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Introduction

As the costs of disasters continue to rise, emergency management professionals as well as ordinary citizens must find ways to reduce hazard risks to our communities and to ourselves. The efforts made to reduce hazard risks are easily made compatible with other community goals; safer communities are more attractive to employers as well as residents. As communities plan for new development and improvements to existing infrastructure, mitigation can and should be an important component of the planning effort. This means taking action to reduce or eliminate long-term risk from hazards and their effects.

This job aid is intended for anyone who has responsibility for, or interest in, reducing hazard risks in their community. As you know, emergency management involves mitigating, preventing, preparing for, responding to, and recovering from the effects of all hazards.
This job aid will be structured around the phases of the hazard mitigation planning process:

- Phase 1: Organize resources
- Phase 2: Assess risks
- Phase 3: Develop a mitigation plan
- Phase 4: Implement the plan and monitor progress

These phases are further defined in FEMA’s mitigation planning How-To Guide series, available for download from the FEMA Library (http://www.fema.gov/library/index.jsp). A list of these guides is included at the back of this job aid.

A glossary is also included in this job aid. It contains definitions of terms related to mitigation.
Phase 1: Organize Resources

The first phase of the mitigation planning process includes determining the level of support for mitigation to be expected from the community, establishing a planning team, and engaging the public.

This phase of the mitigation planning process is discussed in the FEMA How-To Guide, *Getting Started: Building Support for Mitigation Planning* (386-1).

Step 1: Assess Community Support

Among the first steps in the planning process are measuring the level and source of community support for planning, and working on securing any needed support where gaps are identified.
Task A: Determine the planning area

In consultation with the state, identify the areas or jurisdictions to be included in the mitigation planning process. Local governments most often create a mitigation plan that covers their entire political jurisdiction, be it a county, city, township, parish, borough, or unincorporated community that falls under a county’s jurisdiction, but the plan does not usually cross jurisdictional boundaries.

Task B: Determine if the community is ready to begin the planning process

Three key elements are necessary for a successful planning process:

- Knowledge
- Support
- Resources
**Task C: Remove roadblocks**

Some strategies to use when overcoming roadblocks include:

- Educating public officials about benefits of reducing potential losses
- Identifying leaders in other communities who can provide the benefit of their experience
- Identifying a team leader who can help convince stakeholders to support the planning effort
- Emphasizing to elected officials and other decision makers the regulations that require states and communities to have approved plans to be eligible for funding
- Identifying existing processes that can be expanded to include mitigation elements
- Identifying potential funding and technical resources to support the planning process
Step 2: Build the Planning Team

The planning team should be built on existing organizations or boards whenever possible and can welcome anyone who is available to participate regularly. You may use Worksheet #1, “Build the Planning Team,” from FEMA’s How-To Guide 386-1 to help you form the team.

Task A: Create the planning team

Consider the following questions when identifying planning team candidates:

- Who are the representatives most likely to be affected?
- Who might be responsible for what is intended?
- Who is likely to mobilize in support of mitigation planning?
- Whose participation can make the process more effective?
- Who are the "voiceless" for whom special efforts may be needed?
- Who can contribute financial or technical resources?
**Task B: Obtain official recognition for the planning team**

Your planning team should consider obtaining official recognition in the form of a council resolution, a proclamation, a Memorandum of Agreement (MOA), or a Memorandum of Understanding (MOU). This recognition can go a long way toward demonstrating community or state support for mitigation action, and it greatly increases the plan's chances of being formally adopted.

**Task C: Organize the team**

Once potential candidates for the planning team have been identified, the team needs to be organized.

- Have an informal kick-off
- Prepare for the first formal meeting
- Develop a mission statement
- Establish responsibilities
- Assign key roles and provide job descriptions to team members
Step 3: Engage the Public

Involving stakeholders who are not part of the core team in all stages of the process will introduce the planning team to different points of view about the needs of the community. It will also provide opportunities to educate the public about hazard mitigation, the planning process, any findings, and could be used to generate support for the mitigation plan.

Task A: Identify the public

The stakeholders to involve include those individuals who do not regularly participate in the planning process, but may be affected or have an interest in the plan and
its implications. Such stakeholders include public officials, agency heads, neighborhood and other civic organizations, business associations, institutions, and individual citizens.

**Task B: Organize public participation activities**

Revisit the meeting schedule you developed in Task C and identify points where it is important to inform the public of what is happening and to seek their input to assist you in making a decision.

For example, you may want to hold a public meeting at the beginning of the planning process to let stakeholders know the purpose of your planning effort and how you are approaching it. You may have one or more people join the team after such a meeting. Once they understand what is involved, they may decide it is worth their time.
Other ways to involve the public in mitigation planning include:

- Establishing a hotline
- Holding regular community meetings
- Conducting interviews
- Distributing questionnaires

**Task C: Develop a public education campaign**

You will need a specific way to present information to each type of stakeholder. Your educational campaign may include:

- News releases to be distributed by print, radio, and television media
- Brochures, fliers, and newsletters to be distributed through utility bills, grocery or department stores, government buildings, and libraries
- Outreach festivals at festivals, fairs, and bazaars
- Web page linked to state, regional, and local government sites
Phase 2: Assess Risks

After organizing resources for mitigation planning, the next phase in the mitigation planning process is risk assessment. Before attempting to solve the problem, it is necessary to define and quantify it. Risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from hazards.

Conducting a complete risk assessment is a substantial task that requires completion of four steps:

- Identify hazards
- Profile hazard events
- Inventory assets
- Estimate losses

This phase of the mitigation planning process is discussed in the FEMA How-To-Guide, Understanding Your Risks: Identifying Hazards and Estimating Losses (386-2).
Step 1: Identify Hazards

To begin the risk assessment process, you must first identify the hazards that affect your community. Although the federal regulations apply only to natural hazard mitigation planning, communities should take an all-hazards approach. Planning for manmade disasters as well as natural disasters will help to create a safer community, enable quicker recovery, and lessen the financial impact of disasters.

You may use Worksheet #1, “Identify the Hazards,” from FEMA’s How-To Guide 386-2 to help you complete this step.

Task A: List the hazards that may occur

The first task you must undertake to identify the relevant hazards in your community is to list all the hazards that may occur.
Task B: Focus on the most prevalent hazards in your community or state

Narrow your focus by considering the hazards that have affected your community or state in the past and those that experts feel pose a threat.

If your planning area has not experienced a hazard event in recent memory but one of the sources indicates it is a possibility, you may need to conduct additional research to confirm that a particular hazard type is relevant.

Step 2: Profile Hazard Events

To further focus your mitigation planning efforts, you must consider how the hazards may affect your community. In other words, you’ll ask, “How bad can it get?”

You may use Worksheet #2, “Profile Hazard Events,” from FEMA’s How-To Guide 386.2 to help you perform this step.
**Task A: Obtain or create a base map**

When you start the hazard event profiling process, you should locate or create a base map so you can show the areas that are subject to various hazards. A base map should be as complete, accurate, and current as possible. The map should also be planimetric, which is a flat representation of information in true geographic relationship (to scale) with measurable horizontal distances.

Other than distinguishable buildings, roads, rivers, coastlines, place names, and a north arrow, the map should be as uncluttered as possible.

To keep costs down, you can use existing maps as a starting point for your base map. Alternatively, you can create your own base map using resources such as field surveys, Geographic Information Systems (GIS) software, Computer-aided Design (CAD) software, or digitized paper maps.
Task B: Obtain hazard event profile information

The Hazards U.S. Multi-Hazard (HAZUS-MH) software package should be considered first as your primary source of hazard data. Other information sources may include:

- Hazard maps
- Historical data
- Existing plans and reports
- Local experts
- Internet Websites
- Geographic Information Systems (GIS)
- Community, state, and regional experts

Task C: Record the hazard event profile information

Remember that all subsequent steps in the Hazard Mitigation Planning Process are built on the information gathered during risk assessment. Be sure to keep records of what you’ve found and where you’ve found it.
Step 3: Inventory Assets

In this step, you’ll ask, “What assets will be affected by the hazard event?” Assets are the people, property, and activities in a community.

You may use Worksheet #3, “Inventory Assets,” from FEMA’s How-To Guide 386-2 to help you perform this step.

Task A: Determine the proportion of vulnerable buildings and population

The first task for conducting an inventory of the community’s assets is to determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

An initial inventory can be done very quickly and easily using the baseline data contained in HAZUS-MH.
To accomplish the initial inventory, you must perform the following steps:

- Estimate or count the total number of buildings, value of buildings, and number of people in your community or state.
- Estimate the total number of buildings, total value of buildings, and number of people in each of your hazard zones.
- Calculate the proportion of assets located in hazard areas.
- Determine the location of expected growth in your community.

**Task B: Determine whether to collect additional inventory data**

After assessing the number and value of the buildings and the size of the population within the hazard areas, decide whether to end your inventory data collection or continue gathering additional information to identify the extent to which the assets would be damaged by the hazard events.

If you decide to gather additional information, you will then collect details on
specific types of population, building stock, infrastructure, and lifelines in the hazard areas in the order of their importance to the community.

**Task C: Compile a detailed inventory of vulnerable assets**

You will now begin to develop a more detailed inventory of the types of assets that are located in hazard areas, and the characteristics of those assets. Collecting data on these characteristics will help you determine the losses to these assets from different hazards.

- Determine the priorities for your inventory collection efforts.
- Gather building-specific information about the assets. The information you will need includes:
- Gather hazard-specific information about the assets.

Basics of Community Mitigation Job Aid
Step 4: Estimate Losses

In the final step of the risk assessment process, all the information you’ve gathered comes together as you estimate the expected losses from hazard events to people, buildings, and other important assets.

Step 4 answers the question, “How will the community’s assets be affected by the hazard event?”

This step is not required for approval of a local hazard mitigation plan by FEMA. If it is completed, it does provide a greater degree of dependability upon which to base the hazard mitigation strategy.

**Task A: Determine the extent of damages**

- Estimate the losses to structures by multiplying the structure replacement value by the expected percent.
- Estimate the losses to contents by multiplying the replacement value of the
contents by the expected percent damage.

- Estimate the losses to structure use and function by dividing the average annual budget or sales by 365 and then multiplying this value by the displacement time.
- Consider human losses.

Loss estimation tables for floods, earthquakes, and coastal storms are included in FEMA’s how-to guide (386-2).

**Task B: Calculate the loss from each hazard event**

After estimating the extent of damages from a hazard event, you will need to calculate the potential losses using the following steps.

- Calculate the losses to each asset by adding the structure loss, content loss, and function loss for each asset.
- Calculate the estimated damages for each hazard event.
- Create a composite map.
The loss estimate is the foundation upon which your mitigation plan will be built. With it, you should be able to identify which areas are most susceptible to each hazard, where the highest losses would occur, how much a hazard may cost, and how the lives and quality of life might be affected in the aftermath of a disaster.

It is important to compile the results of your work into a written report, to be presented to citizens and elected officials. The State Hazard Mitigation Officer should also be aware of the completion of your loss estimate because the State may want to use it as part of its statewide risk assessment.

It is important to continue to monitor the risks you’ve identified. When reviewing the existing risk assessment and hazard profiles, consider the following questions:

- Do all of the hazards still pose a threat to the community?
- Are there other hazards not included in the assessment that pose a potential threat to the community?
- Does the risk assessment specifically consider the possibility and impact of cascading hazards?
- Are any profiles missing from the risk assessment?
- Is any type of information missing from the hazard profiles?
- Has the relative threat of any hazards on the profile changed since the assessment was done?
- Have priorities changed?
Phase 3: Developing the Mitigation Plan

After a risk assessment has been accomplished, your community’s hazard mitigation planning team can determine appropriate options for mitigating the risks.

This phase of the mitigation planning process is outlined in FEMA’s How-To Guide, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementation Strategies* (386-3). In addition, the following guides will provide information to help you plan:

- **Using Benefit-Cost Review in Mitigation Planning** (386-5)
- **Integrating Historic Property and Cultural Resource Considerations Into Hazard Mitigation Planning** (386-6)
- **Integrate Manmade Hazards Into Mitigation Planning** (386-7)
- **Multi-Jurisdictional Mitigation Planning** (386-8)
- **Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects** (386-9)
Step 1: Develop Hazard Mitigation Goals and Objectives

To develop the hazard mitigation goals and objectives, you’ll complete the following four tasks:

- Task A: Review and analyze the results of the hazard profiles and loss estimation.
- Task B: Formulate goals.
- Task C: Determine objectives.
- Task D: Get public input.

Task A: Review and analyze the results of the hazard profiles and loss estimation

The first task you’ll undertake to develop mitigation goals is to review and analyze the results of the hazard profiles and loss estimation you created during Phase 2 of the mitigation planning process.
You’ll accomplish this task in two steps.

- Review the findings of your risk assessment. This will help clarify problems, issues, and opportunities for hazard mitigation.
- Develop a list of problem statements based on these findings. The problem statements should identify what is happening or could happen, where, how often, and how bad it can get.

**Task B: Formulate goals**

You mitigation goals should articulate the community’s desire to protect people and structures, reduce the costs of disaster response and recovery, and minimize disruption to the community, tribe, or state following a disaster.
The mitigation goals should not identify specific mitigation actions (those will be developed later), but identify the overall improvements you want to achieve.

- Develop proposed goal statements. These are broad, forward-looking statements that succinctly describe your aims.
- Review existing plans and other policy documents to identify potential conflicts. Remember, hazard mitigation goals should be consistent with the goals and objectives of other plans in your community.

**Task C: Determine objectives**

After you have developed your mitigation goals, you are ready to formulate objectives. Objectives define strategies or steps to achieve the goals that have been set. They are more specific and narrower in scope than goals. It is important that the objectives be measurable so you will know when you have successfully implemented the strategy.
To help you measure progress toward your goals, you may wish to include time frames and specific targets within those time frames.

**Task D: Get public input**

Involve the public when developing the community’s goals and objectives to ensure fair representation of all sectors in the community.

The method you choose to use to involve the public depends on the size of your jurisdiction, the style of public input that normally is used for community issues, the established timeline, and the resources available.

Ideally, the procedures you use to obtain public input should be established earlier in the planning process, when you form the planning team and secure support for the process.

Generally speaking, you should:

- Organize public forums to solicit input on community goals and objectives.
Develop consensus on goals and objectives.

Step 2: Identify and Prioritize Mitigation Actions

In the next step of the process for developing a mitigation plan, you will identify, evaluate, and prioritize mitigation actions that address the goals and objectives developed by the planning team in Step 1.

The evaluation and prioritization of mitigation actions will produce a list of recommended mitigation actions to incorporate into the mitigation plan. The planning team will address a number of important questions, including:

- Which actions can help us meet our mitigation objectives?
- What capabilities do we have to implement these actions?
- What impacts (if any) will these actions have on our community?
**Task A: Identify alternative mitigation actions**

The first task in identifying and prioritizing mitigation measures is to determine a variety of possible actions to address the mitigation objectives you developed in Step 1.

- Review existing literature and resources.
- Review success stories.
- Solicit public opinion and input.
- Summarize your findings.

Worksheet #1 from FEMA’s How-To Guide, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementation Strategies*” (386-3) is designed to assist with this task. This how-to guide also contains a Job Aid for identifying alternative mitigation actions by hazard and a reference library with many resources that could serve as a starting point for the planning team.

Another valuable resource that can assist the planning team with this task is FEMA’s How-To Guide, *Using Benefit-Cost Review in Mitigation Planning* (386-5).
**Task B: Identify and analyze state and local mitigation capabilities**

Review and analyze state and local programs, policies, regulations, funding, and practices currently in place that either facilitate or hinder mitigation in general, including how the construction of buildings and infrastructure in hazard-prone areas is regulated.

You should also learn how your local, tribal, and state governments are structured in terms of professional staff that would be available to directly carry out mitigation actions, or to provide technical assistance. This inventory and analysis is often called a capability assessment.

By completing this assessment, you will learn how or whether your community will be able to implement certain mitigation activities. To complete this task, you will perform the following steps:

- Review the state capability assessment.
- Complete a local capability assessment.
FEMA’s How-To Guide 386-3 contains worksheets and a job aid that can help you complete these subtasks. If the state capability assessment has not been completed, you may wish to work with your SHMO to obtain the information to complete Worksheet #2, “State Mitigation Capability Assessment.”

You can use Worksheet #3, “Local Mitigation Capability Assessment,” and the corresponding job aid to help complete the local capability assessment.

Task C: Evaluate, select, and prioritize mitigation actions

In this task, the planning team will select mitigation actions suitable to your community and then decide in what sequence or order these actions should be pursued.
Evaluate alternative mitigation actions. You may choose to use the STAPLE criteria for this evaluation:

- Social
- Technical
- Administrative
- Political
- Legal
- Economic / Environmental

- Summarize and document recommended mitigation actions.
- Prioritize selected mitigation actions.

The planning team can use Worksheet #4, “Evaluate Alternative Mitigation Actions,” from FEMA’s How-To Guide 386-3 to record their discussions. Table 2-1 in the guide lists some considerations and sources of information for each STAPLE criterion to use when completing Worksheet #4.

Using Worksheet #5, “Prioritized Alternative Mitigation Actions,” from FEMA’s How-To Guide 386-3 can help the planning team prioritize the mitigation actions.
Step 3: Prepare an Implementation Strategy

The implementation strategy is an essential part of the hazard mitigation plan. The implementation strategy identifies *how* the hazard mitigation actions will be funded, *who* is responsible for which actions, and *when* the actions are to be completed.

There will be a variety of hazard mitigation actions in the hazard mitigation strategy and multiple ways to implement them.

*Task A: Identify how the mitigation actions will be implemented*

In this task, the planning team will:

- Identify parties, define responsibilities, and confirm partners.
- Identify resources to implement the actions.
- Define the time frame for implementing the actions.

Table 3-1 of FEMA’s How-To Guide 386-3 contains a list of subtasks involved in
accomplishing this task. More information on resources is presented in Securing Resources for Mitigation Planning (386-9).

**Task B: Document the implementation strategy**

Determine the format for presenting your implementation strategy. This, along with discussions of goals and objectives, and identification and prioritization of actions, will comprise your overall mitigation strategy.

**Task C: Obtain the consensus of the planning team**

The planning team should review the resulting strategy and come to a consensus on the timing of the mitigation actions and on the agencies or other parties responsible. When the team confirms that the timeline and use of resources are realistic, and the appropriate agencies or individuals are designated the appropriate responsibilities, it confirms that the strategy is headed in the right direction.
Step 4: Document the Mitigation Planning Process

The hazard mitigation plan is a guide to keep you on track and serves as documentation of the thoughts and considerations that were the foundation of the planning process. As community leadership changes, and during intense decision-making situations (such as the post-disaster setting and when undertaking major land development decisions), the plan will serve as the representation of the community’s principles for hazard loss reduction.

**Task A: Make decisions about the style of the document**

- Decide how to make the document readable. Consider length, format, and complexity of language.
- Determine how detailed the planning document should be.
- Establish the schedule for writing the plan. You should also schedule a public
forum to give the public a chance to comment on the plan.

- Determine who should write the plan.

**Task B: Write the plan**

- Assemble information and write-ups from previous phases of the process.
- Write the plan in conformance with FEMA program requirements.

By following the four-phase process described in this job aid, you are undertaking a planning process that conforms to several FEMA mitigation plans. Refer to the “cross-walk” provided on the next page for information about the planning requirements of several mitigation programs.
# Hazard Mitigation Planning Process – Crosswalk

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<td>Involve the public throughout the planning process</td>
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<td>Assess vulnerability</td>
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<td>Adoption Implementation of mitigation actions Implementation through existing planning mechanisms</td>
<td>Document formal plan adoption by the legal entity submitting the plan (e.g., Governor, mayor, county executive)</td>
<td>Adopt the plan Implement, evaluate, and revise the plan</td>
</tr>
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</table>

This table is taken from FEMA’s How-To Guide 386-3, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies*. 
Task C: Review the plan

After the plan has been developed, it should be reviewed first by the planning team, and then by agencies involved in the plan’s implementation. The public should also have an opportunity to review the draft plan before it is presented for formal adoption. In addition, you should provide a draft copy to your State Hazard Mitigation Officer (SHMO) for review prior to formal local adoption to ensure that the plan meets state and federal requirements.

After comments have been received, revise the plan and prepare the final draft for presentation to the local government for adoption.
Phase 4: Implement the Plan and Monitor Progress

The fourth phase of the mitigation planning process involves implementing the plan and monitoring progress.

During this phase, the mitigation planning team will:

- Adopt the plan.
- Implement the recommendations.
- Evaluate results.
- Revise the plan.

FEMA’s How-To Guide, *Bringing the Plan to Life* (386-4) contains more information and guidance about this phase.

**Step 1: Adopt the Plan**

In order to meet DMA 2000 regulations, your jurisdiction’s governing body must formally adopt the plan in accordance with state and local laws.
Adoption of the plan is also necessary for the following reasons:

- It lends authority to the plan to serve as a guiding document for all local and state government officials.
- It gives legal status to the plan in the event it is challenged in court.
- It certifies to program and grant administrators that the plan’s recommendations have been properly considered and approved by the governing authority and the jurisdiction’s citizens.
- It helps ensure the continuity of mitigation programs and policies over time because elected officials, staff, and other community decision-makers can refer to the official document when making decisions about the community’s future.
**Task A: Brief local leadership**

An excellent way to facilitate adoption of the plan is to periodically brief community decision makers and elected officials on the progress of your planning efforts. Plan adoption should not be difficult if the planning team has conducted activities throughout the planning process that have lent credibility to the team, the plan, and the planning process.

**Task B: Demonstrate the support of partner organizations**

One way to ensure the credibility and eventual passage of the mitigation plan is to present the adopting body with letters of support from organizations and agencies on the planning team, as well as those not on the team. The community’s governing body may view the plan more favorably if it has the support of neighborhood and civic organizations.
Task C: Have the plan adopted by the proper legislative or executive authorities

The mitigation plan will be adopted through your government’s normal legal process. Depending on the laws in your state and jurisdiction, adoption of the plan will give the jurisdiction legal authority to enact ordinances, policies, or programs to reduce hazard losses and to implement other mitigation actions. Generally, most local governing bodies will adopt a hazard mitigation plan by resolution.

Build time into your planning schedule to meet federal and state deadlines for submitting the plan. Make sure you allow sufficient time for formal adoption procedures. Your local governing body may meet only once a month and may require agenda items to be submitted well ahead of time.
Task D: Submit your plan for approval

Once your local governing body has approved the plan, it must be submitted to the State Hazard Mitigation Officer (SHMO). The SHMO should already be familiar with your plan because he or she should have reviewed a draft to determine if the plan meets DMA 2000 and other state program requirements.

Someone should be designated as the point of contact with the state to answer any questions about the plan. For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted by its respective governing body. The SHMO is responsible for forwarding the plan to the FEMA Regional Office for review.
Task E: Publicize the adoption and approval of the plan

Once the plan has been approved, stakeholders should be informed of your success.

Step 2: Implement the Plan

Recommendations

This step is about getting results by putting the recommendations of the plan into place.

Task A: Confirm and clarify responsibilities

During Phase 3 of the mitigation planning process, the planning team identified who would be involved in the implementation of the mitigation actions. During implementation, those roles and responsibilities should be revisited to confirm that all key players understand their duties.
Consider putting a Memorandum of Agreement (MOA) into place among the different agencies and organizations who are working together.

**Task B: Begin to integrate mitigation actions throughout government operations**

The planning team should work with chief administrative officials to begin to integrate the newly adopted hazard mitigation goals and actions into the general operations of its government and partner organizations.

**Task C: Monitor and document the implementation of your projects and actions**

The planning team must continuously monitor and document the progress of the plan’s recommended actions. This documentation is essential for determining the progress made on the hazard mitigation initiatives.

The planning team may decide to ask the agencies, departments, organizations, or
people with duties identified in the mitigation strategy to periodically submit a work progress report on those projects being implemented. This report will come in handy at evaluation time.

You may use Worksheet #1, “Progress Report,” from FEMA’s How-To Guide 386-4 to help you monitor progress.

**Task D: Establish indicators of effectiveness or success**

To be able to evaluate the effectiveness of your mitigation project and initiatives, it is important to establish measurable indicators of effectiveness. In this way, all who are involved in the projects will be able to understand how their actions contribute to the success of the projects.

Indicators should be tied to the goals and objectives of the plan and its projects. They are often expressed as numerical representations of planning objectives.
Task E: Celebrate success

One particularly effective technique for maintaining community support is to simply keep the community informed about the incremental progress and success of the program.

Sharing the findings of progress reports with interested organizations, neighborhood groups, elected officials, and citizens keeps stakeholders up-to-date on your accomplishments and possible setbacks.

Posting these findings on your local Web site or including them in your newsletter will help everyone stay informed of your progress. Also consider holding events to recognize key milestones to keep the public interested.
Step 3: Evaluate Your Planning Results

Regular evaluation keeps the community informed of the plan’s status and, ideally, keeps those responsible for implementing the mitigation actions motivated.

Participation in some federal programs requires regular evaluation of the mitigation plan. Under DMA 2000, communities must evaluate the plan at least every five years. Communities that want credit for their hazard mitigation plan under the Community Rating System (CRS) must evaluate their plan annually.
Task A: Evaluate the effectiveness of the planning process

To evaluate the results of your planning efforts, begin by stepping back and looking at the big picture. Governments must be highly accountable to their citizens and able to defend their decisions.

- Reconvene the planning team.
- Review your planning process.
  Consider the following key elements of your planning process as you conduct your review:
    - Building the planning team
    - Engaging the public
    - Data gathering and analysis
    - Coordinating with other agencies

You may use Worksheet #2, “Evaluate Your Planning Team,” from FEMA’s How-To Guide 386-4 to help you with this task.
Task B: Evaluate the effectiveness of your actions

Consider the following questions when assessing the effectiveness of the planning team’s actions:

- Did the results of the implemented actions achieve the goals and objectives outlined in the plan?
- Were the actions cost-effective, and did they result in reduction of potential losses?
- What actions were slow to get started or were not implemented at all?

You may use Worksheet #3, “Evaluate Your Project Results,” from FEMA’s How-To Guide 386-4 to assist you in completing this task.
Task C: Determine why the actions worked or did not work

After verifying that an action was or was not implemented and its overall results, the planning team should try to document why the action worked or did not work. Several considerations to examine include:

- Availability of resources
- The political or popular support for or against the action
- The availability of funds
- The workloads of the responsible parties
- The actual time necessary to implement the actions

Continue the use of Worksheet #3 from FEMA’s How-To Guide 386-4 to complete this task.
Task D: Keep the community updated and involved, and celebrate your successes

Project implementation brings the community’s hard work to fruition. The planning team should be sure to keep all stakeholders in the community informed of the progress of the projects.

Ways to engage the community may include staging events to showcase your accomplishments or taking advantage of media opportunities to publicize the completion or significant steps of specific projects.

Refer back to FEMA’s How-To Guide 386-1, Getting Started: Building Support for Mitigation Planning, for additional ways to communicate your success to the community.
Step 4: Revise the Plan

The final step in the mitigation planning process is to determine whether you need to make changes to the planning process or the mitigation plan.

Task A: Review those factors that affect your community’s planning context

First, revisit the risk assessment to incorporate updated estimates of cost of living and replacement costs, new scientific data on hazard areas, the effect of hazards on the community, changes in growth patterns, and reductions in vulnerability due to completion of projects.

You may use Worksheet #4, “Revisit Your Risk Assessment,” from FEMA’s How-To Guide 386-4 to help you complete this task. Also refer back to FEMA’s How-To Guide 386-2, Understanding Your Risks, to review information on hazards and estimating losses.
Next, revisit your capability assessment to determine changes in laws, authorities, community and state resources, and availability of financial and technical tools that may affect what you can do.

Refer back to FEMA’s How-To Guide 386-3, *Developing the Mitigation Plan*, to review information on how to update your capability assessment.

**Task B: Analyze your findings and determine whether to revise your planning process or mitigation strategy**

The planning team should use its new knowledge to identify the areas of the plan or planning process that should be changed.
Important questions to discuss with the team include:

- Are the goals and objectives still applicable?
- Do the plan’s priorities correspond with state priorities?
- Do existing actions need to be prioritized for implementation?
- Are actions appropriate for available resources?

**Task C: Incorporate your findings into the plan**

Include your most recent findings about the community, tribe, or state, your hazards and vulnerabilities, as well as the applicable original actions of the plan, into a revised plan. Update your description of the planning process to include the steps you took to revise the plan document and how you involved the public. Also update the implementation strategy to identify who will be responsible for the new or revised actions, the time frame, and funding sources.
The revised plan must be reviewed by all stakeholders in the community for its validity, and proceed through a formal adoption process as required by local or state laws.

In order for the plan to remain a viable tool for your state, tribe, or community, you must regularly review your planning process and mitigation strategy. Communities are rarely static and new challenges will arise during every revision of the plan.

Disasters also present a window of opportunity to evaluate the relative success of the mitigation plan. States, tribes, and communities should take advantage of funding that becomes available as a result of these events. Revising the plan ensures it remains up-to-date and relevant, providing a good return on the time and resources invested in developing it.

You may use Worksheet #5, “Revise the Plan,” from FEMA’s How-To Guide 386-4 to help you keep track of where the plan document may require revisions.
Glossary of Terms

All-Hazards
Describing an incident, natural or manmade, that warrants action to protect life, property, environment, and public health or safety, and to minimize disruptions of government, social, or economic activities.

Benefit
Net project outcomes, usually defined in monetary terms. Benefits may include direct and indirect effects. For the purposes of conducting a benefit-cost analysis of proposed mitigation measures, benefits are limited to specific, measurable risk reduction factors, including a reduction in expected property losses (building, contents, and function) and protection of human life.

Building
A structure that is walled and roofed, principally above ground and permanently affixed to a site. The term includes a
manufactured home on a permanent foundation on which the wheel and axles carry no weight.

**Capability assessment**

An assessment that provides a description and analysis of a community or state’s current capacity to address the threats associated with hazards. The capability assessment attempts to identify and evaluate existing policies, regulations, programs, and practices that positively or negatively affect the community or state’s vulnerability to hazards or specific threats.

**Community Rating System (CRS)**

CRS is a program that provides incentives for National Flood Insurance Program communities to complete activities that reduce flood hazard risk. When the community completes specified activities, the insurance premiums of these policyholders in communities are reduced.
Comprehensive plan

A document, also known as a “general plan,” covering the entire geographic area of a community and expressing community goals and objectives. The plan lays out the vision, policies, and strategies for the future of the community, including all of the physical elements that will determine the community’s future development. This plan can discuss the community’s desired physical development, desired rate and quantity of growth, community character, transportation services, location of growth, and siting of public facilities and transportation. In most states, the comprehensive plan has no authority in and of itself, but serves as a guide for community decision-making.

Critical facilities

Facilities vital to the health, safety, and welfare of the population and that are especially important following hazard events. Critical facilities include, but are not limited to, shelters, police and fire stations, and hospitals.
Debris
The scattered remains of assets broken or destroyed in a hazard event. Debris transported by a wind or water hazard event can cause additional damage to other assets.

Declaration
Presidential finding that a jurisdiction of the United States may receive Federal aid as a result of damages from a major disaster or emergency.

Earthquake
A sudden motion or trembling caused by a release of strain accumulated within or along the edge of the earth’s tectonic plates.

Emergency
Any incident, whether natural or manmade, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, Federal
assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

Emergency Operations Plan
An ongoing plan for responding to a wide variety of potential hazards.

Federal Emergency Management Agency (FEMA)
The lead federal agency with responsibility for responding to Presidential emergencies and major disasters. FEMA was created in 1979 to provide a single point of accountability for all federal activities related to disaster mitigation and emergency preparedness, response, and recovery. FEMA is part of the Department of Homeland Security.

Floodplain
Any land area, including watercourse, susceptible to partial or complete inundation by water from any source.
Flood-proofing

Actions that prevent or minimize future flood damage. Making the areas below the anticipated flood level watertight or intentionally allowing flood waters to enter the interior to equalize flood pressures are examples of flood-proofing.

Goals

General guidelines that explain what you want to achieve. They are usually broad policy-type statements, long term in nature, and represent global visions.

Hazard

Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome.

Hazard event

A specific occurrence of a particular type of hazard.

Hazard information center

Information booth, publication kiosk, exhibit, etc. that displays information to
educate the public about hazards that affect the jurisdiction and hazard mitigation activities people can undertake.

**Hazard mitigation**

Sustained actions taken to reduce or eliminate long-term risk from hazards and their effects.

**Hazard Mitigation Plan**

The plan resulting from a systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards present in society that includes the actions needed to minimize future vulnerability to hazards.

**Hazard profile**

A description of the physical characteristics of hazards and a determination of various descriptors, including magnitude, duration, frequency, probability, and extent. In most cases, a community can most easily use these descriptors when they are recorded and displayed as maps.
HAZUS-MH

A GIS-based, nationally standardized, loss estimation tool developed by FEMA. HAZUS-MH includes earth-quake, wind, hurricane, and flood loss estimate components.

Infrastructure

Refers to the public facilities of a community that have a direct impact on the quality of life. Infrastructure includes communication technology, such as phone lines or Internet access; vital services, such as public water supplies and sewer treatment facilities; and an area’s transportation system: airports, heliports, highways, bridges, tunnels, roadbeds, overpasses, railways, bridges, rail yards, depots; and waterways, canals, locks, seaports, ferries, harbors, drydocks, piers, and regional dams.

Infrastructure Support

Federal financial assistance provided under the Stafford Act to State and local governments or to eligible private nonprofit organizations for disaster-related
requirements. Also known as Public Assistance (PA).

**Jurisdiction**

A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., Federal, State, tribal, local boundary lines) or functional (e.g., law enforcement, public health).

**Loss estimation**

Forecasts of human and economic impacts and property damage from future hazard events, based on current scientific and engineering knowledge.

**Memorandum of Agreement (MOA)**

A non-binding statement that defines the duties, responsibilities, and commitment of the different parties or individuals; provides a clear statement of values, principles, and goals; and establishes an organizational structure to assist in measuring and evaluating progress.
Mitigate

To cause something to become less harsh or hostile; to make less severe or painful.

Mitigation

Activities providing a critical foundation in the effort to reduce the loss of life and property from natural and/or manmade disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction, and repeated damage. These activities or actions, in most cases, will have a long-term sustained effect.

Mitigation actions

Activities or projects that help achieve the goals and objectives of a mitigation plan (also known as mitigation measures).

Mitigation plan

The document that articulates results from the systematic process of identifying hazards and evaluating vulnerability, identifying goals, objectives, and actions to
reduce or eliminate the effects of identified hazards, and an implementation plan for carrying out the actions.

**Objectives**

Objectives define strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific and measurable.

**Open space preservation**

Preserving undeveloped areas from development through any number of methods, including low-density zoning, open space zoning, easements, or public or private acquisition. Open space preservation is a technique that can be used to prevent flood damage in flood-prone areas, land failures on steep slopes or liquefaction-prone soils, and can enhance the natural and beneficial functions of floodplains.

**Ordinance**

A term for a law or regulation adopted by a local government.
Planning
The act or process of making or carrying out plans; the establishment of goals, policies, and procedures for a social or economic unit.

Policy
A course of action or specific rule of conduct to be followed in achieving goals and objectives.

Prevention
Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and, as appropriate, specific law enforcement.
operations aimed at deterring, preemption, interdicting, or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.

**Probability**

A statistical measure of the likelihood that a hazard event will occur.

**Recovery**

The development, coordination, and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private-sector, nongovernmental, and public assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental, and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents.

**Regulation**

Most states have granted local jurisdictions broad regulatory powers to enable the
enactment and enforcement of ordinances that deal with public health, safety, and welfare. These include building codes, building inspections, zoning, floodplain and subdivision ordinances, and growth management initiatives.

Resources

Resources include the people, materials, technologies, money, etc., required to implement strategies or processes. The costs of these resources are often included in a budget.

Response

Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or
consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice.

Risk

The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to a specific type of hazard event. It also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.
Stafford Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL100-107 was signed into law November 23, 1988 and amended the Disaster Relief Act of 1974, PL 93-288. The Stafford Act is the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and its programs.

STAPLE(E) An acronym for the criteria that can be used by a community in selecting an appropriate mitigation strategy: Social, Technical, Administrative, Political, Legal, and Economic/Environmental.

State Hazard Mitigation Officer (SHMO)

The state government representative who is the primary point of contact with FEMA, other state and federal agencies, and local units of government in the planning and implementation of pre- and post-disaster mitigation activities.
Strategy
The general plan or direction selected to accomplish incident objectives.

Tornado
A violently rotating column of air extending from a thunderstorm to the ground.

Vulnerability
Describes how exposed or susceptible an asset is to damage. Vulnerability depends on an asset’s construction, contents, and the economic value of its functions. Like indirect damages, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power—if an electric substation is flooded, it not only affects the substation but a number of businesses as well. Often, indirect effects can be much more widespread and damaging than direct ones.

Zoning
The division of land within a local jurisdiction by local legislative regulation
into zones of allowable types and intensities of land uses.

**Zoning ordinance**

Designation of allowable land use and intensities for a local jurisdiction. Zoning ordinances consist of two components: a zoning text and a zoning map.
List of FEMA How-to Guides

The Federal Emergency Management Agency (FEMA) has developed a series of mitigation planning "how-to" guides to assist states, communities, and tribes in enhancing their hazard mitigation planning capabilities.

These guides are designed to provide the type of information state and local governments need to initiate and maintain a planning process that will result in safer communities. These guides are applicable to states and communities of various sizes and varying ranges of financial and technical resources.

This how-to series is not intended to be the last word on any of the subject matter covered; rather, it is meant to provide easy to understand guidance for the field practitioner. In practice, these guides may be supplemented with more extensive technical data and the use of experts when necessary.
The following is a list of the guides including a description of the topics that each guide covers.

**Getting Started: Building Support for Mitigation Planning** (FEMA 386-1)

This guide covers getting started with the mitigation planning process, including important considerations for how to organize efforts to develop an effective mitigation plan. It also addresses creating a mitigation planning team that has broad representation and developing public support for the planning.
Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 386-2)

This guide provides detailed, step-by-step instructions on the procedures which are part of the Assessing Risks phase of the Natural Hazard Mitigation Planning Process. The intent of this how-to guide is to help its users develop a baseline estimate of possible losses throughout their community or state from one event.

Developing the Mitigation Plan: Identifying Mitigation Actions and Implementation Strategies (FEMA 386-3)

This guide covers setting mitigation priorities and goals for a community or state and writing the plan. It addresses developing goals and objectives that will guide the identification of actions to address the potential losses identified in Phase 2. It also discusses formulating an implementation strategy, identifying responsible agencies, and setting
appropriate time frames for completing mitigation actions. The final step in this phase is writing a plan that documents the planning process and includes an implementation strategy.

**Bringing the Plan to Life: Implementing the Hazard Mitigation Plan** (FEMA 386-4)

This guide covers implementing the mitigation plan, including project funding and maintaining a dynamic plan that changes to meet new developments. It also serves to lead communities and states through the formal adoption of the plan and discusses how to implement, monitor, and evaluate the results of mitigation actions to keep the mitigation plan relevant over time.
Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)

This guide covers evaluating potential mitigation measures through the use of benefit-cost analysis and other techniques. The purpose of this guide is to help local jurisdictions understand how to apply the concepts of Benefit-Cost Review to the prioritization of mitigation actions, and thereby meet the requirement of the Rule.

Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning (FEMA 386-6)

This guide covers incorporating special considerations into hazard mitigation planning for historic structures and cultural resources. The guide outlines specific steps for how communities can harness their knowledge, talent, and energy to create a secure future for historic resources.
**Integrating Manmade Hazards into Mitigation Planning** (FEMA 386-7)

This guide covers incorporating considerations for human-caused hazards into hazard mitigation planning. This guide serves as a resource to help its users expand the scope of their plan to address terrorism and technological hazards.

**Multi-Jurisdictional Mitigation Planning** (FEMA 386-8)

This guide covers using multi-jurisdictional approaches to mitigation planning.
Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects (FEMA 386-9)

The purpose of this guide is to help a community move from the hazard mitigation plan to fully developing those mitigation projects that may be implemented using FEMA Hazard Mitigation Assistance as appropriate.

This guide explains the process of developing the scope of a project and identifies the key components of a successful mitigation project funding application. It also describes how to identify funding available through FEMA and other agencies, and discusses the process of preparing an application for FEMA grant funding. This guide shows how valuable information contained in the hazard mitigation plan can be used to fully develop the project scope of work and apply for grant funding, as well as how to use lessons learned through the implementation of mitigation projects to improve the hazard mitigation plan when it is updated.