

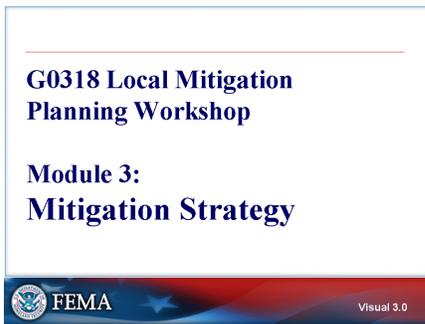
MODULE 3: MITIGATION STRATEGY

OBJECTIVES

Participants will understand how to develop a mitigation strategy.

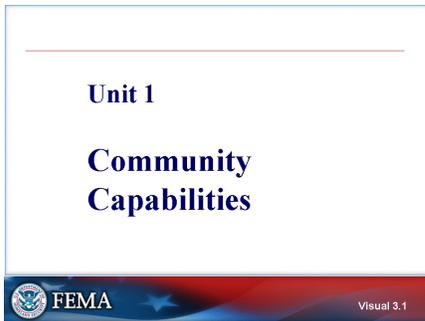
METHODOLOGY

This section includes lecture, discussion questions, and three tabletop activities, and provides an opportunity for participants to ask questions.



Visual 3.0

Module 3: Mitigation Strategy



Visual 3.1

Unit 1: Community Capabilities

At the conclusion of this unit, participants will be able to identify the capabilities their community currently has to accomplish hazard mitigation.

Community Capabilities

- 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?



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Visual 3.2

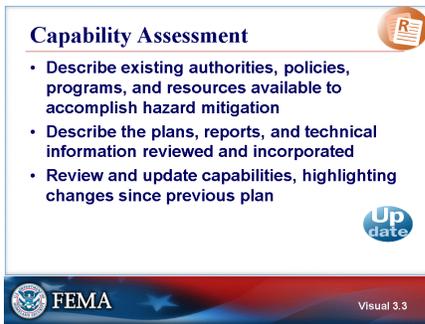
Visual 3.2

Community Capabilities

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

Each community has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources, for accomplishing mitigation.

The planning team should evaluate how existing capabilities contribute to vulnerability by reducing or exacerbating disaster impacts. Understanding what capabilities need to be changed or enhanced to reduce disaster losses allows the community to address those shortfalls in the mitigation strategy. Moreover, if the planning team understands community capabilities, they can select mitigation strategies that are feasible from a management perspective rather than strategies that require resources they don't have.



Visual 3.3

Capability Assessment

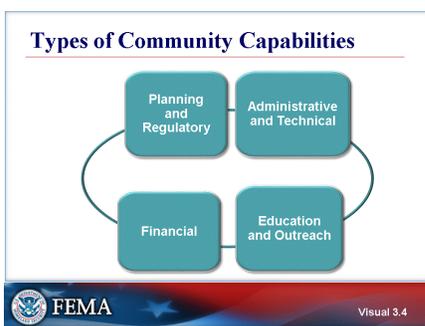
- Describe existing authorities, policies, programs, and resources available to accomplish hazard mitigation
- Describe the plans, reports, and technical information reviewed and incorporated
- Review and update capabilities, highlighting changes since previous plan

The plan must describe each jurisdiction's existing authorities, policies, programs, and resources that can help accomplish hazard mitigation.

The planning team will need to collect information on community capabilities. To review capabilities, begin by reviewing existing plans, reports, and information and interviewing local departments and agencies to gain a better understanding of relevant programs, regulations, resources, and practices. A recommended approach is to distribute a capabilities worksheet to planning team members to take back to their community or agency to complete.

For multi-jurisdictional plans, the capabilities of each participating jurisdiction must be individually reviewed and documented.

In a plan update, the planning team will ensure capabilities are documented sufficiently and highlight any capability changes from the previous plan.



Visual 3.4

Types of Community Capabilities

The primary types of capabilities to review in mitigation planning are:

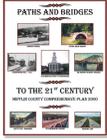
- Planning and Regulatory
- Administrative and Technical
- Financial
- Education and Outreach

The planning team may also identify additional types of capabilities relevant to mitigation planning.

Examples of Capabilities
 Plans, policies, and ordinances such as:

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

Planning and Regulatory



FEMA Visual 3.5

Visual 3.5

Examples of Capabilities
 Staff and skills for planning and mitigation such as:

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

Administrative and Technical



FEMA Visual 3.6

Visual 3.6

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

Administrative and technical capabilities refer to the staff, their skills, and tools the community has for mitigation planning and implementing specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively. Think about the types of personnel employed by each jurisdiction and the public and private sector resources that may be accessed to implement mitigation activities in your community, and their level of knowledge and technical expertise.

The planning team can identify resources available through other government entities, such as counties or special districts, which may be able to provide technical assistance to communities with limited resources.

Examples of Capabilities

Resources available to fund mitigation actions such as:

- Operating budgets
- Stormwater utility fees
- Development impact fees

Financial

FEMA

Visual 3.7

Visual 3.7

Examples of Capabilities – Financial

Resources available to fund mitigation actions such as:

- Operating budgets
- Stormwater utility fees
- Development impact fees

Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions. While some mitigation actions, such as building assessment or outreach efforts, require little to no costs other than staff time and existing operating budgets, other actions, such as the acquisition of floodprone properties, could require a substantial monetary commitment from local, State, and Federal funding sources.

Visual 3.8

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 (e.g., Tornado Awareness Month)
- Public Information Officer
- Community newsletter

Education and outreach capabilities refer to programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Examples include fire safety programs that fire departments deliver to students at local schools; participation in community programs, such as Firewise or Storm Ready; and activities conducted as part of hazard awareness campaigns, such as Tornado or Flood Awareness Month.

Some communities have their own public information or communications office to handle outreach initiatives.

National Flood Insurance Program

Jurisdictions that participate in the NFIP are required to conduct activities for mitigating floods; these activities fall into these types:

- Floodplain Mapping
- Floodplain Management
- Flood Insurance

Visual 3.9

The plan must describe each jurisdiction's participation in the NFIP, and for participating jurisdictions, the local floodplain administrator is often the primary source for this information. The description could include the following:

- Planning and Regulatory: Describe the community's adoption and enforcement of floodplain management regulations, including when the community joined the NFIP, when the Flood Insurance Rate Maps (FIRMs) became effective, and whether the floodplain ordinance meets or exceeds minimum requirements. Provide a summary of the community's compliance history, including when the most recent Community Assistance Visit (CAV) was completed, if there is a need for a CAV, and if there are any outstanding compliance issues.
- Administrative and Technical: Describe community staff dedicated to managing the NFIP, such as a dedicated floodplain administrator or staff for whom the NFIP is an auxiliary duty. Also, describe the tasks completed by staff in support of the NFIP, such as permit review and building inspections.
- Financial: Summarize the flood insurance coverage, number of policies, and claims history, including repetitive loss properties, in the community. Repetitive loss properties are NFIP-insured structures that have been repetitively damaged by flooding. Include the types and numbers of repetitive loss properties in the community. The planning team may need to contact the State NFIP Coordinator for this information.
- Education and Outreach: Describe any education or outreach activities that relate to the NFIP, such as flood-safe building practices or availability of 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?

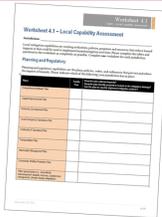


Visual 3.10

Visual 3.10

Capability Assessment Worksheet

- Attachment A: Local Mitigation Planning Handbook
- Modify worksheet as appropriate for:
 - The community
 - Use with a particular agency
 - Safe Growth Audit




Visual 3.11

Visual 3.11

FEMA's Community Rating System (CRS) program rewards communities that go beyond the minimum standards for floodplain management under the NFIP by providing flood insurance premium discounts for policy holders in the community. Developing a hazard mitigation plan is an activity that may be eligible for CRS credit. For more information, contact your State NFIP Coordinator.

Discussion Questions:

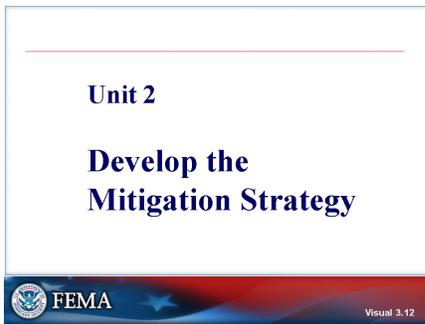
- How would you collect information on capabilities in your community?
- What community capabilities might be identified?
- What limits to community capabilities might be identified?

Capability Assessment Worksheet

- Attachment A: Local Mitigation Planning Handbook, Worksheet 4.1
- Modify worksheet as appropriate for:
 - The community
 - Use with a particular agency
- Safe Growth Audit

Refer to Handbook, Worksheet 4.1 Local Capability Assessment for an example of a way to gather information about community capabilities. To improve response rate, the worksheet could be modified for a particular community or when being distributed to a particular agency or department.

One way to assess the impact of planning and regulatory capabilities is to complete a safe growth audit. The purpose of the safe growth audit is to analyze the impacts of current policies, ordinances, and plans on community safety from hazard risks due to growth. Refer to Handbook, Worksheet 4.2 Safe Growth Audit for basic safe growth audit questions.



Visual 3.12



Visual 3.13

Unit 2: Develop the Mitigation Strategy

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

- Set mitigation goals
- Identify mitigation actions based on the community's risk assessment
- Evaluate and prioritize mitigation actions
- Prepare a plan for implementation

Mitigation Strategy

- Goals:
 - Long-term outcomes
- Actions:
 - Specific
 - Reduce risk
- Action Plan:
 - Priorities
 - Implementation

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process.

The mitigation strategy is made up of three main components: mitigation goals, mitigation actions, and an action plan for implementation. These provide the framework to identify, prioritize, and implement actions to reduce risk to hazards.

	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



Visual 3.14

Mitigation Goals and Actions

The community will define long-term mitigation goals and will then develop a variety of corresponding mitigation actions that together constitute a mitigation strategy.

Mitigation goals are general guidelines that explain what the community wants to achieve with the plan. They are usually broad, policy-type statements that are long-term, and represent visions for reducing or avoiding losses from the identified hazards.

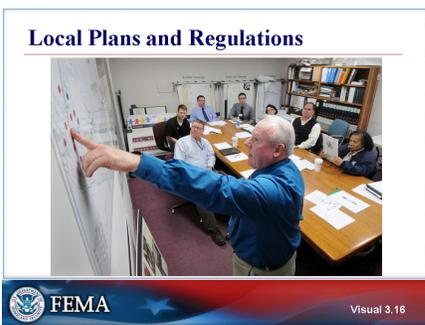
Mitigation actions are specific projects and activities that help achieve the goals. The implementation of actions helps achieve the plan’s mission and goals. The actions form the core of the plan and are a key outcome of the planning process.

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



Visual 3.15



Visual 3.16



Visual 3.17



Visual 3.18

Types of Mitigation Actions:

- Local Plans and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs

The next four visuals provide information about these four different types of mitigation actions.

Local Plans and Regulations

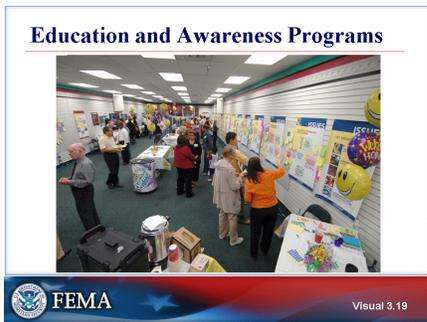
These include actions that pertain to government authorities, policies, or codes that influence the way land and buildings are developed and built. Actions may include modifying the local flood damage prevention ordinance to adopt higher standards for reducing flood damage than the minimum standards established by the NFIP.

Structure and Infrastructure Projects

These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. Many of these types of actions are projects eligible for funding through FEMA Hazard Mitigation Assistance programs.

Natural Systems Protection

These are actions that minimize damage and losses and also preserve or restore the functions of natural systems. Actions may include sediment and erosion control or wetlands restoration projects.



Visual 3.19



Visual 3.20

Education and Awareness Programs

These are actions to inform and educate the public, elected officials, and property owners about hazards and potential ways to mitigate them. Actions may be posting hazard maps on a Web site or mailing information about a hazard to owners of properties in a hazard-prone area.

Other Actions in the Mitigation Plan

- The plan must include mitigation actions
- However, the plan may also propose actions to enhance
 - Preparedness
 - Response
 - Recovery

Mitigation actions reduce or eliminate long-term risk and are different from actions taken to prepare for or respond to hazard events. Mitigation activities lessen or eliminate the need for preparedness or response resources in the future. When analyzing risks and identifying mitigation actions, the planning team may also identify emergency response or operational preparedness actions.

For some hazards, such as tornadoes, it may be necessary and practical to include preparedness actions in the mitigation plan. The mitigation plan may be the best place for your community to capture and justify the need for these actions.

Although it may be appropriate for the mitigation strategy to include non-mitigation actions, these will not take the place of or meet the requirements for mitigation actions, so it is important that your planning team understand the difference and distinguish between mitigation and other emergency management activities.

Discussion Questions

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



Visual 3.21

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



Visual 3.22

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



Visual 3.23

Discussion Questions:

- What are some examples of mitigation actions?
- What are some examples of activities related to preparedness and 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

The next several visuals will explain these four steps that are followed to develop a mitigation strategy.

1. Develop Mitigation Goals

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

The plan must include hazard mitigation goals that represent what the community seeks to achieve through mitigation plan implementation. The priority mitigation actions will be those that achieve the goals the planning team, elected officials, and public all agree on. Mitigation goals are required to be in the plan and must be consistent with the hazards identified in the risk assessment.

If you are updating a plan, the planning team should evaluate the previous goals and reaffirm or change them based on current conditions and priorities.



Visual 3.24

How to Develop Goals

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

Whether you are updating goals or developing new ones, here are some considerations for developing goals:

- Risk Assessment Findings – Review the findings of the risk assessment, especially the problem statements. Group the problem statements by themes, such as hazard, assets at risk, or location. Several problem statements or groups may lead to a single mitigation goal.
- Outreach Findings – Consider themes that stood out during planning team meetings and outreach activities.

For instance, the need for improved education and awareness about hazards may be a common theme.

- Community Goals – Review existing plans and other policy documents to ensure hazard mitigation goals are consistent with the goals of other community plans, such as the comprehensive plan, and other objectives established by the governing body.
- State Hazard Mitigation Goals – The State Hazard Mitigation Plan documents the State's goals for reducing risk and allocating resources, so it may be strategic to align your plan's goals with the State plan's 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

Visual 3.25

2. Identify Mitigation Actions

Each jurisdiction must:

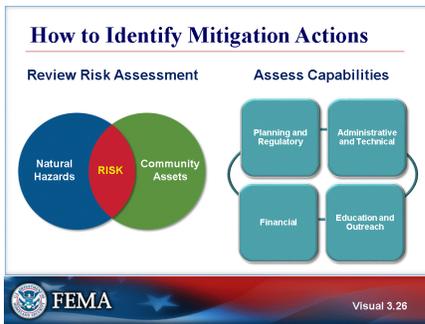
- Identify and analyze a comprehensive range of specific mitigation actions to reduce the impacts of hazards identified in the risk assessment
- Consider actions that reduce risk to:
 - Existing buildings and infrastructure
 - New development and redevelopment

Each participating jurisdiction must identify and analyze a comprehensive range of specific mitigation actions and projects to reduce the impacts of the hazards identified in the risk assessment. The emphasis is on the “impacts,” or vulnerabilities identified in the risk assessment, not on the hazards themselves. Some hazards may not have many impacts, or the impacts may already be mitigated.

Therefore, fewer mitigation actions will be identified than for a hazard causing more frequent or severe impacts.

A comprehensive range means that communities evaluate different types of mitigation actions for each hazard. For example, building retrofits, infrastructure protection, and changes in local ordinances represent a mix of structural and non-structural approaches. In addition, jurisdictions must consider actions that reduce risk to existing buildings and infrastructure, as well as those that limit risk to new development and redevelopment.

Communities must also consider actions that reduce risk to future development. The planning team should evaluate the effects of current growth plans and regulations (i.e., comprehensive plans, zoning and subdivisions ordinances, building codes, and capital improvement programs) on community safety and consider how these could be updated to reduce the community’s vulnerability.



Visual 3.26

How to Identify Mitigation Actions

- Review Risk Assessment
- Assess Capabilities

Start with the problem statements from the risk assessment. For each problem statement, consider different types of mitigation actions for addressing the problem. You may end up with multiple ideas that are categorized under one type (e.g., education and awareness or local plans and regulations) and no ideas under another type. However, the intent is to think broadly, or comprehensively, when identifying potential actions, and to consider future development.

Next, assess information on community capabilities. The mitigation strategy must be based on existing local authorities, policies, programs, and resources, and the ability to expand on and improve these existing tools.

Capabilities can be assessed to identify gaps that need to be addressed and strengths that can be enhanced through new mitigation actions.

For instance, are there gaps in design or enforcement of existing regulations that can be addressed through additional personnel or a change in procedure or policy? Could an existing education program be improved to cover the most significant hazards and better target non-English speakers? Are there additional studies, reports, or plans that are needed to understand risk?

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.

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Visual 3.27

Visual 3.27

Example Problem Statement

After using the risk assessment to develop mitigation actions, an example problem statement might be:

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



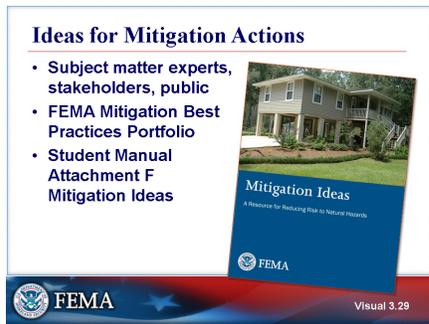
Visual 3.28

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

Examples of potential actions to address the problem, from each of the categories of mitigation types, are the following:

- **Local Planning and Regulations:** Adopt a wildfire mitigation ordinance to specify conditions for the use and development of wildfire hazard areas to mitigate risk to life and property.
- **Structure and Infrastructure Projects:** Retrofit the school and county maintenance shop with fire-resistant construction materials and create a defensible space around the perimeters of the buildings.
- **Natural Systems Protection:** Identify large tracts of vacant land in high-hazard areas for acquisition by the Department of Parks to develop trails and preserve open space.
- **Education and Awareness Programs:** Implement a program using Firewise Communities materials to educate property owners in the wildland-urban interface on actions they can take to reduce risk.



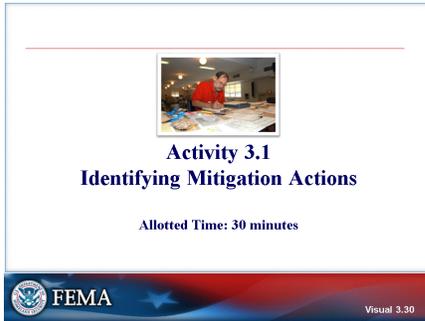
Visual 3.29

Ideas for Mitigation Actions

- Subject matter experts, stakeholders, public
- FEMA Mitigation Best Practices Portfolio
- Student Manual Attachment F: Mitigation Ideas

To find effective solutions, innovative ideas, and best practices for mitigating risks, consult the following resources:

- Ask subject matter experts – Experts on the planning team and among stakeholders can help evaluate actions that provide long-term solutions. For example, if the problem is repetitive flood damage in a specific location, but you are unsure if the flooding is caused by undersized culverts, inadequate storm drainage, or debris, you will have to ask an engineer to evaluate the flooding and recommend potential solutions.
- Collect ideas from stakeholders and the public – The outreach strategy provides opportunities for gathering ideas and input from the public. Surveys and questionnaires are effective tools for gathering information on alternative mitigation actions that would be acceptable or preferred by community members.
- Research existing guides and resources – There are many publications and Web-based resources for identifying mitigation actions. Some States have prepared technical guides to assist local communities.
- FEMA Mitigation Best Practices Portfolio – This resource found on our Web site provides mitigation success stories and case studies from communities across the country.
- Refer to Attachment F: Mitigation Ideas



Visual 3.30

Activity 3.1: Identifying Mitigation Actions

- Allotted Time: 30 minutes

Instructions

Consider the problem statements written for Activity 2.1 and identify at least three potential mitigation actions to address each problem. Write one mitigation action on each index card. If possible, identify mitigation actions that fall into different categories:

- Local Planning and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs

One person per group will read the identified mitigation actions to the class.

NFIP Compliance

- NFIP communities must describe continued compliance with the program
- Plan updates must meet the same requirements and document any change in floodplain management programs

Update

FEMA Visual 3.31

Visual 3.31

NFIP Compliance

- NFIP communities must describe continued compliance with the program
- Plan updates must meet the same requirements and document any change in floodplain management programs

For communities participating in the NFIP, the plan also must describe each jurisdiction's continued compliance with NFIP requirements to help demonstrate the flood mitigation activities that will be accomplished through the program. The mitigation plan must do more than state that the community will continue to comply with the NFIP.

Each jurisdiction must describe their floodplain management program and address how they will continue to comply with the NFIP requirements.

The plan does not need to have specific actions in the mitigation strategy for NFIP compliance, although areas of improvement, if identified, can be turned into future mitigation actions. These could include unmet needs in staff training, CAVs, CRS participation, or flood hazard mapping. Jurisdictions can also consider how to mitigate identified repetitive loss properties.

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

Costs Benefits

\$ Losses Avoided

FEMA Visual 3.32

Visual 3.32

3. Evaluate and Prioritize Actions

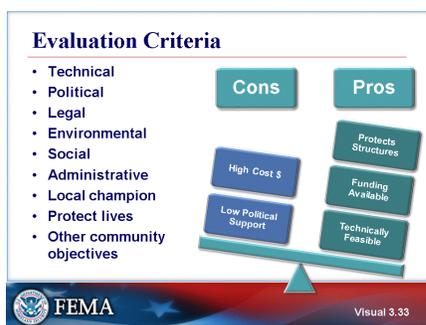
Describe how actions will be prioritized, including emphasis on benefit-cost review.

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

Not all of the identified actions will be included in the final action plan because of technical feasibility, political acceptance, lack of funding, and other constraints. The planning team will need to evaluate the mitigation actions to prioritize which ones are most suitable for the community to pursue implementation.

The one criterion that must be part of the evaluation and prioritization process is benefit-cost review. The planning team must consider the benefits that would result from a mitigation action versus the cost. This does not mean a full benefit-cost analysis, such as the FEMA Benefit-Cost Analysis (BCA) Toolkit, but a planning-level assessment of whether the costs are reasonable compared to the probable benefits. Cost estimates do not have to be exact but can be based on experience and judgment.

Benefits include losses avoided, such as the number and value of structures and infrastructure protected by the action and the population protected from injury and loss of life. Qualitative benefits, such as quality of life and natural and beneficial functions of ecosystems can also be included in the review.



Visual 3.33

Evaluation Criteria:

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

The planning team needs to agree upon the other criteria that will be used to analyze the mitigation actions. Here are some suggestions for criteria and examples of questions the planning team can use to evaluate each mitigation action alternative:

- Technical – Is the mitigation action overly complicated from an engineering perspective? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
- Political – Is there overall public support for the mitigation action? Is there the political will to support it?
- Legal – Does the community have the authority to implement the action?
- Environmental – What are the potential environmental impacts of the action? Will it comply with environmental regulations?
- Social – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
- Administrative – Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?
- Local Champion – Is there a strong advocate for the action or project among local departments and agencies that will support the action's implementation?
- Other Community Objectives – Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation?

Action Prioritization

- Considers plan goals and hazards addressed
- Weighs the pros and cons
- Is appropriate for community capabilities



FEMA Visual 3.34

Visual 3.34

Action Prioritization

- Considers plan goals and hazards addressed
- Weighs the pros and cons
- Is appropriate for community capabilities

Develop a process for the planning team.

The evaluation and prioritization process is intended to help the planning team weigh the pros and cons of different action alternatives to determine which ones will be the most effective at achieving the plan's goals and reducing impacts of hazards identified in the risk assessment.

However, the decisionmaking process is not necessarily straightforward; it is highly specific to each jurisdiction. You will need to develop a process for identifying and prioritizing mitigation actions that is appropriate for the size, number, and capabilities of the communities involved.

After careful evaluation, the planning team will have a list of actions that are acceptable and practical for addressing the problems identified in the risk assessment. The planning team can prioritize actions for implementation by assessing the importance of each item relative to the plan's goals and the hazards addressed.

Prioritization could be done by numerical ranking; high, medium, or low designation; chronologically by date of implementation; or other methods. Prioritization may change over time in response to changes in community characteristics and risks and to take advantage of available resources.

Activity 3.2 Prioritizing Mitigation Actions

- Allotted Time: 30 minutes

Instructions

The entire class will review approximately five actions using a limited set of criteria to identify top priority actions.

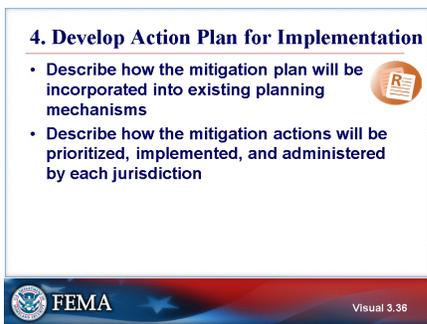


Activity 3.2
Prioritizing Mitigation Actions

Allotted Time: 35 minutes

FEMA Visual 3.35

Visual 3.35



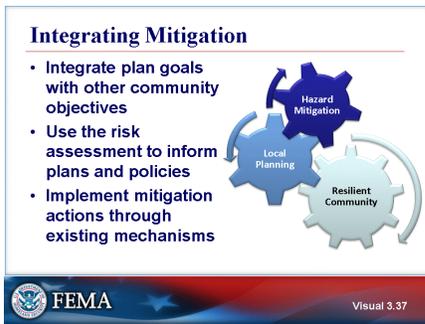
Visual 3.36

4. Develop Action Plan for Implementation

- Integrating Mitigation: Describe how the mitigation plan will be incorporated into existing planning mechanisms
- Action Implementation: Describe how the mitigation actions will be prioritized, implemented, and administered by each jurisdiction

The Action Plan describes how the mitigation actions will be implemented and defines how those actions will be prioritized, administered, and incorporated into existing planning mechanisms in the community.

In a multi-jurisdictional plan, each jurisdiction must have an action plan specific to that jurisdiction and its vulnerabilities.



Visual 3.37

Integrating Mitigation

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

Mitigation plans must describe the community's process to integrate the data, analysis, and mitigation goals and actions into other planning mechanisms. The plan also must identify the existing planning mechanisms where hazard mitigation information and actions may be incorporated.

Planning mechanisms means governance structures that are used to manage local land use development and community decisionmaking. The review of community capabilities described should provide this information.

Methods for integrating the mitigation plan with other planning mechanisms include:

- Integrate plan goals with other community objectives
 - The mission and goals for risk reduction may be incorporated into the objectives and policies of other plans. Goals and objectives can be included in the comprehensive plan and implemented through zoning and building codes, capital improvement programs, and permitting processes.
 - Examples of complementary goals and objectives are:
 - “Protect life and property in high hazard areas” and “Limit densities of new development”
 - “Limit the extension of public infrastructure in high hazard areas” and “Reduce sprawl”
 - “Reduce the vulnerability of future development in high hazard areas” and “Update development regulations”

- Use the risk assessment to inform plans and policies
 - The risk assessment provides data, analysis, and maps that can be integrated into other plans to inform policies and decisionmaking. For instance, the risk assessment can form the basis for other emergency management program activities and plans, including the emergency operations plan, evacuations plans, and post-disaster recovery plans. Incorporation of hazard information and mapping into land use plans, zoning and subdivision codes, and the development review process can guide growth and redevelopment away from high-risk locations. This information can also be used to design and site future public facilities to minimize exposure to hazards.
- Implement mitigation actions through existing mechanisms
 - Where possible, the community should implement the identified mitigation actions through existing plans and policies that already have support from the community and policy makers. For instance, a Community Wildfire Protection Plan, as defined by the Healthy Forest Restoration Act, identifies a community's priorities for wildfire fuel reduction projects. A capital improvements program outlines a jurisdiction's spending plan for capital projects that support existing and future development, such as roads, water, and sewer systems, usually over a 5-year period. Mitigation projects that could be included in the capital improvements plan include strengthening at-risk critical facilities or acquiring open space in identified hazard areas. Other implementation tools for mitigation actions could include staff work plans, permitting procedures, job descriptions, and training.

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



Visual 3.38

Action Implementation

The action plan also identifies how specific mitigation actions will be implemented, including who is responsible for which actions, what funding mechanisms and other resources are available or will be pursued, when the actions will be completed, and how they are prioritized. The capability assessment can be helpful in reviewing which agencies are responsible for certain functions in the community and the financial resources available.

Assign responsible agency. Each jurisdiction must determine which department or agency is most appropriate to lead each action. If coordinating with other agencies will be necessary, this is a good time for them to provide input on the steps and timeframes necessary to carry out the actions.

Identify potential resources. Resources include funding, technical assistance, and materials. Estimating the cost of an action will help the planning team target the most appropriate resources. Sources of local funding may include the general operating budget, capital improvement budgets, staff time, impact fees, special assessment districts, and more. Your State Hazard Mitigation Officer and the FEMA mitigation planning Web page can help identify potential State and Federal resources. The planning team should also consider opportunities for private sector funding and partnerships, as well as resources that may be provided by academic institutions.

Estimate timeframe. Funding cycles will likely affect when you can begin implementing an action. The timeframe can detail when the action will be started, interim steps, and when it should be fully implemented.

Other implementation items that you may consider describing in the action plan are goals addressed, partner agencies, steps for implementation, and estimated budget. An action implementation worksheet can be a good approach for formatting the information collected for each action and its implementation. Attachment G: Action Implementation Example provides two examples of completed worksheets.

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

Visual 3.39

Communicating the Action Plan

You will need to consider how to present the final action plan in a format that can be easily used and referenced by community members and officials. This is the primary tool that will be used to obtain funding, assign priorities, guide the decisionmaking process, and track mitigation progress and accomplishments in future plan updates.

A matrix, such as the example, can be a good format for summarizing information on the recommended actions. You also may consider including this information along with the mission and goals in the front of the plan in the form of an executive summary, so users can quickly understand how the community plans to reduce risk to hazards and strengthen disaster resiliency.

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



Visual 3.40

Steps for Developing a Mitigation Strategy

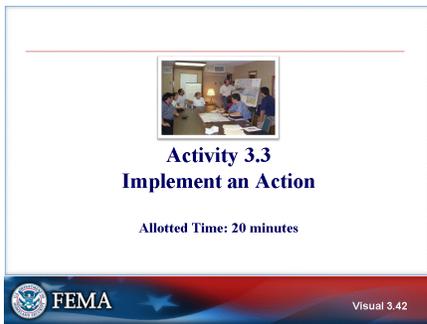
To review, the steps for developing a mitigation strategy are:

- Develop mitigation goals
- Identify a comprehensive range of mitigation actions for each hazard
 - Review risk assessment
 - Assess capabilities
- Evaluate and prioritize actions
- Develop an action plan for implementation
 - Integrate with existing plans and procedures
 - Describe implementation of actions



Visual 3.41

Are there any questions?



Visual 3.42

Activity 3.3: Implement an Action

- Allotted Time: 20 minutes

Refer to Attachment G: Action Implementation Example for this activity.

Instructions

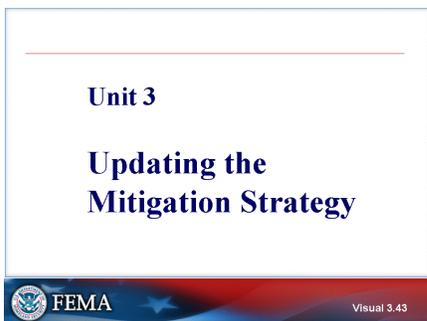
For the action assigned to your small group, discuss how to develop an implementation strategy by considering:

- What administrative, regulatory, or other planning mechanisms are already in place for implementing this action?
- Who will be responsible for implementation?
- Who else needs to be involved to ensure success?
- How will the action be financed?
- When will the action be completed?

Identify potential problems that a community will encounter in answering these questions.

Unit 3: Updating the Mitigation Strategy

At the conclusion of this unit, participants will be able to update the mitigation strategy.



Visual 3.43

Update the Mitigation Strategy

- Evaluate progress in plan implementation
- Describe changes in priorities

FEMA Visual 3.44

Visual 3.44

Update the Mitigation Strategy

- Evaluate progress in plan implementation
- Describe changes in priorities

To continue to be an effective representation of the jurisdiction's overall strategy for reducing risk to natural hazards, the plan must reflect current conditions and past achievements. The plan update is an opportunity for each jurisdiction to assess its previous goals and proposed actions, to evaluate progress made in implementing actions, and to adjust proposed actions to address current realities. The mitigation strategy should be revised following a disaster to determine if the recommended actions are still appropriate given the impacts of the event.

Evaluate Progress in Implementation

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

Completed: Did action have the intended results? What factors contributed to success?

Not Completed: Still relevant - include in updated mitigation strategy? What were barriers to implementation?

FEMA Visual 3.45

Visual 3.45

Evaluate Progress in Implementation

- How was the plan integrated into other planning mechanisms?
- What is the status of each action?
 - For completed actions ask:
 - Did the action have the intended results?
 - What factors contributed to success?
 - For actions not completed ask:
 - Is the action still relevant? Will it be part of the updated mitigation strategy?
 - What were the barriers to implementation?

Integration of Hazard Mitigation

The updated plan must explain how the jurisdiction(s) incorporated the previous mitigation plan, when appropriate, into other planning mechanisms over the last 5 years as a demonstration of progress in local mitigation efforts. The updated plan must continue to describe how the current mitigation strategy, including the goals and hazard mitigation actions, will be incorporated into other planning mechanisms over the next 5 years.

Completion of Mitigation Actions

The plan also must describe the status of the mitigation actions identified in the previous plan by describing those that have been completed or not completed. For actions that have not been completed, the plan must either describe whether the action is no longer relevant or indicate whether it is included as part of the updated action plan.

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



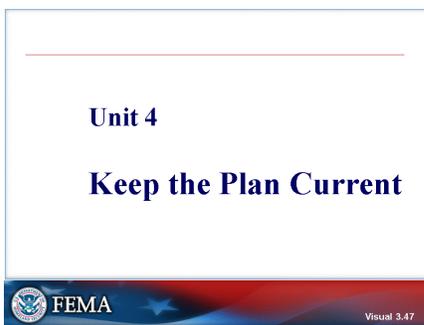
Visual 3.46

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
 - New partners

Addressing changes in priorities allows your community to redirect actions to reflect current conditions, including financial and political realities, or changes in conditions or priorities due to disaster events. In addition, now that the community has implemented some actions, you will be able to apply what you learned about what works and what does not. New actions can be identified based on the updated risk assessment and capability assessment and prioritized in combination with actions that will be carried over or revised from the previous plan. Factors that may influence changes in priorities include:

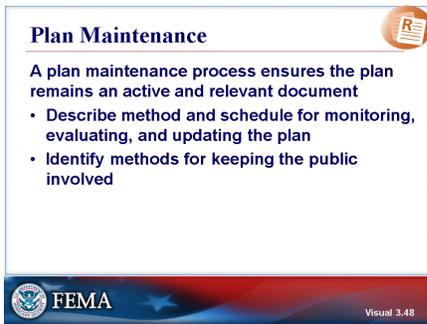
- Altered conditions due to disaster events and recovery priorities
- Changing local resources, community needs, and capabilities
- New State or Federal policies and funding resources
- New hazard impacts identified in the updated risk assessment
- Changes in development patterns that could influence the effects of hazards
- New partners that have come to the table



Visual 3.47

Unit 4: Keep the Plan Current

At the conclusion of this unit, participants will be able to document the planning process, including how the plan will be implemented and how progress will be monitored over time.



Visual 3.48

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

The planning team's responsibilities do not stop after the plan is adopted; they continue through implementation. To ensure that the plan, and specifically the action plan, remains current and relevant, the planning team will need to establish procedures and coordinate maintenance of the plan.

To do this, the plan must describe the method and schedule for keeping the plan current by monitoring, evaluating, and updating the plan within a 5-year cycle. The plan must explain how each community will keep the public engaged in the process as actions are implemented.

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	<ul style="list-style-type: none"> Annually After a disaster event
How	Progress report forms from responsible agencies	<ul style="list-style-type: none"> Evaluate process and implementation Identify lessons learned Report to elected officials



Visual 3.49

Plan Monitoring and Evaluation

- Monitoring: Tracking the implementation of mitigation actions
- Evaluating: Assessing the effectiveness of the plan at achieving its goals

Monitoring may include a system for tracking the status of the identified hazard mitigation actions. The lead office coordinates with other agencies responsible for implementing mitigation actions identified in the plan to maximize the opportunities to implement actions, track progress on actions that have been initiated, identify and address any barriers to implementation, and take advantage of grant opportunities. A method and schedule for regular monitoring can include reports or other deliverables and expectations for meeting attendance. Monitoring becomes part of the regular, administrative function of the offices or positions to which it is assigned.

Evaluation involves a review of the stated vulnerabilities, capabilities, and mitigation goals. Plan evaluation may not happen as frequently as plan monitoring, but it is an important step to ensure that the plan continues to serve a purpose in the community. Many communities commit to, at a minimum, annually reconvening the planning team to review the mitigation plan or preparing a report for their governing bodies that demonstrates progress or changes to date. This information also serves as the basis of the next plan update.

The planning team should also establish tasks to complete following a hazard event. For example, the method for monitoring and evaluation may include recording lessons learned from a particular event, which can be used to improve the risk assessment in the plan. Additionally, mitigation priorities can change after a disaster, and additional funding sources might become available.

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	<ul style="list-style-type: none"> • Annually • After a disaster event
How	Progress report forms from responsible agencies	<ul style="list-style-type: none"> • 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



Visual 3.50

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

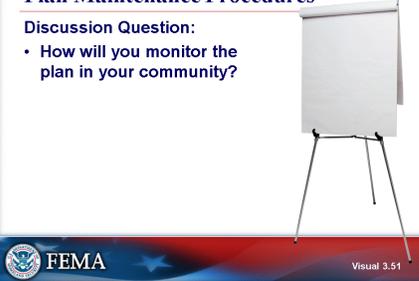
The plan must identify how, when, and by whom the plan will be updated. Updating means reviewing and revising the plan at least once every 5 years, though there are tasks that can be accomplished more frequently to make the 5-year update easier. Documentation may require only a simple explanation of the update procedures expected during the planning cycle. It may be appropriate to include a schedule of activities that allows sufficient time for a complete planning process before the plan expires.

The planning team can also establish procedures for updating the plan following a disaster event. Your community's vulnerabilities and mitigation priorities often change following a disaster.

Plan Maintenance Procedures

Discussion Question:

- How will you monitor the plan in your community?

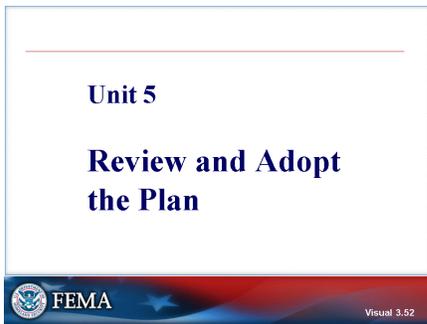


Visual 3.51

Plan Maintenance Procedures

Discussion Question:

- How will you monitor the plan in your community?



Visual 3.52



Visual 3.53

Unit 5: Review and Adopt the Plan

At the conclusion of this unit, participants will be able to understand the steps required for FEMA approval and community adoption once the plan is complete.

Review the 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

When the plan has reached a final draft stage, the planning team may complete the FEMA Local Mitigation Plan Review Tool's Regulation Checklist found in the Local Mitigation Plan Review Tool. This internal review can confirm the plan meets Federal requirements prior to submitting the plan to the State.

Prior to submittal, the public should be given an opportunity to review and comment on the final draft of the mitigation plan.

Whether the plan is introduced on the agenda of a public meeting, posted online, or made available through any other mechanism, make sure the public is given enough time to comment.

Refer to Attachment B: Local Mitigation Plan Review Tool



Visual 3.54

State and FEMA Plan Approval

Submit the Plan

Once the planning team is confident the plan meets the required elements and includes all supporting documentation, forward the plan to the State Hazard Mitigation Officer (SHMO). The SHMO will review the plan and respond with any required revisions. Once the State is satisfied that the plan meets the requirements, the SHMO will forward the plan to your FEMA Regional office for approval. FEMA will conduct its review within 45 days, if possible, and provide a completed Local Mitigation Plan Review Tool to the State. The FEMA Regional office and the SHMO may contact you to discuss additional revisions to the plan to ensure that it meets the Federal mitigation planning regulations.

Approvable Pending Adoption

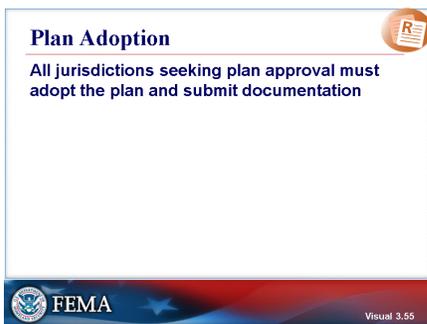
Once FEMA determines the plan is in compliance with the regulations, FEMA will notify the SHMO that the plan is "approvable pending adoption" (APA). APA is a recommended and potentially time-saving process by which the community submits the final draft of the mitigation plan to the State and FEMA for review prior to formal adoption by the elected officials or other authorized governing body. If FEMA determines the plan is not approvable, and revisions are needed, the community will be able to make revisions before taking the plan through adoption, thereby avoiding unnecessary delays in plan approval.

Plan Adoption

The final plan must include documentation that it has been formally adopted by the governing body of the jurisdiction(s) requesting approval. The governing bodies are typically the town board, city council, or county commission. Adoption by the local governing body demonstrates the community's commitment to implementing the mitigation strategy and authorizes responsible agencies to execute their responsibilities.

Plan Approval

Upon receiving the record of adoption from the State, FEMA will issue an official approval letter stating which jurisdictions have adopted the plan and the expiration date. Attached to the approval letter will be a FEMA- completed Local Mitigation Plan Review Tool that describes the strengths of the plan, recommends how the plan could be improved in future plan updates, and suggests how to implement the mitigation strategy.



Visual 3.55



Visual 3.56

Plan Adoption

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

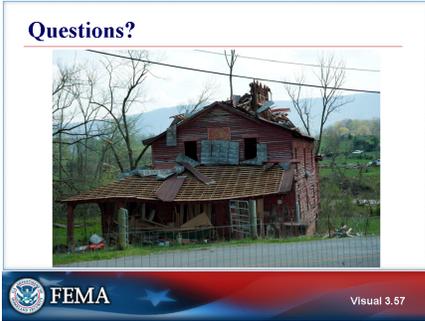
Adoption must take place within 1 year of receipt of FEMA's APA letter. At least one of the participating jurisdictions must adopt within 1 year from the APA notice; however, it is recommended that jurisdictions coordinate the adoption process as soon as the plan has received APA status to ensure that all participants are covered by a plan for the full 5 years.

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!

Here are a few additional considerations related to the plan review and approval process:

- Communicate with your SHMO early and often when approaching submittal. Discuss with your SHMO whether it would be appropriate to share drafts of the plan or portions of the plan prior to a formal review, to ensure the plan is complete. Also, you will want to ensure your plan meets any additional State requirements.
- The relationships you have already established with stakeholders, elected officials, and government agencies will be important assets during the adoption process. To facilitate adoption of the plan, periodically brief community decisionmakers throughout the planning process on the progress of the planning team's efforts.
- Build time into your planning process to meet State and FEMA procedures for review. Your local governing body may meet only once a month and may require agenda items to be submitted well ahead of time.
- Celebrate and publicize the adoption and approval of the plan:
 - Post a notice on the community's Web site
 - Issue a press release on plan adoption and approval to local media outlets
 - Distribute notices of approval to stakeholders
 - Announce the first project or projects to be initiated
 - Propose a congratulatory resolution or achievement award for the planning team (or specific individuals) for their successful work and commitment to making the community safer



Visual 3.57

Are there any questions?

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