

INTRODUCTION TO MITIGATION BUILDING A MITIGATION PROGRAM

INTRODUCTION

The first three units of this course addressed components of community mitigation that have multiple steps or parts and required a substantial amount of background information. This final unit will illustrate how those steps fit into a process that can be used to develop a pre-disaster mitigation plan and a community mitigation program.

COMMUNITY INVOLVEMENT

The primary tools needed to build a mitigation program are community commitment, a community planning team, and public input. Public input and information from community officials and groups are important to gathering data, identifying problems, and deciding on solutions.

Community Commitment. Community leaders need to acknowledge that there are hazards and that they can and must be addressed. In addition to this leadership, staff time and resources are needed to develop the plan, implement activities, and maintain community interest in mitigation. Resources may include the use of phones and office equipment, provision for local travel, and printing and photocopying expenses. The availability of local staff and/or volunteers to spend time planning and carrying out activities that will reduce hazards and prevent losses depends on the level of community commitment.

Community Planning Team. Although a strong community leader is important to the mitigation effort, a community planning team is essential. A community planning team:

- Ensures better solutions, because no one person in the community has all the answers.
- Gains community acceptance for the mitigation plan, since many viewpoints are represented.

Unit 4 Objectives

1. Give a rationale for local pre-disaster mitigation planning and actions.
2. Describe the overall process for developing a mitigation plan.
3. Develop an outline of steps to be taken in order to begin or enhance a local mitigation program.

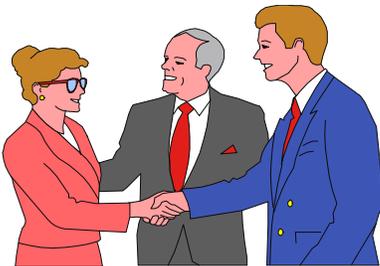


- Ensures important information and assistance are not overlooked.

Community planning teams are usually composed of individuals with a variety of skills and areas of expertise. Recommended members for the community planning team include the following:

- A member of the City Council or Board of Selectmen.
- The community planner or a planning board member.
- A member of the Conservation Commission.
- A building official.
- The community engineer.
- The community health official.
- Public works personnel.
- The emergency program manager.
- One or more hazard area residents.
- One or more representatives of the business community.
- Representatives of adjoining communities (if problems and/or solutions are likely to extend outside community boundaries).

There are many ways to recruit these potential team members and encourage team participation. There may be planning groups already established to address hazard related issues; for example, a Local Emergency Planning Committee (LEPC) that addresses hazardous materials issues, or a Community Rating System (CRS) group that plans activities to reduce flood losses. Such groups may be a good core for a mitigation planning team. In addition, the following methods have been successful.



- Encourage the City or Town Manager, or Chief Elected Official, to appoint team members.
- Publicize the fact that a plan will be developed to solve hazard problems and ask for volunteers.
- Emphasize the importance of a diverse team in mitigation planning.
- Inform people of what the time commitment may be in terms of duration and frequency.

- Give people the option of providing input in other ways, besides being a team member.
- Provide specific tasks to each person on the team.
- Maintain communications with each team member.

Public Input. Throughout the planning process, public input will be required to ensure workable solutions to hazard problems. An individual or small group could perform the data collection and analysis. It is important to interview local officials and residents to gather historical information on the various hazards that are likely to occur in the community. The input of the wider community is also needed to ensure that solutions, proposed actions, ongoing implementation of the plan, and monitoring and documenting of successes are accomplished.

There are several ways the community planning team can ensure that public input is obtained. These methods include:

- **Hosting Public Input Workshops**, which can take the form of a facilitated meeting involving a large group of community representatives, business representatives, and residents. In this type of forum, brainstorming brings problems and issues to the table, as well as ideas for solutions. This comprehensive approach allows the public to help identify issues and ways to solve problems.
- **Developing and distributing questionnaires** to hazard area residents in utility bills, or posted in the local weekly newspaper. For example, distribute a questionnaire to gauge the level of interest in retrofitting and floodproofing projects.
- **Disseminating information and opportunities for feedback** through local access cable television. Meetings can be broadcast to the community, and can include video footage of historical or recent disaster damages, as well as phone numbers of team members who will accept comments and suggestions.

DEVELOPING A PRE-DISASTER MITIGATION PLAN

Pre-disaster planning is the key element in building an effective mitigation program. Mitigation plans emphasize actions to be taken *before* a disaster occurs to reduce or prevent future damages.

Preparing a plan to reduce the impact of a disaster *before* it happens provides many benefits to your community.

Benefits of Planning Before a Disaster

- Meet community needs.
- Achieve multiple objectives.
- Promote public participation.
- Increase funding eligibility.
- Guide post-disaster recovery.

- **Meets Community Needs.** Pre-disaster mitigation planning will help identify the problems and solutions that exist in the community. Every community is different in terms of its economics, size, geography, governance, demography, land uses, and hazards. Developed in conjunction with the jurisdiction's comprehensive plan, solutions developed for the mitigation plan will be tailored to interface with other community goals. Therefore each community's mitigation plan will vary to some degree.
- **Achieves Multiple Objectives.** Mitigation plans can be tailored to any type of hazard. Developing a mitigation plan helps the community find the most appropriate solutions, address multiple problems with a comprehensive solution, and maintain or improve local environmental and economic integrity.
- **Promotes Public Participation.** Prior to a disaster the mitigation planning process promotes public input and coordination among stakeholders to help generate ideas for solutions and ensure recognition and local ownership of problems. Participation in planning groups provides individuals concerned about the potential effects of disasters many opportunities to help solve problems and later to implement the solutions.
- **May Increase Funding Eligibility.** Pre-disaster mitigation planning may increase a community's chances of receiving funds from a variety of sources. (As discussed in Unit 3, FEMA requires State and local governments to undertake mitigation planning as a condition of receiving Federal disaster assistance.) Mitigation planning is also an eligibility requirement for most FEMA mitigation funding programs, such as the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), and the Community Rating System (CRS). These mitigation plans must include an evaluation of the hazards in the planning areas.

- ***Guides Post-Disaster Recovery.*** Pre-disaster mitigation plans are useful in preparing the community to deal with post-disaster situations by identifying actions that should be done immediately following a hazard event. The plan can guide the community to further reduce future damages by helping the community to develop policies that promote a rapid and efficient recovery, and capitalize on post-disaster opportunities for safety improvements. Having a plan that includes post-disaster actions will ensure that opportunities for future mitigation are not overlooked in the urgency to rebuild. It will help to diffuse what otherwise may be a hostile, stressful, and unproductive environment.

DEVELOPING A LOCAL MITIGATION PLAN

The overall planning approach described in this unit has been successfully implemented in many communities. This specific methodology has been adapted from *Flood Mitigation Planning: A Community Guide*, prepared by the Massachusetts Department of Environmental Management with assistance from the Federal Emergency Management Agency and the Natural Resources Conservation Service.

The planning team should follow 10 basic steps to prepare an effective mitigation plan for the community.

Step 1 – Map the Hazards

Step 2 – Determine the Potential Damage

Step 3 – Identify What is Already Being Done

Step 4 – Identify What is Not Already Being Done

Step 5 – Brainstorm Alternatives

Step 6 – Evaluate Actions

Step 7 – Coordinate with Others

Step 8 – Select Actions

Step 9 – Develop a Strategy

Step 10 – Adopt and Monitor the Plan

STEP 1: MAP THE HAZARDS

Where are the hazards? Unit 1 described the Hazard Analysis process and a method for developing Hazard Profiles. Those profiles identify where the hazards are likely to strike. That data should be used for developing a base map depicting the hazard areas in relation to structures, infrastructure and resources. This map will:

- Depict the hazard to viewers
- Provide a comprehensive view of the community's hazard areas
- Help focus efforts on specific areas

The following checklist will help generate a community base map that depicts hazard areas.

Step 1 Checklist

- ✓ Obtain and review existing hazard maps and information from the Hazard Analysis. For resources of information, see the *Appendix R: Additional Mitigation Resources*.
- ✓ Contact the State Geographical Information System (GIS) manager to determine if existing digital mapping is available.
- ✓ Contact the appropriate FEMA Regional Office to obtain information about recent map amendments or revisions.
- ✓ Contact appropriate State offices/departments that may have maps concerning hazards (e.g., Department of Environmental Management, Emergency Management, Geological Survey, State Climatologist, State Forestry Department)
- ✓ Visit the community planning office to obtain local natural resource, open space, and master plans, and review for hazard information.
- ✓ Using a town assessor's map as a base, highlight (draw lines) to depict hazard areas. Use different colors or shading to depict the various hazard areas.
- ✓ Include a legend defining the map's key hazard areas.

STEP 2: DETERMINE THE POTENTIAL DAMAGE

After having mapped the hazard areas in Step 1 (Map the Hazards), refer to the risk determination made during the Hazard Analysis process. Step 2 involves estimating the number of structures, infrastructure and resources in the community that are in the hazard areas, and the estimated hazard-related losses in the community. This step helps narrow the focus of where actions should be taken to reduce hazard-related damages.

This information should be added to the base map created in Step 1 (Map the Hazards) to give a graphic depiction of what is at risk in the community.

Step 2 Checklist

- ✓ Estimate the types, numbers and values of structures in the hazard area, using community assessor's information, land use or zoning maps, and the hazard overlay developed in Step 1 (Map the Hazards).
- ✓ Contact the FEMA Regional Office to obtain information about repetitive flood loss properties.
- ✓ Inventory critical facilities – are any of the following in the hazard area?
 - emergency operations center / city or town offices
 - water and wastewater treatment plants / sewage pumping stations / public works garages
 - power substations
 - police or fire stations
 - schools / hospitals / daycare facilities
 - nursing homes / elderly housing / shelters
 - correctional facilities
 - hazardous materials facilities / power plants
 - access roads to the facilities listed above
 - evacuation routes.
- ✓ Mark on the base map the general areas where there are residential structures in the hazard area.
- ✓ Mark on the base map the general areas where there are other types of structures in the hazard area, including industrial, retail, and office buildings.
- ✓ If applicable, highlight on the base map the areas that include repetitive flood loss structures.
- ✓ Mark all identified critical facilities in the hazard area on the map.

STEP 3: IDENTIFY WHAT IS ALREADY BEING DONE

What is the community already doing that can protect against future hazard-related damages? In Step 1 (Map the Hazards) and Step 2 (Determine the Potential Damage), the community planning team described the extent of the hazard problem for the community by identifying the hazard areas and determining what is at risk.

In Step 3, create a summary of what is already being done locally to mitigate hazards by listing the items already in place that work toward solving hazard problems or preventing future losses in the community.

Consider the following loss protection systems at the Federal and State levels which may affect the community.

- The community may have a hazard *warning system* in place, and should have an *emergency operations plan*.
- The community's Emergency Operations Center should have *evacuation plans and systems* in place. For communities near a nuclear power plant, evacuation plans are required.
- There may be Federal and State regulations mandating *land use restrictions* in certain areas that may help reduce hazard risk. If the community has open land owned by the State or Federal government, examine what restrictions are placed on its development. For example, a State Wetlands Protection Act regulates the development of all lands identified as significant to the protection of resources identified in the Act.
- If there are areas in the community not served by a public sewer system, state *septic system* regulations may influence development and may be a consideration for mitigation alternatives that include rebuilding and elevation of structures.
- Determine the status of programs, described in Unit 3, that may be already underway in the community. These might include: economic/community development programs to help homes using Community Development Block Grant funds; the Hazard Mitigation Grant Program; the National Flood Insurance Program; the Community Rating System; or a Coastal Barrier Resources Act program.

Additional protection systems the community may also have are listed below.

Prevention/ Limitation of Development in Hazard Areas	Plans That Should Take Hazards Into Account	Physical Protection From Known Hazards
Local zoning (e.g., floodplain) State/Federal ownership of land that preserves hazard areas Local or non-profit ownership of conservation land, including parks, playgrounds, buffer areas, bicycle paths, wildlife sanctuaries, etc. Natural limitations to development (slopes, soils, high water tables, etc.) State/local development requirements (e.g., Wetlands Protection Act, NFIP, State Building Code)	Natural resources plans Community Rating System (CRS) participation/plans Open space/recreation plans Emergency/flood evacuation plans Community comprehensive plans Economic development plans Capital improvements plans Redevelopment plans Standards for new construction Standards for infrastructure at risk	Elevated structures Anchored structures Seismically- retrofitted structures Flood-proofed structures Acquired or relocated structures Seawalls Levees Berms Dams Tide gates Reforestation Beach nourishment Soil stabilization Tree thinning

The Step 3 Checklist will help you develop a list of what the community is already doing to protect hazard areas. To help you record this information you will begin using the Existing Protection Matrix. Make several copies of the blank matrix page before you begin.

For each of the items, enter in Column 1 of the Existing Protection Matrix each action, policy, or program that provides damage protection for the particular hazard. Enter a brief description of each measure in Column 2. In Step 4 (Identify What Is Not Being Done), you will complete the matrix by evaluating these measures.

Existing Protection Matrix

<i>Column 1</i> Type of Existing Protection	<i>Column 2</i> Description	<i>Column 3</i> Area Covered	<i>Column 4</i> Effectiveness and/or Enforcement	<i>Column 5</i> Improvements or Changes Needed
<i>Example:</i> Floodplain District Zoning Bylaw	Requires elevation of new or improved structures in floodplain; prohibits hazardous materials in floodplain	100-year floodplain as shown on Flood Insurance Rate Map dated August 16, 1989	Enforced by zoning official; variances rarely granted; additional flood areas not included in district	Include newly identified flood areas in zoning district; encourage lower development density in the district

Step 3 Checklist

- ✓ Check local bylaws, ordinances, open space and master plans for existing protection of hazard areas. For example, the community's local zoning may incorporate restrictions such as prohibition on certain types of uses in the high hazard areas, minimum lot sizes, setback requirements, subdivision regulations, etc.
- ✓ Find out if the community participates in any plans that take hazards into account (e.g., Community Rating System). If so, there may already be a plan in place that can be expanded to a mitigation plan.
- ✓ Determine if cultural and historic resources are protected. Are there plans for protection of local libraries and archives, or for community records?
- ✓ Determine if the community has a disaster warning system, emergency operations system, and/or evacuation plan.
- ✓ Determine where any existing hazard control structures are in the community, and approximately how many structures (including critical facilities) they protect. Contact, for example, the local Department of Public Works, U.S. Army Corps of Engineers, or Natural Resources Conservation Service.
- ✓ Check for existing hazard maps. For example, floodplain maps may already exist for the community.
- ✓ Check with the community Building Official to determine if local property owners have demolished, relocated or retrofitted structures in the hazard areas.

STEP 4: IDENTIFY WHAT IS NOT BEING DONE

Where are the gaps in hazard protection in the community? Step 3 (Identify What Is Already Being Done) determined what actions, policies, and programs were already in place to help reduce future hazard losses. In Step 4 evaluate the effectiveness of these existing measures, identify where they can be improved, and determine the goals to reduce the risk of hazard damages in vulnerable areas.

This evaluation takes into account the geographic extent of the hazard, and where the gaps may exist in the community's protection. It also examines the effectiveness of the existing protection. If existing protection measures are adequate, the plan will be an agreement to continue to enforce existing regulations and maintain existing systems. If there are gaps in hazard protection, the plan should address what actions will be taken to improve hazard damage reduction.

Geographic Aspect. Geographically, where is the community unprotected? Are there risk areas visible in the maps generated in Steps 1 and 2 that are not covered by an existing protection system (regulatory and/or physical) as identified in Step 3? For example, a zoning bylaw may apply to mapped floodplain areas, but not to areas that are not mapped as floodplain and that you have determined are at risk from flooding.

Evaluating geographic areas helps focus efforts on the most vulnerable locations in the community. If the community's hazard problems are affected by the actions of another community, or if the community's actions can impact a nearby area, you may need to take a wider approach and coordinate planning with these neighboring communities. If the hazard problems are limited to a specific area within the community, the plan could be tailored to that area only.

Policy/Program Effectiveness. Consider the level of effectiveness of existing policies or programs listed on Step 3's Existing Protection Matrix. For example, a floodwall may protect structures from flooding during a 50-year storm, but will they be overtopped during the 100-year event? If it will, does the community consider it to be effective enough as a flood control measure? Or, are improvements or changes needed? This applies to regulatory measures as well. For example, is a floodplain district zoning bylaw that only regulates flood areas on the Flood Insurance Rate Maps sufficiently effective in minimizing the community's risk of flood damages?

Evaluation of the level of effectiveness of the existing protection measures involves gauging how well the existing programs, policies, regulations, and structures are actually working to protect vulnerable areas from hazards. For example, the community's open space and recreation plans or master plans may not take the hazard into account. Improving existing protection measures can help reduce risk across the community, especially in the hazard areas you have identified.

Developing Goals. After identifying the gaps in hazard protection in the community, develop goals for hazard reduction. The goals should not identify specific measures (this will be done in subsequent steps), but identify the improvements you want to achieve. Sample goal statements are:

- “Protect the residential area along Beach Boulevard from wave overwash flooding.”
- “Prevent wildfires from engulfing neighborhoods near the wildlife preserve.”
- “Ensure that wastewater treatment plants in the community will function during earthquake events.”

Step 4 Checklist

- ✓ Determine the physical area that is being protected and write it in Column 3 on the Existing Protection Matrix. This could be the entire community, a particular neighborhood, or other specifically defined areas.
- ✓ Determine the effectiveness and/or the level of enforcement for each measure. This can be done by noting enforcement measures as shown under Column 4 in the matrix example, or by developing a rating system. The rating system can be as simple as using, for example, “good,” “partial,” or “poor.”
- ✓ Depending on the effectiveness of a particular measure, develop some suggestions for improvements to the existing measure, or some additional measures that can be taken. If a measure is very effective in preventing losses, you may just need to note under Column 5, “Continue to enforce or perform

Using the matrix as a guide, prepare the community's goal statements for hazard reduction. Focus on the geographic areas at risk and the needed improvements in existing protection measures. These general goals are useful for communicating to others what it is the community wants to do. This is especially helpful when coordinating with other agencies, which will be done in Step 7 (Coordinate With Others).

STEP 5: BRAINSTORM ALTERNATIVES

What mitigation actions can be taken? In Step 4 (Identify What is Not Being Done), the community planning team developed goals for hazard reduction. In Step 5, the team will focus further on the actions that will reduce hazard damages. This step will produce a list of all types of actions that could be taken to reduce losses and eliminate hazards.

Some of the actions you identify will be based on the information from Step 4 – “Improvements or Changes Needed” under Column 5 of the Existing Protection Matrix. These actions should reflect what needs to be done to reduce future damages, and not what is already being achieved through existing systems or programs.

Brainstorming Ideas. Actions will be developed during this step by generating ideas for solutions through a brainstorming process. These ideas will later be evaluated according to community criteria discussed in Step 8 (Select Actions). One of the best ways to generate ideas is through a group process called “brainstorming.” In order for this process to be effective, there are certain “rules” that need to be followed.

- Every team member should contribute his or her ideas towards defining a workable solution for the problem.
- When generating ideas, strive for quantity over quality. Use free association and encourage creativity. Don’t accept just the “standard” answers as the only possible solutions.
- Don’t rule anything out during this step. Maintain respect for individual and different ideas. Don’t just focus on activities that fit existing funding programs.
- Make sure to record all ideas. You will probably need someone to keep track of all the ideas on an easel.

Categorizing Ideas. After the team has identified ideas for mitigating local hazards, organize the actions for comparison and discussion. For example, you can assign each action to one of the categories introduced in Unit Two of this manual:

- **Prevention** - measures such as planning and zoning, open space preservation, land development regulations, storm water management, dune and beach maintenance.



- **Property Protection** – measures such as acquisition, relocation, rebuilding, and floodproofing.
- **Public Information** - measures such as outreach projects, real estate disclosure, hazard information centers, technical assistance, and school age and adult education programs.
- **Natural Resource Protection** – measures such as erosion and sediment control, and wetlands protection.
- **Structural Projects** - measures such as dams, reservoirs, dikes, levees, seawalls, bulkheads, revetments, high flow diversions, spillways, buttresses, debris basins, detaining walls, channel modifications, storm sewers and elevated roadways
- **Emergency Services** - measures such as hazard threat recognition, hazard warning, emergency response, protection of critical facilities, and health and safety maintenance.

Step 5 Checklist

- ✓ Conduct a brainstorming session with the community planning team to identify actions to reduce hazard damages.
- ✓ Follow up the brainstorming session by obtaining as much detail as possible about each action. This will help to perform Step 6 (Evaluate Actions).
- ✓ Use available technical assistance. Invite appropriate State or Federal agency staff to the brainstorming session, or ask them to develop suggestions at a separate forum.
- ✓ Reference published sources that explain different kinds of actions.

As actions are suggested, place them under a category listing. This can be done by having easels around the room for the six categories (Prevention, Property Protection, Public Information, Structural Projects, Emergency Services and Natural Resource Protection) and writing each suggestion on the appropriate easel.

STEP 6: EVALUATE ACTIONS

Which mitigation actions are feasible? In Step 5 (Brainstorm Alternatives), the community planning team developed ideas and began to categorize them by type of solution. In Step 6, you will determine whether they are appropriate measures to solve the identified problems. The team will also list the feasible hazard loss reduction actions, considering the impacts from several points of view.

Evaluation Criteria. The most important criterion is whether or not the proposed action mitigates the hazard. Is it effective in reducing hazard damage? How much will the hazard losses be reduced if this action is taken? Although some proposed actions may do little to actually reduce hazard occurrence or hazard damages when taken alone, they may be important steps toward more effective actions.

Each action also should be examined for its compatibility with other goals. For example, how does the action impact the environment? Consider whether the proposed action will meet state and local environmental regulations. Does it affect historic structures or archeological areas? Does it help achieve multiple community objectives?

Also take into account “timing.” How quickly does the action have to take place to be effective? Which actions will produce quick results? This is particularly important if funding sources have application time limits, if it is the beginning of “storm season,” or if the community is in the post-disaster scenario (when everyone wants to recover as soon as possible).

Using basic evaluation criteria will facilitate the process of deciding which actions are most appropriate for your community. In Unit 2 you learned about the STAPLE criteria that can help the community decide which measures are most appropriate to solve the hazard risk problem. Recall that STAPLE stands for **S**ocial, **T**echnical, **A**dministrative, **P**olitical, **L**egal, and **E**conomic/**E**nvironmental criteria for making planning decisions. Refer back to that part of Unit 2 to refresh your memory on what each criterion involves.

Step 6 Checklist

- ✓ For each action, first answer the question of whether or not it will minimize the hazard risk or reduce hazard losses. Actions that do not do so should be placed low on the priority list unless they are part of a larger or more effective set of actions.
- ✓ For each action, evaluate whether it is a complete solution or will need to be combined with other measures.
- ✓ For each action, determine how well the action fits the STAPLE criteria. Ask the questions provided in Unit 2's section on STAPLE criteria.
- ✓ Keep track of the responses to the questions in the STAPLE criteria for each action.
- ✓ If actions involve property protection or hazard control to reduce damages to specific properties, an inventory is recommended to help determine costs and benefits of the alternatives. An inventory of individual structures should include, for example:
 - A sound estimate of the number of structures listed by use (residential, commercial, industrial) in the area where the action is proposed
 - The percentage of structures in a high hazard area.

STEP 7: COORDINATE WITH OTHERS

Who else is performing related activities? In Step 6 (Evaluate Actions), the community planning team evaluated proposed ideas for mitigation and prioritized them using the STAPLE criteria. Step 7 involves determining what actions other community groups or outside agencies are doing that can help implement or support local hazard reduction actions. For example, are there capital improvements, economic development, environmental protection and /or comprehensive plans that include related activities? Completing this step will help prevent duplication or conflicting efforts.

Coordinate the actions the community wants to take to mitigate future hazard damages with other community priorities and mitigation goals of surrounding communities and Federal and State agencies. The advantages of coordination include:

- Improved access to technical assistance and financial resources (other agencies are more likely to help you if their goals are also being met).
- Better solutions developed for multiple problems.
- Broader support provided for implementation.
- Reduced chances of duplicating or conflicting efforts.

Step 7 Checklist

- ✓ Check with community officials and local organizations. Examine local and regional plans, including any comprehensive plans, economic development, environmental preservation, open space, water quality, parks and recreation, or transportation plans. Do any of these include activities, measures, or proposals for the hazard planning area?
- ✓ Send a cover letter stating the mitigation goals (from Step 4) and a brief description of the identified actions to appropriate agencies. Make sure the letter requests their review and asks if they have any plans that can be coordinated with any of the identified actions. Contact local, State and Federal groups/agencies involved with:
 - State Hazard Management Program – State 409 Hazard Mitigation Plan
 - Natural Resources – land use plans
 - Floodplain Management
 - Environmental Regulations
 - Housing and Community Development – redevelopment plans
 - Conservation Services – open space preservation, conservation restrictions
 - Emergency Management – emergency response plans
 - FEMA Region – disaster assistance programs, flood insurance, map revision plans
 - National Parks Service – rivers and trails planning
 - U.S. Army Corps of Engineers (USACE) – water resource projects, Section 22 Planning Assistance program, Floodplain Management Services program
 - U.S. Fish and Wildlife Service – wetlands and wildlife conservation plans
 - Adjacent communities – check if actions or conditions in adjacent communities impact the community’s hazard problems, or if actions or conditions in the community affect adjacent communities
 - Local conservation districts – soil and water conservation activities
 - Regional Planning Agencies – transportation plans, zoning bylaw assistance
 - Building Regulations
 - Infrastructure Regulations or Construction
 - Public Information
 - Insurance

Make a note of any comments received on particular actions. This will help in the next steps of selecting and prioritizing actions.

STEP 8: SELECT ACTIONS

What are the community's priorities? In Steps 6 (Evaluate Actions) and 7 (Coordinate With Others), the community planning team evaluated the proposed actions generated in Step 5 (Brainstorm Alternatives) and determined what actions other agencies were taking that could help reduce hazard losses. Step 8 involves selecting actions and prioritizing them in order of importance.

Before selecting actions that can best meet the community's mitigation needs, the community planning team should establish a formal minimum threshold. Of the actions that meet the minimum threshold, select those that are most effective in reducing hazard damages while meeting a majority of the community's criteria for acceptability. For example, a community may decide not to accept actions that would require longer than six months for the approval process.

Prioritizing Actions. When the set of actions have been selected, the community planning team should prioritize them. Prioritize the actions based on what is most effective in reducing hazard damages. One way of developing priorities is to separate actions into immediate short-term projects and long-range measures.

Some of the most effective actions may be easily achievable, such as conducting outreach workshops to encourage a particular mitigation action. Other seemingly more important activities may not be so easily achievable, due to lack of funding, current regulations, or lack of technical or staff support. For example, the town of Hazardville does not have the necessary staff and funds to commit to new projects. Knowing these constraints, they will select some immediate actions on the basis of whether they can be successfully undertaken by a group of volunteers. However, they also will prioritize and focus on a few long-term projects while funds and staffing are sought.

It is recommended to have a few easily achievable projects as top priorities, such as a public education program. This will create "building blocks" of successes and will encourage the community planning team to pursue some of the more challenging projects. The more complex and time-consuming high priority actions can be implemented as part of the ongoing process of mitigation.

Step 8 Checklist

- ✓ Establish a minimum acceptable level for actions to be considered. Look at both immediate actions and long-term projects.
- ✓ Select those actions that best fit the community's needs. Choose feasible actions that do the most to reduce hazard damages while meeting the community's minimum standards and meet all or most of the STAPLE criteria.
- ✓ Prioritize actions that will reduce hazard damages in the most vulnerable areas.
- ✓ Include as top priorities some actions that can be done quickly and easily.

STEP 9: DEVELOP A STRATEGY

How will the community implement the prioritized mitigation actions? In Step 8 (Select Actions), the community planning team selected and prioritized the actions to be implemented. In Step 9, develop a clear strategy that outlines who will implement the prioritized actions, and when and how the actions will be implemented.

In the previous steps of the planning process, the community planning team determined why hazard damages occur; what can be done to achieve the mitigation goals; and where in the community the measures to reduce losses will be implemented. To ensure that the plan will be followed, you will need to:

- Establish an implementation group.
- Prepare an implementation schedule.
- Develop an implementation process.

This implementation strategy should take advantage of technical and financial resources that would become available should a major disaster strike before or while the actions are being implemented.

Questions that will guide you through these tasks are included in the following Checklist for Step 9.

Step 9 Checklist

Establish an Implementation Group

- ✓ Identify a person in charge who:
 - is responsible for ensuring that project(s) continue to make progress
 - can dedicate a significant amount of time to this task
 - has the ability to obtain assistance from others.
- ✓ Determine how the leader will work with the group.
 - Does the leader have authority?
 - Does the leader manage people/time/money?
 - Can the leader direct others?
 - Can others veto the leader's decisions?

Prepare An Implementation Schedule

- ✓ Identify all implementation tasks.
- ✓ Determine needed order of completion.
- ✓ Coordinate with other community activities and determine any special scheduling needs (e.g., seasonal climate conditions).
- ✓ Determine start dates and target completion dates.

Develop An Implementation Process

- ✓ Determine what permits or approvals are needed.
- ✓ Determine what resources are needed for implementation by identifying sources of funding, staff time needs, and technical assistance needs.
- ✓ Reevaluate the initial implementation strategy.
 - Is funding available?
 - Is necessary staffing available?
 - Is approval likely from regulators and others?
- ✓ Are the costs still accurate given identified administrative/implementation needs?

STEP 10: ADOPT AND MONITOR

In Step 9 (Develop a Strategy), the community planning team developed a strategy for implementing selected actions. Step 10 involves the process of drafting the plan, formally adopting it, and monitoring and evaluating the plan to ensure that actions are completed, with a schedule for monitoring, evaluating and updating it.

Drafting the Plan. A formal written plan will be produced in this final step of the planning process. The document will include the results of the planning process and provide an opportunity for public review and acceptance.

The plan should catalog the information gathered in the first three steps of the planning process:

- Hazard Identification.
- Risk Assessment.
- Existing Protection Systems.

It should then identify the information gathered during Steps 4 through 8 of the planning process:

- Planning Area.
- Protection Needs.
- Selected Actions in Order of Priority (with a brief explanation of how priorities were determined and why selected alternatives were favored over those that were not).

Finally, the plan should detail the implementation strategy developed in Step 9:

- Who administers the plan and implements the actions.
- How the actions will be accomplished.
- When the actions are expected to be completed.

Formal Adoption. It is strongly recommended that the Board of Selectmen, City Council or Planning Board formally adopt the community's plan. There are several advantages to having the community mitigation plan formally adopted. Formal adoption:

- Demonstrates community commitment to hazard loss reduction efforts.
- Prepares the public for what the community can be expected to do before and after a disaster.
- Ensures continuity of hazard loss reduction efforts over time.
- Ensures eligibility for funding under several Federal programs that require formal adoption.

Monitoring and Evaluation. The community mitigation plan should be evaluated annually and following every major disaster event. The community should assess how effective the implemented actions have been. The review will provide an opportunity to modify the original plan, the implementation schedule, or the budget.

Step 10 Checklist

- ✓ Draft the plan using results from Steps 1 through 9, as described in this section.
- ✓ Circulate the draft plan to reviewers, including the community planning team, local officials, and technical assistance contacts, for comments. A list of suggested reviewers was provided in Step 7.
- ✓ Convene a public meeting to introduce the draft plan to the general public and obtain input.
- ✓ Advertise intent to adopt the plan, as appropriate.
- ✓ Have the Board of Selectmen, City Council or Planning Board adopt the plan.
- ✓ Prepare to review the plan to monitor action implementation on a yearly basis and revise the plan, as necessary.
- ✓ Prepare to evaluate the plan regularly, and always following a major disaster event. Ask these questions:
 - Are actions being implemented?
 - How effective have they been in reducing hazard losses?

SUMMARY

- ✓ The primary tools needed to begin building a mitigation plan are community commitment, a community planning team, and public input.
- ✓ Pre-disaster mitigation planning emphasizes actions to be taken *before* a disaster occurs to reduce or prevent future damages.
- ✓ There are 10 basic steps to follow in preparing an effective mitigation plan for the community.
 - Step 1 – Map the Hazards
 - Step 2 – Determine the Potential Damage
 - Step 3 – Identify What is Already Being Done
 - Step 4 – Identify What is Not Already Being Done
 - Step 5 – Brainstorm Alternatives
 - Step 6 – Evaluate Actions
 - Step 7 – Coordinate with Others
 - Step 8 – Select Actions
 - Step 9 – Develop a Strategy
 - Step 10 – Adopt and Monitor the Plan

MITIGATING YOUR HAZARDS

This exercise provides an opportunity to identify those who can assist in developing a local, pre-disaster mitigation plan. Refer to the checklists in this unit, the work completed in the Mitigating Your Hazards sections of Units 1,2, and 3, and Appendix R, *Additional Mitigation Resources*. List members of the community, technical experts, organizations, and other sources of information that you would like to involve in these aspects of the mitigation planning process.

	RESOURCES FOR PLANNING TEAM
Mapping the hazard	
Determining potential damage	
Identifying what is already being done	
Identifying what is not being done	
Brainstorming alternatives	
Evaluating actions	
Coordinating with others	
Selecting actions	
Adopting and monitoring the plan	

✓ CHECKING YOUR MEMORY

Circle the correct response. Answers may be found on page A-1.

1. A community mitigation plan can
 - A) involve many key players in solving problems.
 - B) achieve multiple objectives.
 - C) guide post-disaster recovery.
 - D) all of the above.

2. The community planning team includes
 - A) individuals with a variety of skills.
 - B) only public works officials.
 - C) only elected officials.

3. Public input is _____ during the mitigation planning process.
 - A) desirable
 - B) undesirable

4. Hazard identification is carried out at what point in the planning process?
 - A) Anytime as long as it is completed.
 - B) First.
 - C) Last.

5. Warning systems, evacuation plans and land use restrictions are examples of
 - A) Federal programs.
 - B) government meddling.
 - C) loss protection systems.

6. The feasibility of mitigation actions should be determined by
 - A) the chief elected official.
 - B) the STAPLE criteria.
 - C) the State office of emergency management.

7. The Plan Implementation Group
 - A) ensures that the mitigation project continues to make progress.
 - B) prepares an implementation schedule.
 - C) Both A and B.