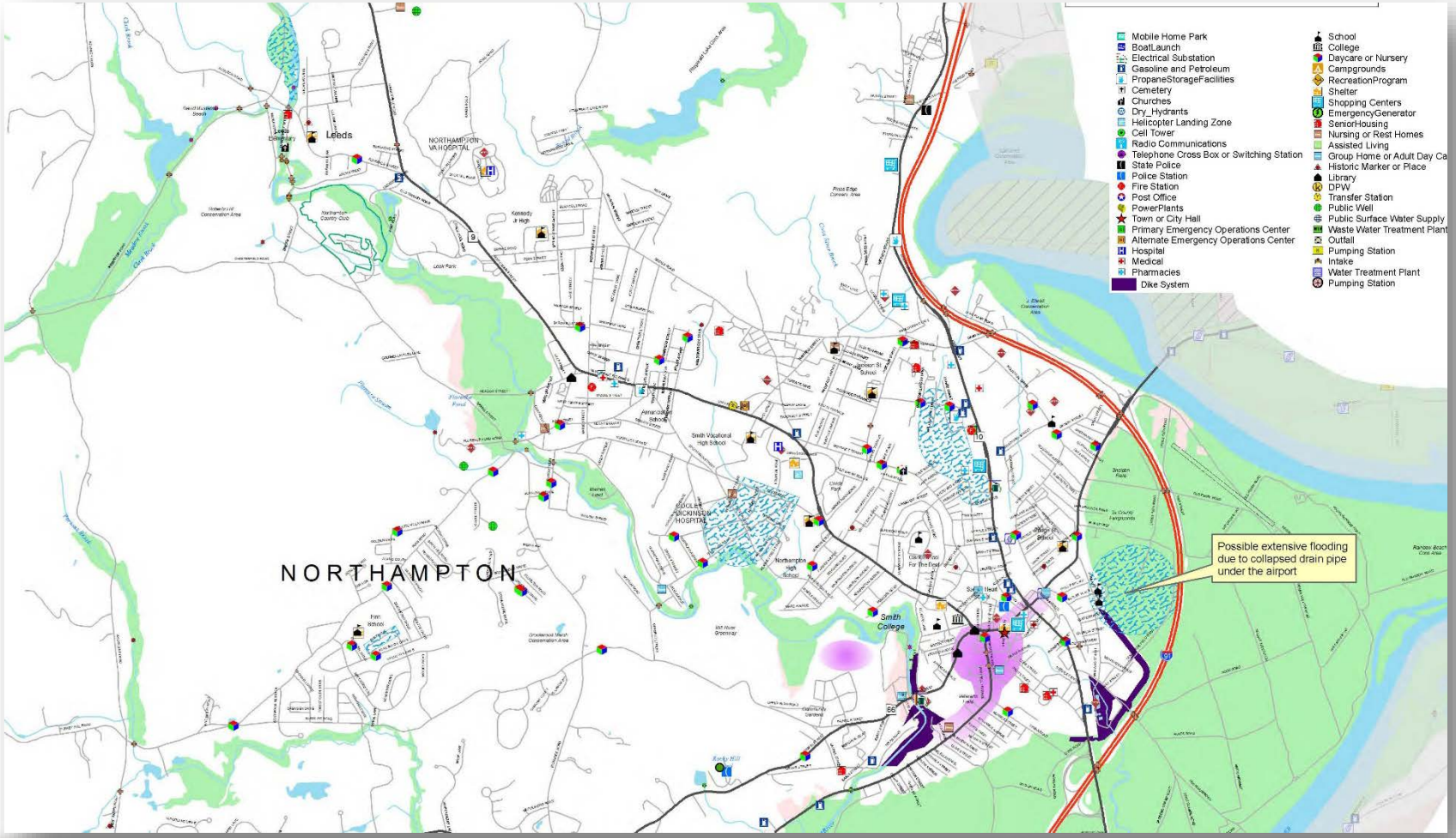
Date of Flood	Property Damage
August 19, 2010	$2,500,000
August 28, 2007	$1,000
July 23, 2007	$1,000
October 14, 2006	$15,000
October 9, 2006	$20,000
October 6, 2006	$500,000
October 3, 2006	$25,000
July 10, 2006	$25,000
September 9, 2005	$3,000

Date of Flood	Property Damage
September 12, 2002	$25,000
July 30, 1999	$2,000
July 14, 1999	$60,000
September 6, 1997	$175,000
July 31, 1976	$50,000
September 18, 1972	$385
July 29, 1969	$1,250
August 2, 1963	$5,000

Probability of Future Events

- The previous slide shows:
  - There were 17 occurrences of flooding
  - Over 48 years from 1962 through 2010
- With 17 occurrences in 48 years, probability of future occurrence is 17/48 = 0.3542 or about a 35% chance of flooding in any year
- If using dollar values of property damage, use constant or real dollars to adjust for inflation.

Hazard Map


Mobile Home Park
BoatLaunch
Electrical Substation
Gasoline and Petroleum
PropaneStorageFacilities
Cemetery
Churches
Dry_Hydrants
Helicopter Landing Zone
Cell Tower
Radio Communications
Telephone Cross Box or Switching Station
State Police
Police Station
Fire Station
Post Office
PowerPlants
Town or City Hall
Primary Emergency Operations Center
Alternate Emergency Operations Center
Hospital
Medical
Pharmacies
Dike System
School
College
Daycare or Nursery
Campgrounds
RecreationProgram
Shelter
Shopping Centers
EmergencyGenerator
SeniorHousing
Nursing or Rest Homes
Assisted Living
Group Home or Adult Day Ca
Historic Marker or Place
Library
DPW
Transfer Station
Public Well
Public Surface Water Supply
Waste Water Treatment Plant
Outfall
Pumping Station
Intake
Water Treatment Plant
Pumping Station
Leeds
NORTHAMPTON
Possible extensive flooding due to collapsed drain pipe under the airport

Summarize Hazard Information

Hazard	Location	Extent	Probability
Tornado	Entire planning area	EF2	2% chance per year
Hail	Entire planning area	1” diameter	10% chance per year
Flood	Along 0.2 mile of stream in Town A only	6” to 12” depth	25% chance per year

Step 2: Identify Community Assets

Community Assets

People

Economy

Structures

Critical Facilities and Infrastructure

Natural Environment

People

- Locations and concentrations of residents and employees
- Locations and concentrations of special needs and dependent populations
- Types and locations of visiting populations

Economy

- Major employers
- Primary economic sectors
- Commercial centers
- Dependencies between economy and infrastructure

Structures

Existing and Future

- Locations, types, and building materials
- Cultural and historic resources
- Locations and types of planned new development/redevelopment
- Infrastructure for new development
- Planned critical facilities and capital improvements
- Value of structures in real dollars

Structures (Existing and Future)

Existing Structures
(red dots)

Existing (red dots) and
Potential Future Structures
(yellow dots)

Critical Facilities & Infrastructure

- Location, age, and value of critical facilities and infrastructure
- Dependencies that exist among critical facilities and infrastructure

Discussion Questions

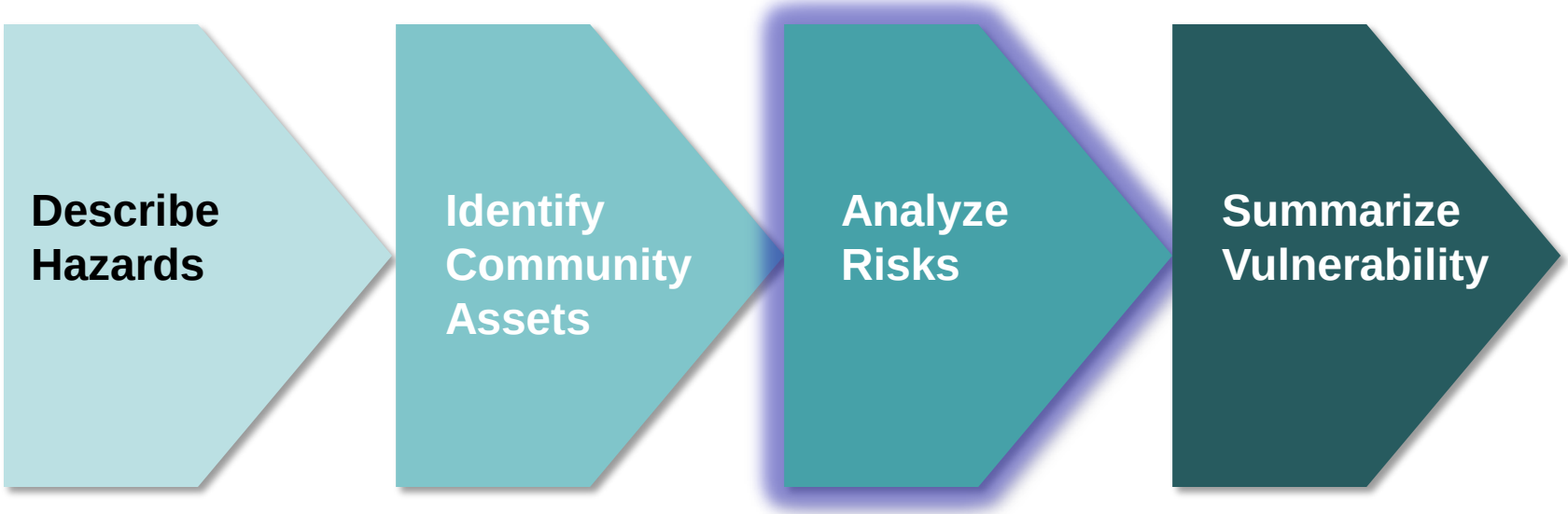
- What are critical facilities and infrastructure in your community?

- What are potential natural hazards which may impact them?

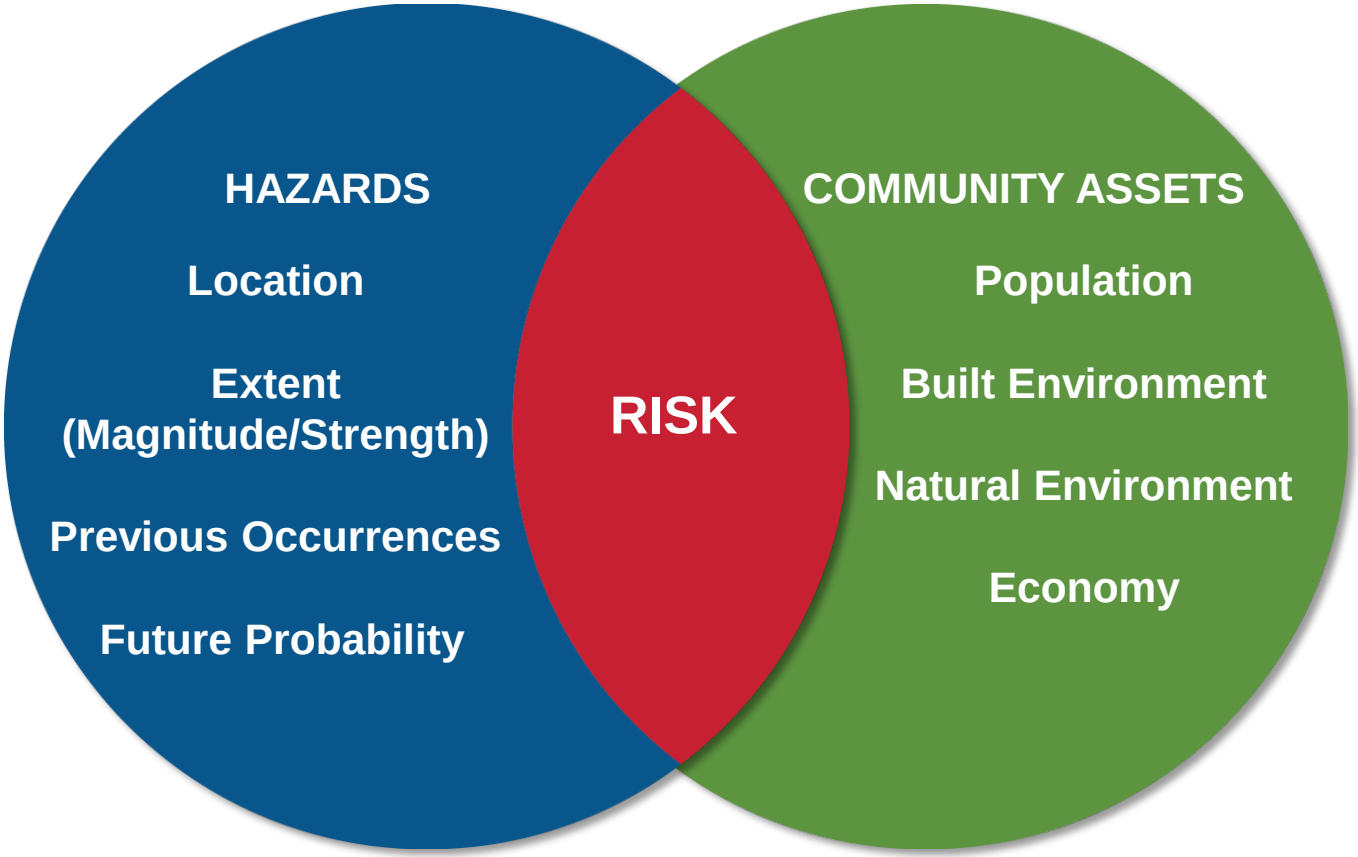
Natural Environment as Mitigation Partner

- Environmental functions that reduce magnitude of hazards
- Critical habitat areas to protect
- Areas where conservation reduces risk and achieves other community objectives (example: trails and parks)

Step 3: Analyze Risks



Hazards, Community Assets, and Risk



Analyze Risk and Summarize Vulnerability

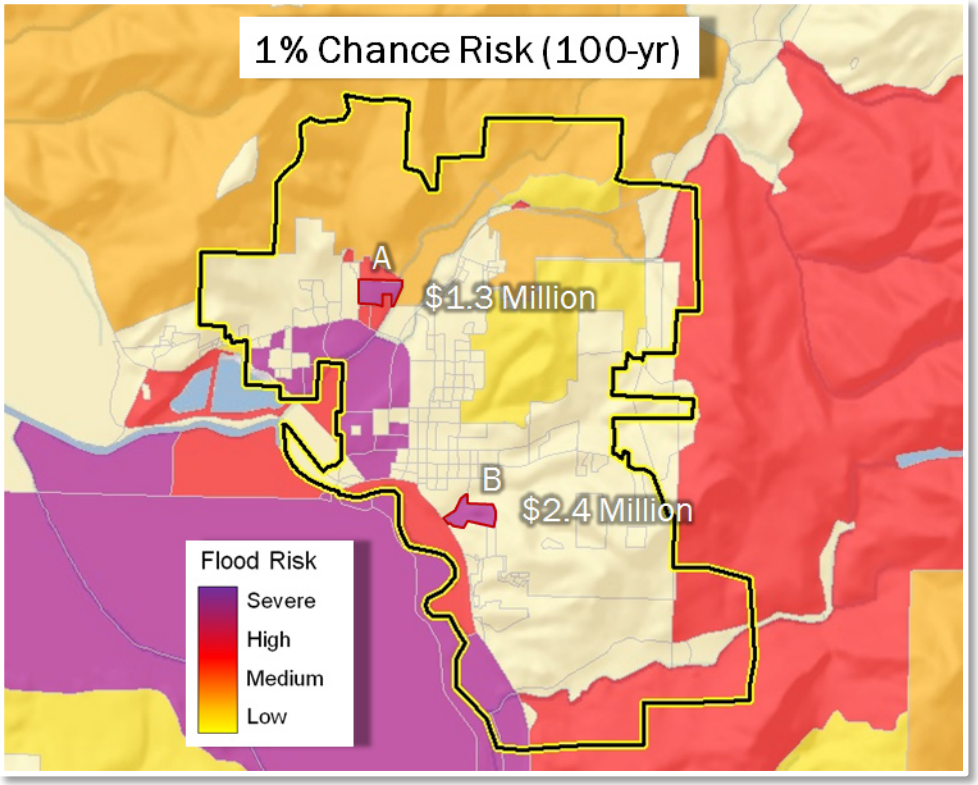
For each hazard:

- Evaluate vulnerable assets
- Assess potential impacts
- Estimate future losses

Methods for Analyzing Risk

Exposure analysis

Historical analysis



Scenario analysis

Exposure Analysis

What assets are located in hazard-prone areas?

- Quantify number, type, value of assets
- Estimate future development in hazard-prone areas based on planning and zoning
- Consider magnitude of hazard or event (high vs. moderate wildfire hazard areas)
- Use maps and GIS for analysis

Exposure Analysis

	1% Annual Chance		0.2% Annual Chance*		X Zone (no flood)	
Jurisdiction	Parcel Count	Structure Value	Parcel Count	Structure Value	Parcel Count	Structure Value
Citrus Heights	157	$30,238,980	276	$50,562,943	23,170	$3,718,817,361
Elk Grove	525	$206,224,864	3,967	$812,840,315	41,437	$9,429,151,072
Folsom	8	$2,519,665	124	$168,740,000	19,787	$6,912,827,854
Galt	1	$315,000	-	-	6,712	$1,021,595,732
Isleton	324	$29,743,865	-	-	9	$1,633,479
Rancho Cordova	21	$9,394,521	976	$153,705,651	16,207	$4,262,908,025
Sacramento	28,192	$6,781,945,735	8,420	$1,736,860,331	94,263	$18,389,505,445
Unincorporated County	4,483	$1,444,981,125	21,415	$3,583,079,793	131,159	$24,219,438,215
Total	**33,711**	**$8,505,363,755**	**35,178**	**$6,505,789,033**	**332,744**	**$67,955,877,183**

Source: Sacramento County 2010 secured roll assessor & parcel data; Sacramento County DFIRM, January 2011
*This parcel count only includes those parcels in the 0.2% annual chance floodplain. The 0.2% annual chance flood also includes all parcels in the 1% annual chance floodplain.

Historical Analysis

Based on past events, what are potential future impacts and losses?

- Use for higher frequency events with available data on past impacts and losses (e.g., winter storms, stormwater flooding)
- Consider vulnerability of new development

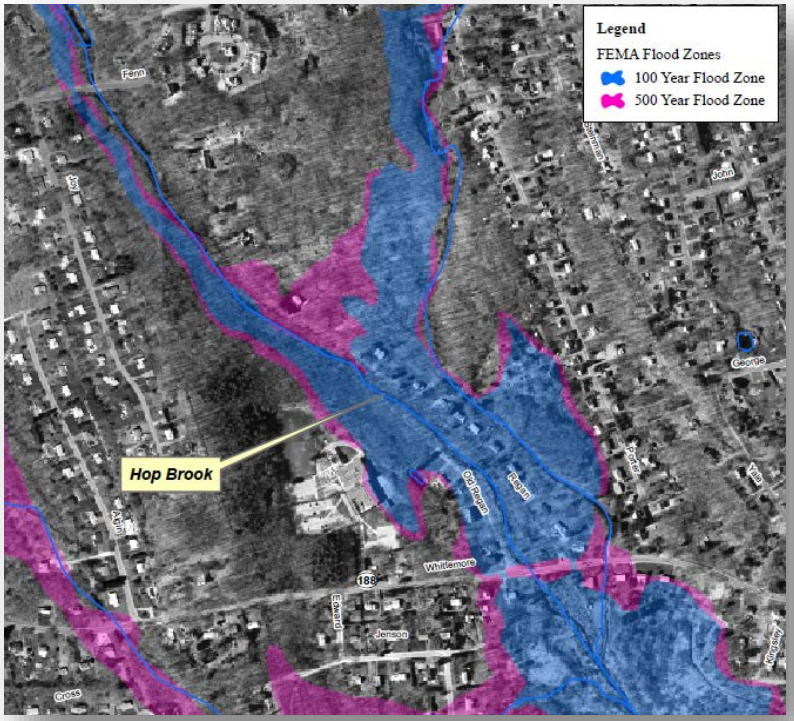
Scenario Analysis

What are the potential impacts and losses if a particular event occurs?

- Monetary costs, casualties, down time, etc.

Consider a scenario analysis for low-frequency, high-consequence events (e.g., earthquake)

- Use modeling tools, such as HAZUS MH EARTHQUAKE • WIND • FLOOD



Risk Index

Hazard	Location	Probability	Extent	Impact	Rank
Tornado	Entire planning area	5% chance per year	EF2	Damage > $35 million	1
Hail	Entire planning area	75% chance per year	Up to 1” diameter	Damage $50,000 to $100,000	2
Subsidence	Northwest corner of planning area	Very low; there is no history of subsidence	Minimal	Damage <$500	3

Step 4: Summarize Results

Summarize Overall Vulnerability

- Summarize each jurisdiction's overall vulnerability to hazards
- Communicate findings to:
  - Educate public, stakeholders, elected officials
  - Inform decision-making
  - Develop mitigation strategy

Develop Problem Statements

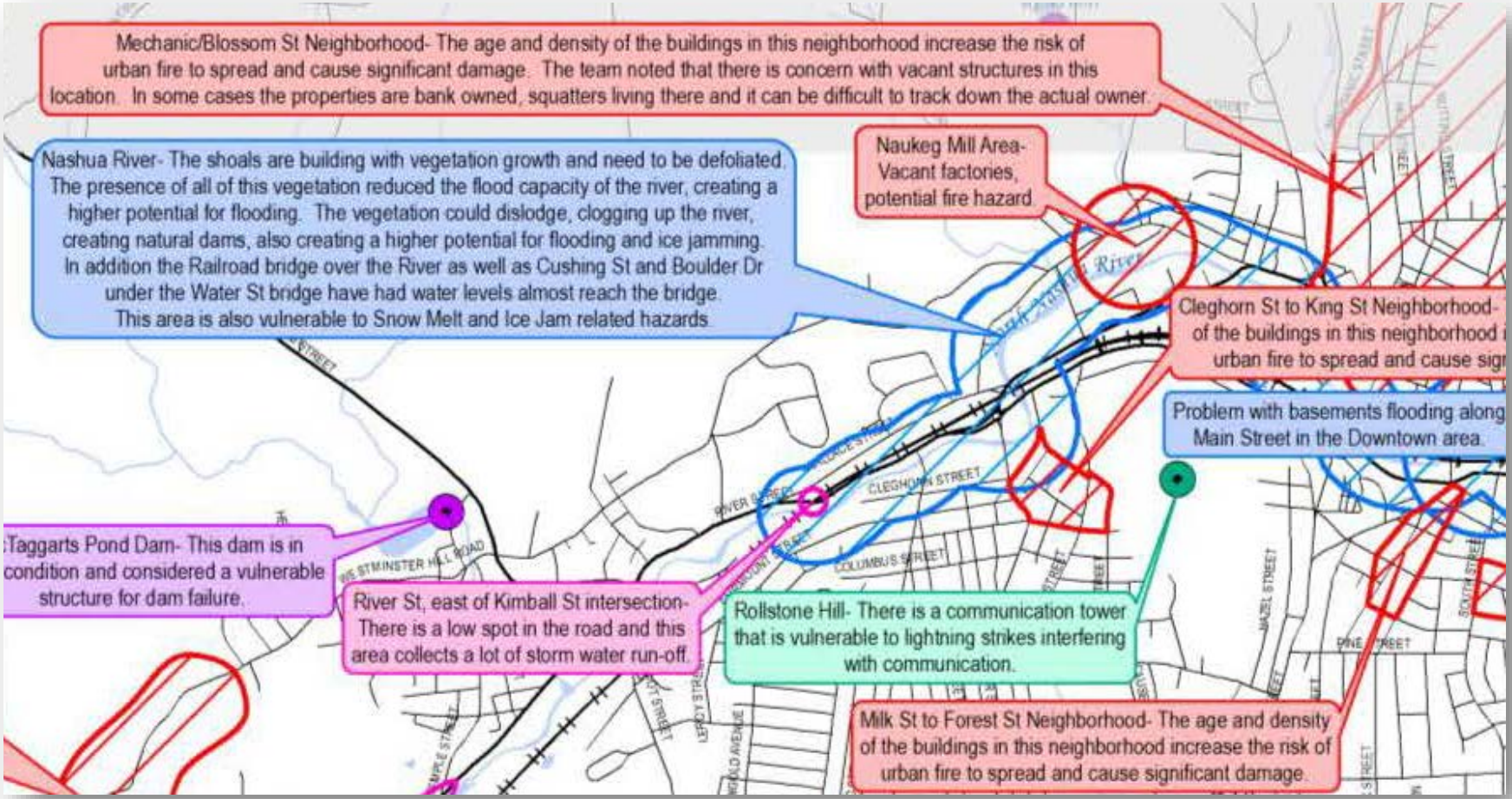
To communicate vulnerabilities, develop problem statements

- Clear, concise
- Not overly technical
- Identify key issues or problems
- Based on results of the risk assessment
- Pertain to individual jurisdictions or to the entire planning area

Example Problem Statements

- The Town of Newton recently annexed the South Woods area located in the wildland-urban interface. The Town's land use and building codes do not address wildfire hazard areas. Future development in South Woods will increase vulnerability to wildfires.
- The North Creek Sewage Treatment Plant is located in the 100-year floodplain and has been damaged in past events.

Problem Statement Map



Problem Statements with Mitigation Strategy

Hazard	Problem Statements	Potential Projects	STAPLEE Scores						
			Social	Technical	Administrative	Political	Legal	Economic	Environment
Flood	5. Heavy and prolonged rain events cause flood damage to the 55 structures located within the 1% floodplain.	5a. Join the Community Rating System	3	3	1	1	2	2	3
		5b. Educate residents within the floodplain about risks through GIS maps on Town website and mailing out NFIP brochures.	3	3	3	3	3	3	3
	6. The culvert at the intersection of Yaz Street and Papi Road does not have the capacity to handle flow during minor thunderstorms, causing localized flooding that affects 3 businesses.	6a. Upgrade culvert to accommodate stormwater higher intensity storms.	3	3	3	3	3	3	3
	7. The Three Corners neighborhood consistently experiences localized flooding and erosion at various locations during heavy rain events, impacting Town Hall, the Wastewater Treatment Plant, and 4 residential structures.	7a. Amend current subdivision regulations to require a "zero discharge" policy for stormwater runoff from new development.	3	2	2	2	2	2	3
		7b. Adopt erosion and sedimentation control regulations for new construction.	2	2	2	1	2	3	2
		7c. Establish a green infrastructure program to encourage the use of pervious pavement, as well as expand existing parks and greenways.	3	3	3	3	3	2	3
		7d. Raise electrical wiring 2 feet above worst							

Update to Reflect Development Changes

- **Increasing vulnerability**
- Climate change
- New development in hazard-prone areas

Decreasing vulnerability

- Mitigation actions implemented to reduce risk
- Adopted codes to protect future development

Risk Assessment Summary

- Plan document focuses on communicating analysis and findings to:
  - Emergency managers
  - Planners
  - Policy makers
  - Community members
- Background data in appendices or integrated in local systems

Review of the Risk Assessment

For each hazard, the plan must provide description of:

- Hazards (location, extent, previous occurrences, and future probability)
- Potential impacts for each participating jurisdiction
- Changes in development since previous plan was developed if plan is an update

- Summary of vulnerability

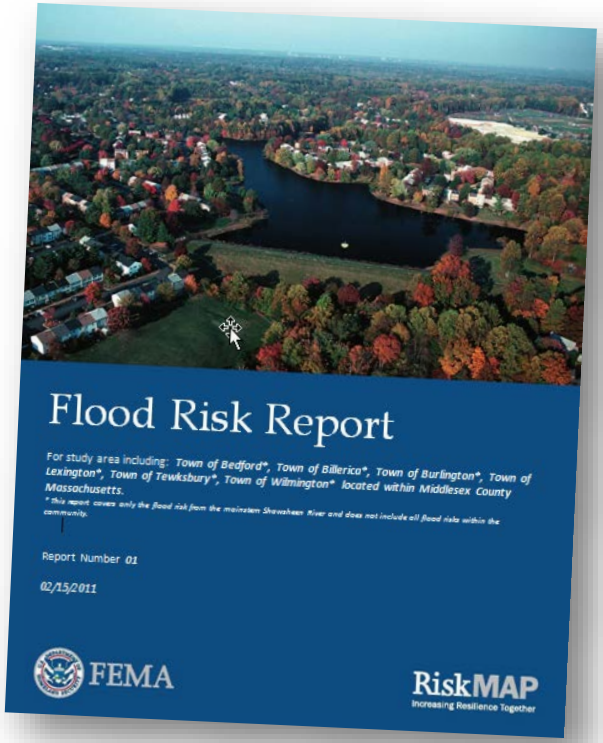
Module 3:
Mitigation Strategy

Unit 3.1

Community Capabilities

Community Capabilities Related to Mitigation

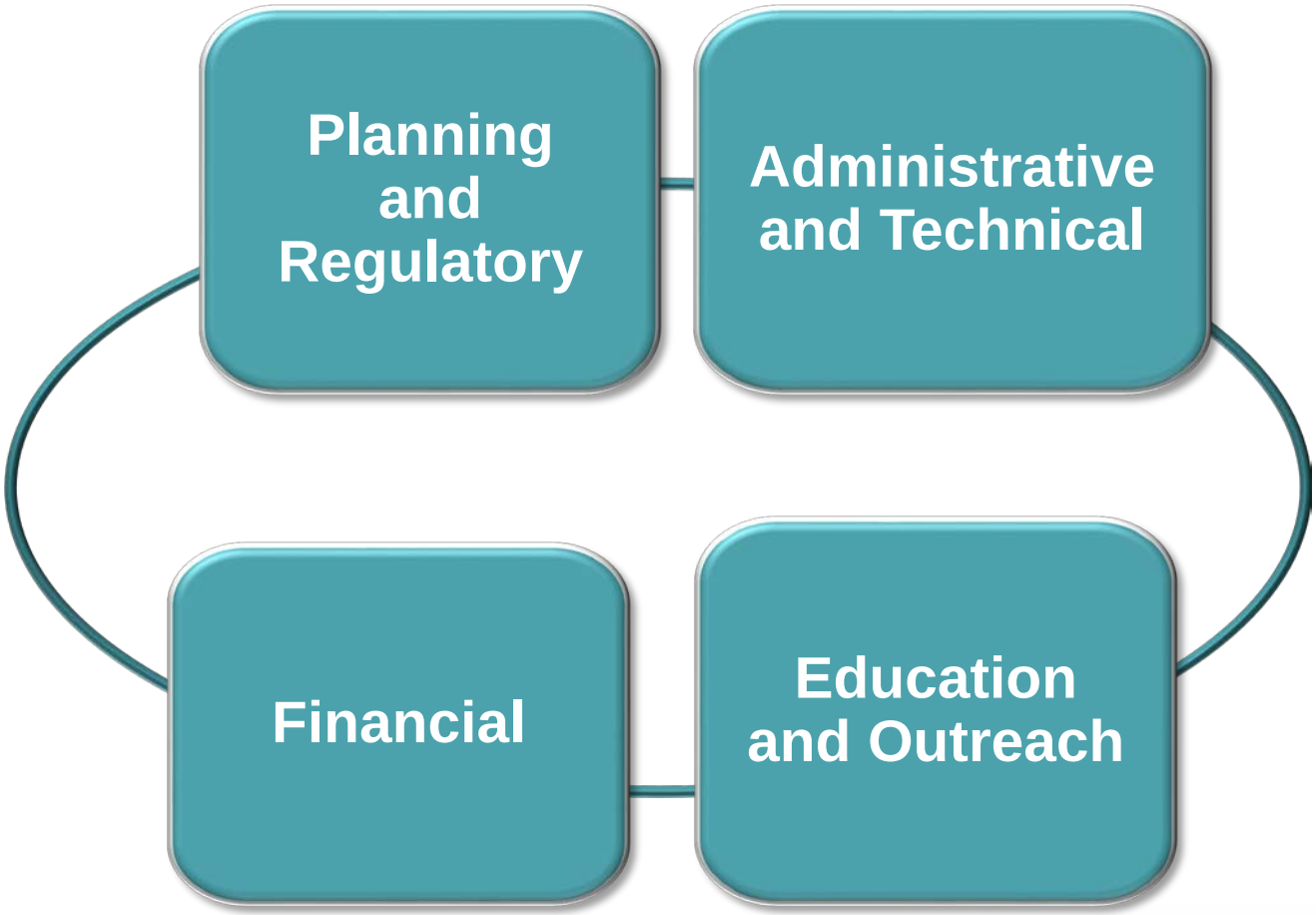
- What existing capabilities (plans, policies, programs) currently reduce long-term vulnerability?
- What capabilities could be used to implement mitigation and reduce vulnerability in the future?



Capability Assessment

- Describe existing authorities, policies, programs, and resources available to accomplish hazard mitigation
- Describe the plans, reports, and technical information reviewed and incorporated
- Review and update capabilities, highlighting changes since previous plan

Types of Community Capabilities

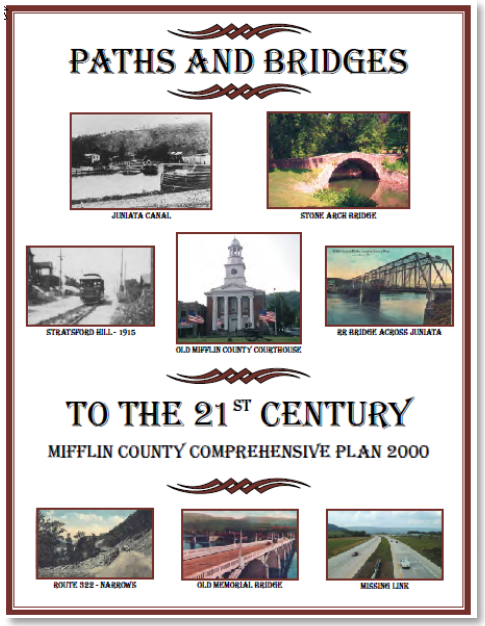


Examples of Capabilities

Planning and Regulatory

Plans, policies, and ordinances such as:

- Comprehensive plans
- Capital improvement programs
- Transportation plans
- Emergency operations plans
- Zoning ordinances
- Building codes



Examples of Capabilities

Administrative and Technical

Staff and skills for planning and mitigation such as:

- Engineers
- Planners
- GIS analysts
- Building inspectors
- Emergency managers
- Grant writers

Examples of Capabilities

Financial

Resources available to fund mitigation actions such as:

- Operating budgets
- Stormwater utility fees
- Development impact fees

Examples of Capabilities

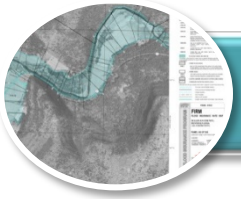
Education and Outreach

Existing programs that implement mitigation and communicate risk such as:

- School programs
- Firewise communities
- Storm Ready communities
- Hazard awareness campaigns (Tornado Awareness Month)
- Public Information Officer
- Community newsletter

National Flood Insurance Program

Plan must describe participation in the NFIP, as well as repetitively damaged NFIP-insured structures.



Floodplain Mapping

Floodplain Management

Flood Insurance

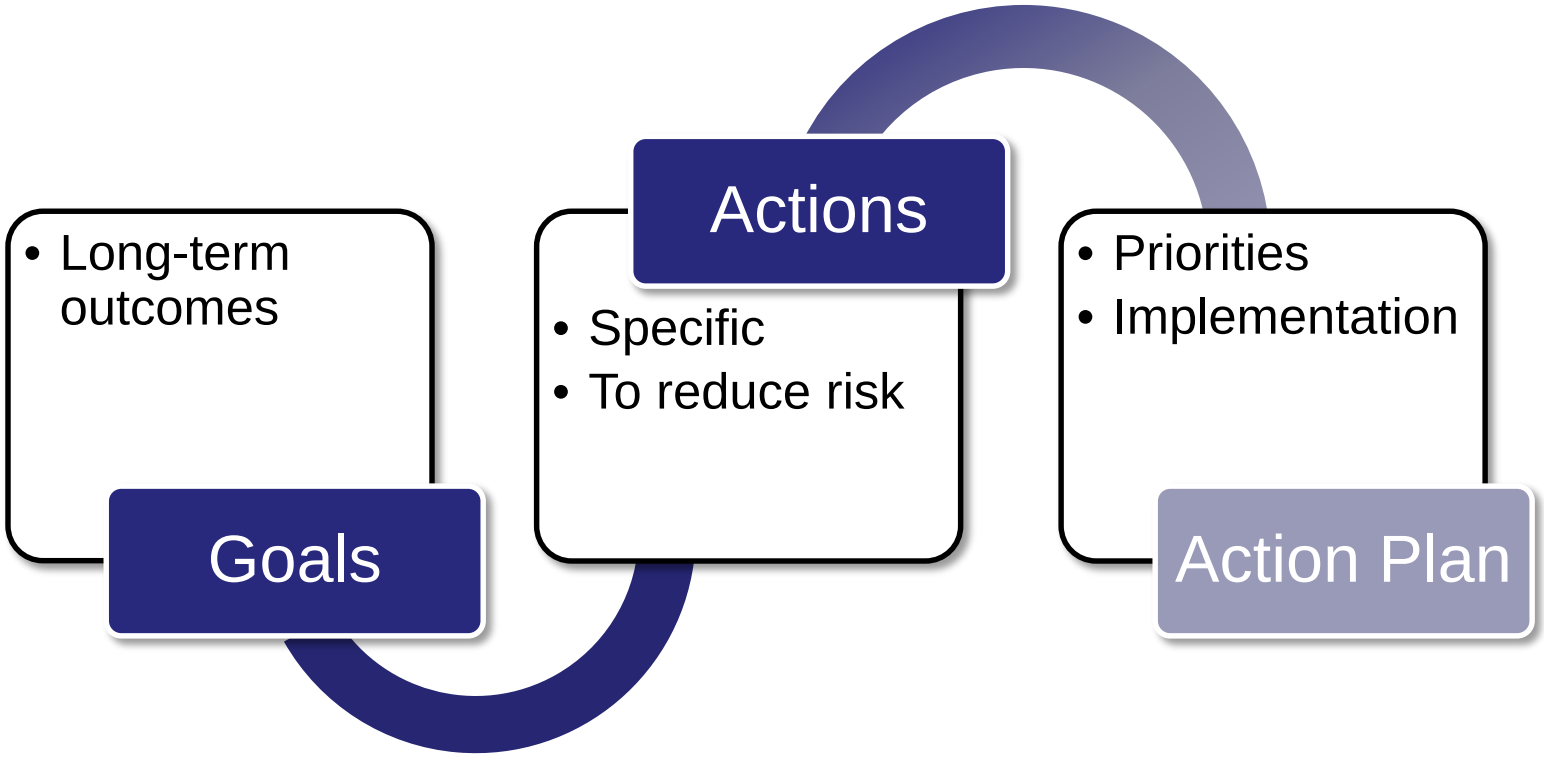
Discussion Questions

- How would you collect information on capabilities in your community?
- What community capabilities might be identified?
- What limits to community capabilities might be identified?

Unit 3.2

Develop the Mitigation Strategy

Mitigation Strategy



Mitigation Goals and Actions

	Goals	Actions
	Broad, long-term, policy-type statements	Specific projects and activities that help achieve goals
Ex 1	Reduce losses due to flooding	Amend flood damage prevention ordinance to require elevation of first floor at least 1 foot above base flood elevation
Ex 2	Prevent damage to structures and infrastructure	Retrofit historic school for earthquake safety

Types of Mitigation Actions

Local Plans and Regulations

Structure and Infrastructure Projects

Natural Systems Protection

Education and Awareness Programs

Local Plans and Regulations

Structure and Infrastructure Projects

Natural Systems Protection

Education and Awareness Programs

Other Actions in the Mitigation Plan

Discussion Questions

- What are some examples of mitigation actions?
- What are examples of activities related to response, but not mitigation?

Steps for Developing a Mitigation Strategy

1. Develop Mitigation Goals

2. Identify Comprehensive Range of Mitigation Actions

3. Evaluate and Prioritize Actions

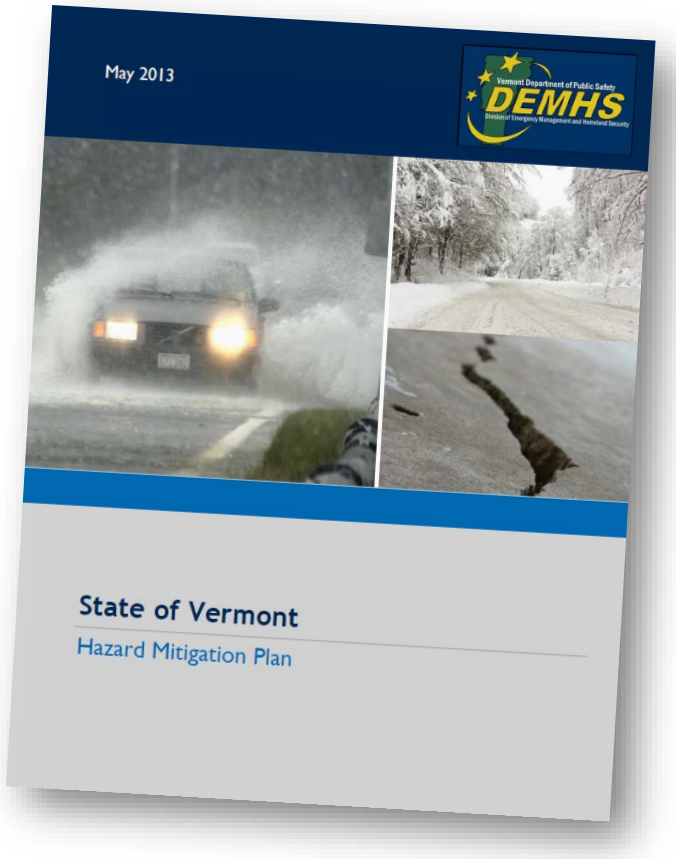
4. Develop Action Plan for Implementation

1. Develop Mitigation Goals

- The plan must include mitigation goals consistent with the hazards identified in risk assessment
- Evaluate previous goals and reaffirm or change based on current conditions and priorities

How to Develop Goals

- Risk assessment findings
- Outreach findings
- Community goals
- State Hazard Mitigation Plan goals



2. Identify Mitigation Actions

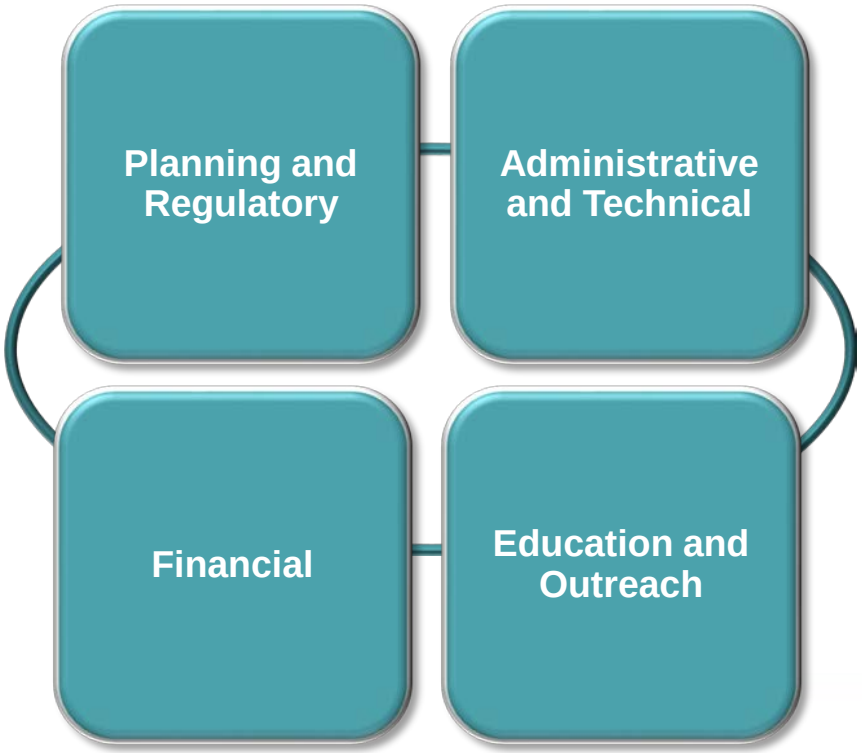
Each jurisdiction must:

- Identify and analyze a comprehensive range of specific mitigation actions to reduce the impacts of hazards identified in the risk assessment
- Consider actions that reduce risk to:
  - Existing buildings and infrastructure
  - New development and redevelopment

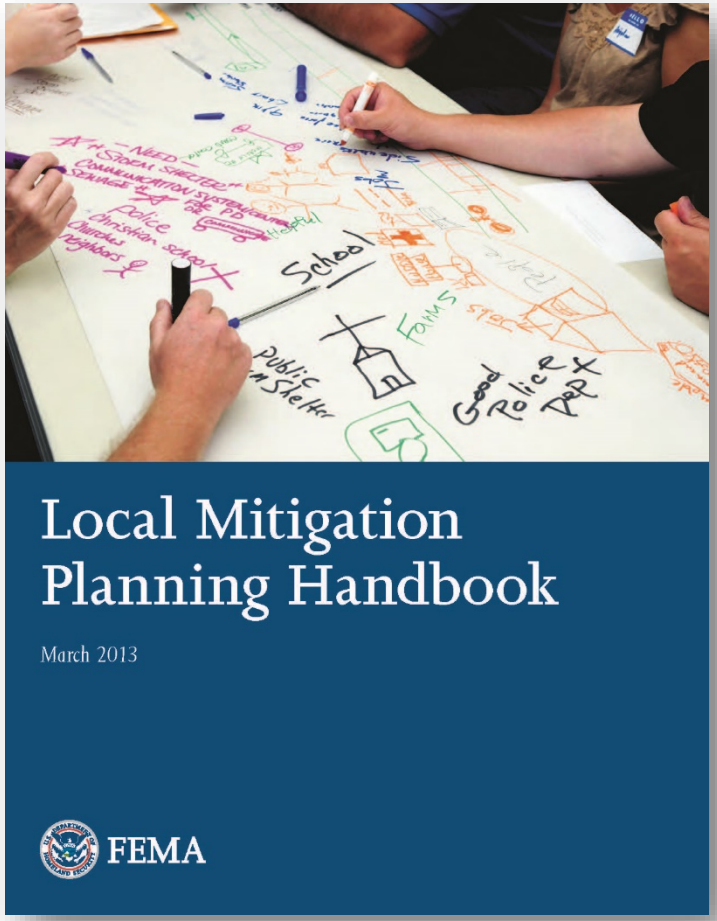
How to Identify Mitigation Actions

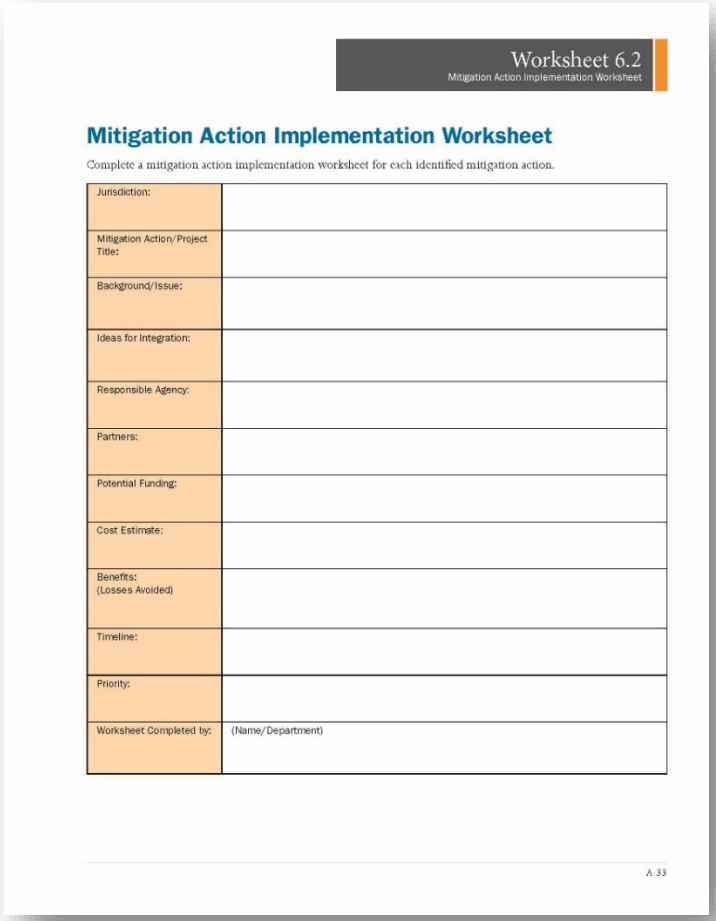
Review Risk Assessment

Assess Capabilities



Mitigation Action Worksheet





Worksheet 6.2
Mitigation Action Implementation Worksheet

Mitigation Action Implementation Worksheet

Complete a mitigation action implementation worksheet for each identified mitigation action.

Jurisdiction:	
Mitigation Action/Project Title:	
Background/Issue:	
Ideas for Integration:	
Responsible Agency:	
Partners:	
Potential Funding:	
Cost Estimate:	
Benefits: (Losses Avoided)	
Timeline:	
Priority:	
Worksheet Completed by:	(Name/Department)

A-33

Example Problem Statement

In wildland-urban interface areas, two critical facilities (school and county maintenance shop) and $500 million in property value are at risk, and there is increasing development pressure.

Comprehensive Range of Actions

Adopt a wildfire mitigation code

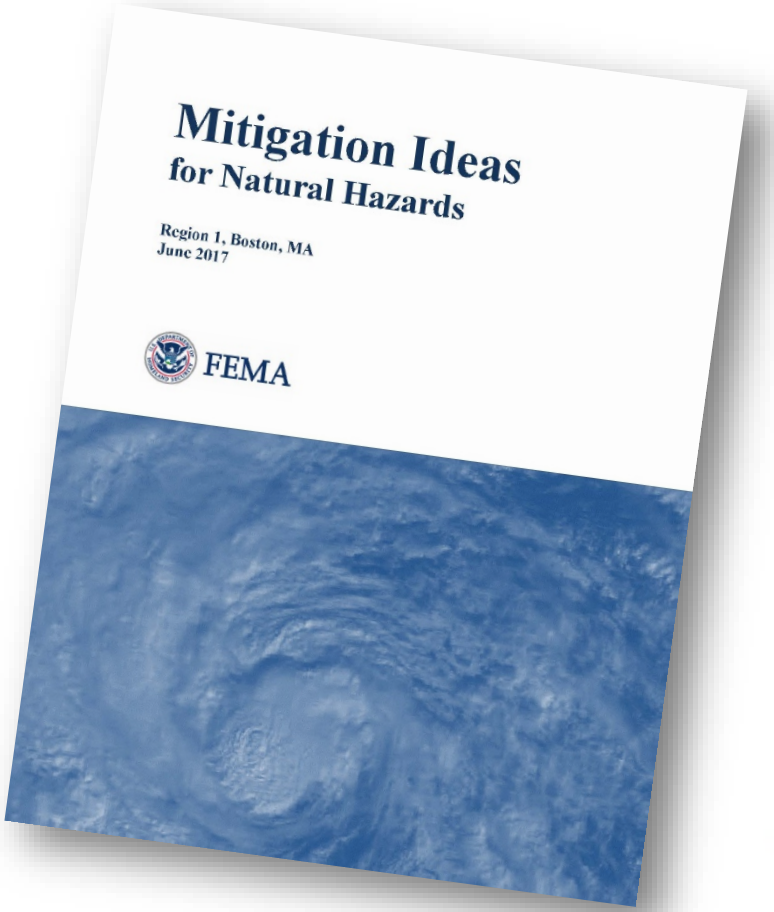
Retrofit school and maintenance shop with fire-resistant materials

Identify land for acquisition by Parks Department for trails and open space

Implement Firewise programs to educate property owners

Ideas for Mitigation Actions

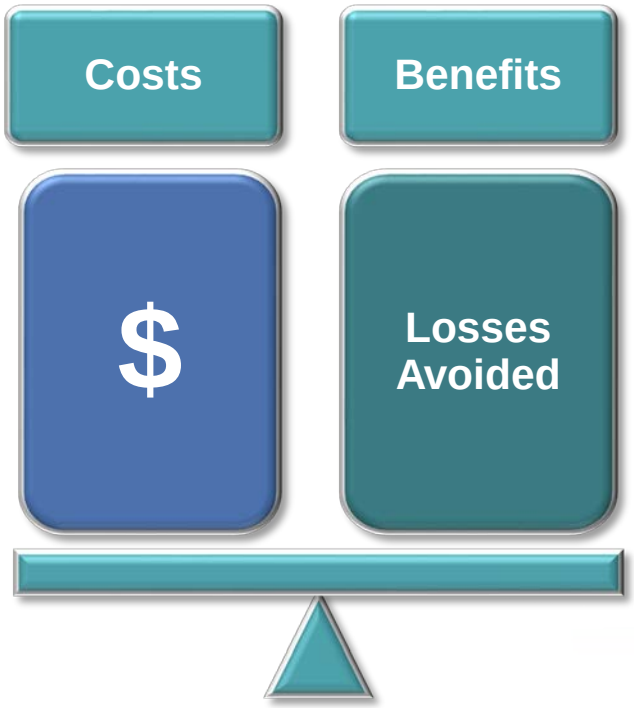
- Subject matter experts, stakeholders, public
- FEMA Region I's "Mitigation Ideas for Natural Hazards"



3. Evaluate and Prioritize Actions

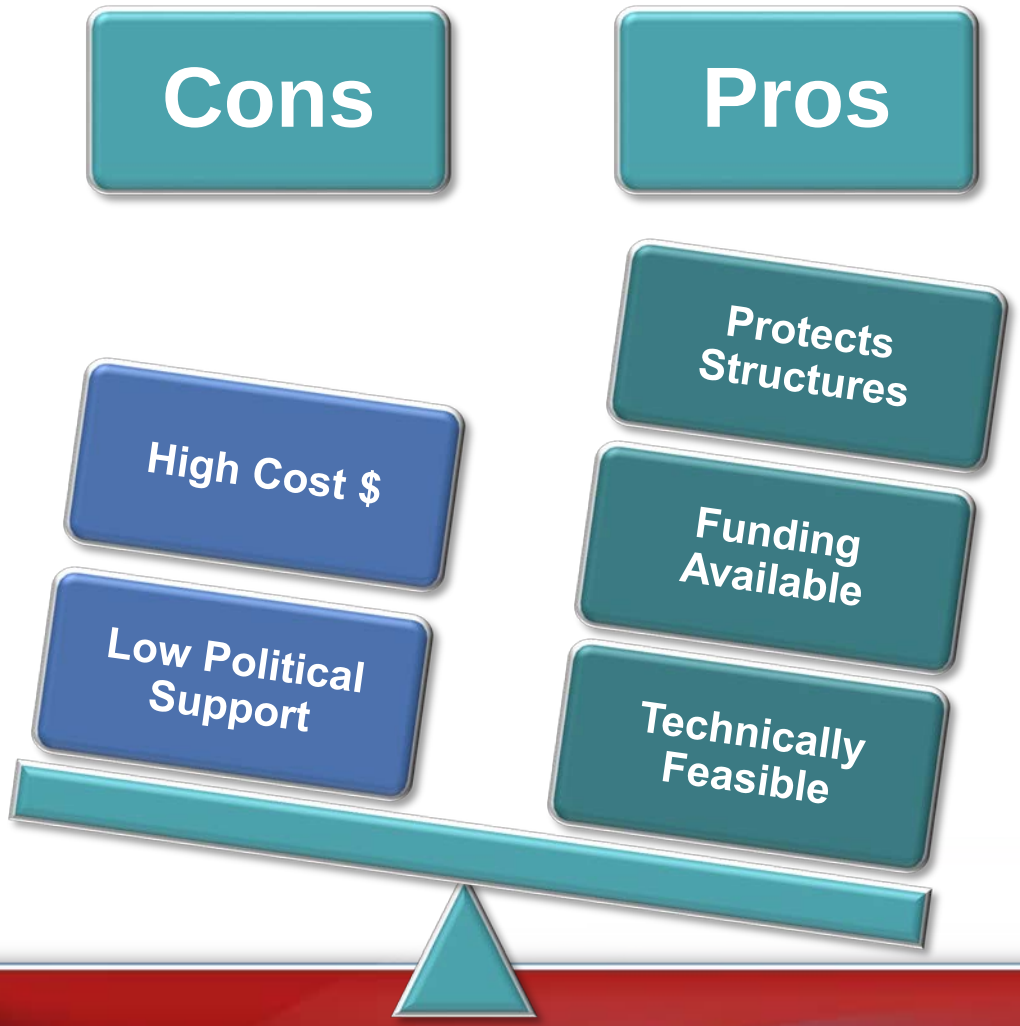
Describe how actions will be prioritized, including emphasis on benefit-cost review

- Benefit-Cost Review
  - Are costs reasonable compared to problem and probable benefits?
  - Estimate costs using planning level assessment
  - Consider quantitative ($) and qualitative



Evaluation Criteria

- Technical
- Political
- Legal
- Environmental
- Social
- Administrative
- Local champion
- Protect lives
- Other community objectives



Action Prioritization

- Consider plan goals and hazards addressed
- Weigh the pros and cons
- Ensure appropriate for community capabilities

4. Develop Action Plan for Implementation

- Describe how the mitigation plan will be incorporated into existing planning mechanisms
  - Examples: Land use plan, comprehensive plan, capital improvement plan, etc.
- Describe how the mitigation actions will be prioritized, implemented, and administered by each jurisdiction

Integrating Mitigation

- Integrate plan goals with other community objectives
- Use the risk assessment to inform plans and policies
- Implement mitigation actions through existing mechanisms

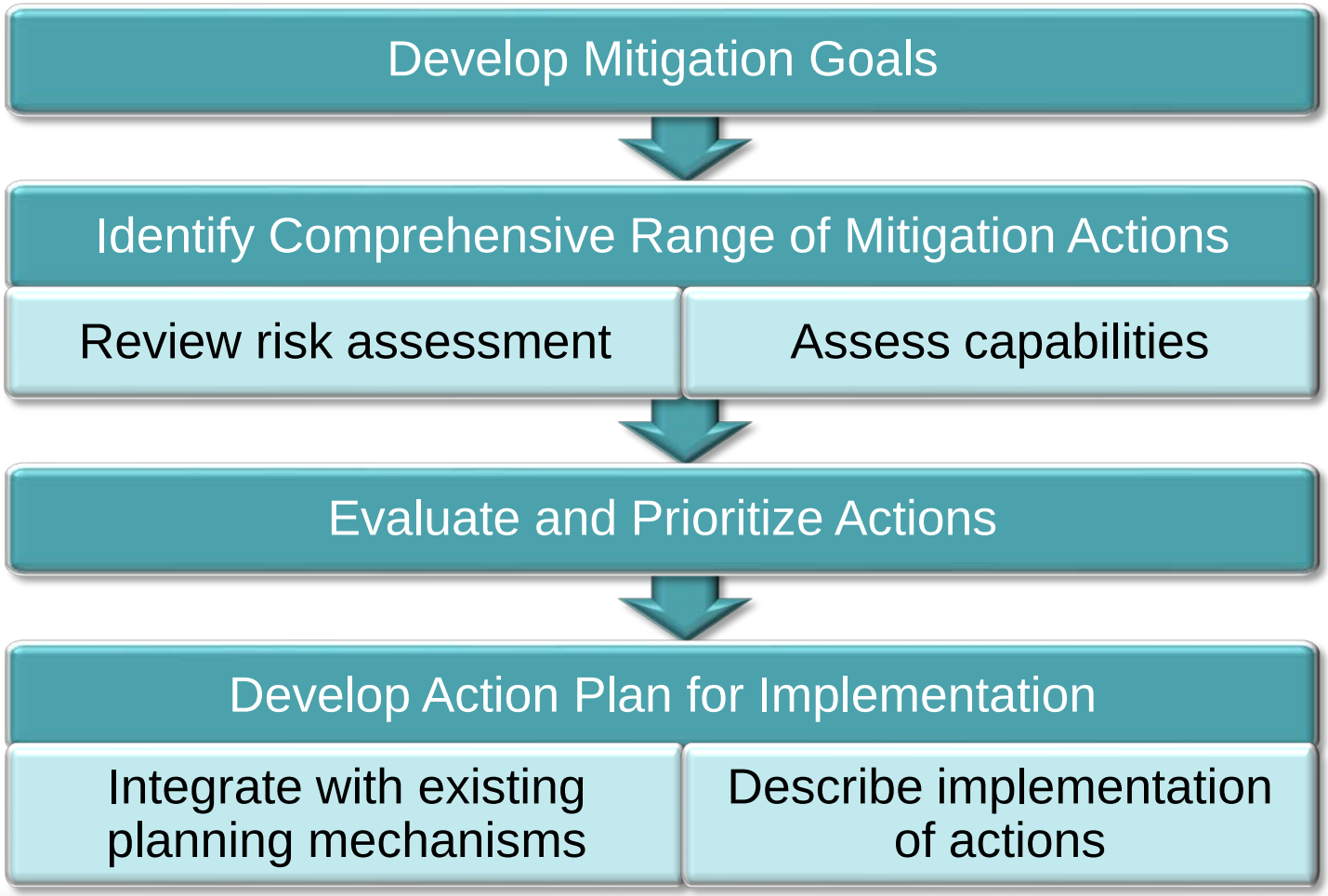
Action Implementation

Action	Restrict construction of critical facilities and infrastructure in 500-year floodplain
Responsible Agency	Planning and Development
Potential Resources	Staff time, operating budget
Timeframe	Completion in 2 years
Priority	High

Communicating the Action Plan

Action No.	Description	Priority	Responsible Agency	Potential Funding	Time Frame
1	Floodproof pump stations	Medium	Department of Public Works	FEMA HMA	2-4 years
2	Inspect schools for seismic retrofit	High	School District	Staff time	1-3 years
3	Implement vegetation management program	Medium	Fire District	State Forest Service	Ongoing

Steps for Developing a Mitigation Strategy



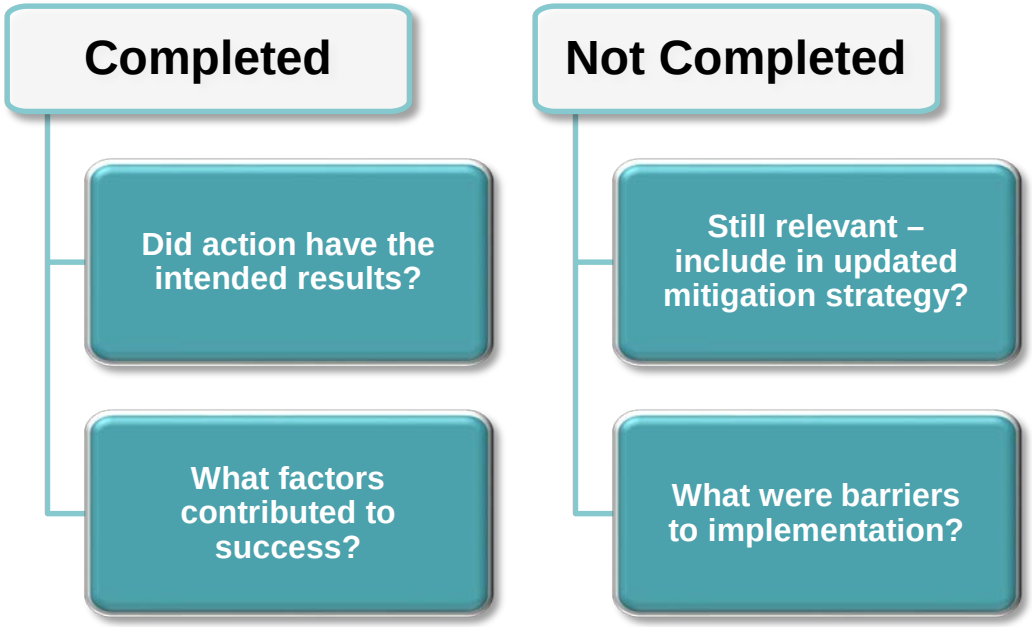
Unit 3.3
Updating the Mitigation Strategy

Update the Mitigation Strategy

- Evaluate progress in plan implementation
- Describe changes in priorities

Evaluate Progress in Implementation

1. How was the plan integrated into other planning mechanisms?
2. What is the status of each action?



How Have Priorities Changed?

- Identify new actions based on updated risk and capability assessments
- Reprioritize with remaining actions from previous plan
- Factors influencing changes:
  - Hazard events and recovery priorities
  - Rate of growth and development
  - Political and economic changes
  - New State or Federal funding sources

Unit 3.4
Keep the Plan Current

Plan Maintenance

A plan maintenance process ensures the plan remains an active and relevant document

- Describe method and schedule for monitoring, evaluating, and updating the plan
- Identify methods for keeping the public involved

Plan Monitoring and Evaluation

	Monitoring: Tracking implementation of mitigation actions	Evaluating: Assessing the effectiveness of the plan at achieving its goals
Who	Mitigation Committee	Mitigation Committee
When	Quarterly	• Annually • After a disaster event
How	Progress report forms from responsible agencies	• Evaluate process and implementation • Identify lessons learned • Report to elected officials

Plan Update

Develop a method and schedule for updating the plan on a 5-year cycle

- Determine a responsible party for the update process
- Estimate a practical schedule
- Identify steps in process
  - Develop scope of work
  - Coordinate participating jurisdictions
  - Apply for funding or budget cost

Discussion Question

- **How will you monitor the plan in your community?**

Unit 3.5

Review and Adopt the Plan

Review Final Draft Plan

- Follow existing local process for public review
- Make available on Web site and community locations
- Publicize comment period
- Present to elected officials

Ready for nature's nastiness

Towns need plans to be eligible for funds

BY OUANNAH LEONARD
REPUBLICAN-AMERICAN

In Watertown, whenever the Steele Brook rises, it first floods The Gowans-Knight Co. Inc. on Knight Street.

That business, which builds and refurbishes fire trucks, floods before Bradshaw Chrysler Jeep on Main Street and well before Watertown Plaza off Route 63, said Charles Berger Jr., Watertown's town engineer. The Gowans-Knight Co. is at the lowest point along Steele Brook, he said.

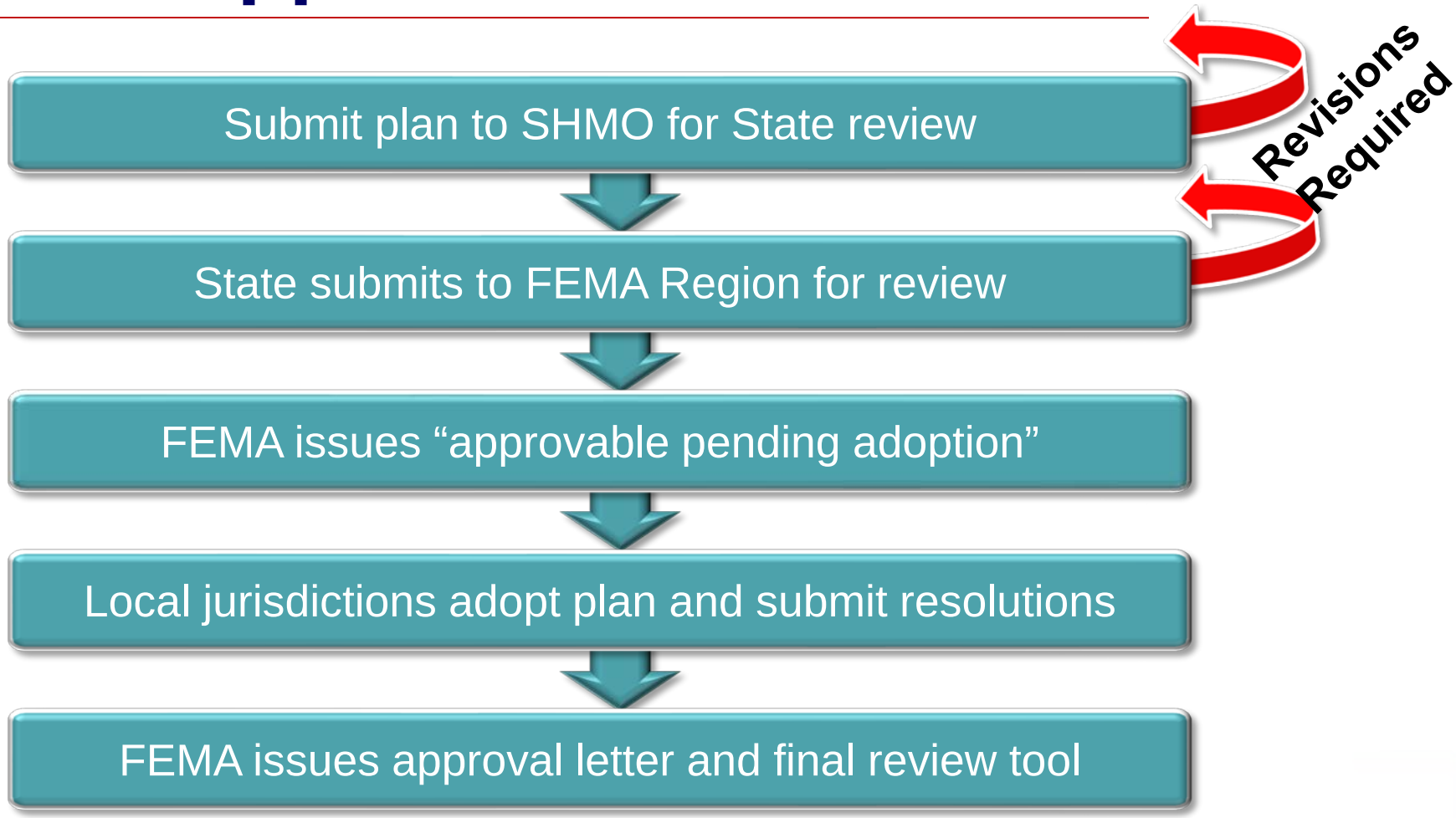
It's a tiny brook and then it's a nightmare, said Day Palmer, vice president of The Gowans-Knight Co. Every

See FLOOD, Page 7A

DARLENE DOUTY REPUBLICAN-AMERICAN

Day Palmer, vice president of Gowans-Knight Co. in Watertown, holds a photo taken when the business was flooded after tropical storm Lee in 2011. Cities and towns in Greater Waterbury are updating their plans to mitigate natural hazards.

Plan Approval Process



Plan Adoption

All jurisdictions seeking plan approval must adopt the plan and submit documentation.

Keep in Mind

- Communicate often with your State planners
- Keep local decisionmakers informed of the plan's progress
- Allow time for State and FEMA review and local adoption
- Celebrate your success!

Photo credit: Brigitte Ndikum-Nyada, FEMA Region I

Module 4:
Community Resilience in Action

Unit 4.1

Putting the Plan into Action

Planning Has Important Benefits

Engages the whole community in a process to:

- Builds partnerships
- Increases awareness of hazards and risks
- Communicates priorities
- Aligns with other community objectives

Common Challenges

- Competing priorities
- Apathy, loss of interest
- Lack of funding and resources
- Limited local capability or capacity
- Insufficient political will
- Disconnect with day-to-day operations

Discussion Question

- What are challenges to implementing mitigation actions in your community?

Unit 4.2

Recommendations for Success

Use Post-Disaster Window of Opportunity

- Take advantage of public interest and political will
- Funding opportunities to address problems
- Chance to re-invent community

Focus on Quality over Quantity

- Balance staff available and the time allotted to the project
- Plans can always be updated to include future projects
- Identify and focus on projects that target the highest risks and greatest community needs

Build on Existing Strengths

Look at existing programs and plans to match with mitigation actions and proposed projects.

Encourage Local Champion

- Must have sufficient authority
- Understands the vision and can clearly communicate it to others
- Ideally from an organization that will be spearheading the project

Develop Strong Messaging

- Stakeholders need to see personal value
- Community officials want to see the financial benefit
- Agency leads want to see the benefit to their goals and objectives
- Businesses want to see how the plan will protect their investments
- The public wants to see how it will protect their lives and property

G318 Local Mitigation Planning Workshop

Workshop Conclusion

Workshop Goal

Provide plan developers with the information necessary to prepare and implement a local hazard mitigation plan.

Workshop Objectives

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

- Define hazard mitigation and identify the benefits of mitigation planning
- Develop or update a local hazard mitigation plan
- Identify resources and guidance available for mitigation planning

Workshop Closing

- Final questions
- Suggestions
- Observations about the workshop
- Congratulations!