

Session No. 37

Course Title: Coastal Hazards Management

Session Title: Hazard Mitigation Planning I

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Time: 70 minutes

Objectives:

- 37.1** Become familiar with the hazard mitigation planning provisions of the Disaster Mitigation Act of 2000.
 - 37.2** Discuss the benefits of hazard mitigation planning.
 - 37.3** Overview of the mitigation planning process.
 - 37.4** Become familiar with the first step in the mitigation planning process: “Identify Potential Natural Hazards.”
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Scope:

During the next few sessions, the Instructor will generate class discussions about hazard mitigation planning as mean of decreasing the vulnerability of coastal communities. The Mitigation Planning sessions will be very participatory. A short introductory lecture about the basic concepts will be augmented by in-class exercises and student presentations that will take students through the mitigation planning process.

The planning exercises used in these sessions are based on workshops conducted by the North Carolina Division of Emergency Management (NCEM) to assist local governments prepare hazard mitigation plans as required under the Disaster Mitigation Act of 2000. The major reading assignment for these sessions – *Keeping Natural Hazards from Becoming Disasters: A Mitigation Planning Guidebook for Local Governments* -- was prepared by NCEM for use during these workshops. The *Guidebook* was prepared for a wide range of users, from certified planners working in large municipalities with vast resources at their disposal, to non-planners, including emergency management personnel, town clerks, county managers, and other local employees that may not necessarily have a planning background. While the *Guidebook* was not designed specifically for use in

coastal areas, the basic procedures and techniques are applicable to a wide range of hazard locations.

Many of the exercises to be conducted during the mitigation planning sessions will involve the creation of maps. Basic instructions for preparing these maps are included in the *Guidebook*, along with some sample maps. Depending upon the level of expertise of the students and/or time constraints, the Instructor may wish to require either more sophisticated or simplified versions of the mapping steps for student presentations. The objective to be learned is the need for maps to graphically illustrate the analysis being conducted. Whether the maps are created using Geographic Information Systems (GIS) or pencil and paper is not critical.

The first of the Mitigation Planning sessions, No. 37, will serve as an introduction and overview of the concept of mitigation planning. The Instructor will select a coastal locality that will be used to illustrate the planning process. Session 37 will also include a discussion of the Disaster Mitigation Act of 2000's planning requirements for state and local governments. The Instructor will then give a brief lecture on the first step in the planning process, "Identify Potential Natural Hazards."

Session No. 38 will begin with student presentations on the planning step introduced in Session 37, "Identify Potential Natural Hazards." The Instructor will then lecture on the Step Two of the planning process: "Assess Hazard Vulnerability."

Session No. 39 will begin with student presentations on "Assess Hazard Vulnerability." The Instructor will then lecture on the Step Three of the planning process: "Assess Community Capability."

Session No. 40 will begin with student presentations on "Assess Community Capability." The Instructor will then lecture on the Step Four in the planning process: "Form Interim Conclusions" and Step Five "Establish Values and Goals."

Session No. 41 will consist of a classroom debate regarding "Formulating Interim Conclusions" and an in-class group exercise on "Establishing Values and Goals." The Instructor will then lecture on Step Six of the planning process: "Formulate Mitigation Policies."

Session No. 42 will begin with student presentations on "Formulate Mitigation Policies." The Instructor will then lecture on Step Seven "Establish Procedures for Monitoring, Evaluating, and Reporting Progress," Step Eight "Establish Procedures for Revisions and Updates" and Step Nine "Adoption."

Session No. 43 will begin with student presentations on "Monitoring, Evaluating and Reporting Progress," "Revisions and Updates" and "Adoption." The Instructor will then lecture and lead a class discussion summarizing the entire planning process, and its applicability to mitigation of coastal hazard impacts.

Supplemental Considerations:

The sessions on planning focus primarily on hazard mitigation plans that are prepared as distinct, free-standing plans. Many local communities prepare such stand-alone plans as a prerequisite for receipt of federal hazard mitigation funds. However, there are many other ways to develop local mitigation plans. Some communities incorporate a hazard mitigation element into their local land use or comprehensive plan. Other communities tie the mitigation plan to the local emergency operations plan. Some jurisdictions may include other hazard elements (if multiple types of hazards are present in that locality) to the local floodplain management plan. There is no one right way to prepare a mitigation plan – the important thing is that the mitigation plan serves to guide development decisions so that vulnerability to natural hazards is reduced.

The planning sessions in this course focus primarily on hazard mitigation planning at the local level. It is important to remember that states are also required to prepare plans under the Disaster Mitigation Act of 2000. While additional factors must be considered when preparing a state-wide plan, the essential concepts and many of the actual planning steps are identical whether the plan is prepared at the state or local level. Some states rely heavily on plans made by local jurisdictions when assembling the state plan, particularly for hazard assessment and strategy formulation. In fact, the DMA 2000 requires a certain level of integration of local plans for state plan approval.

Note, too, that the *Guidebook* provides instructions to assist local communities that wish to prepare a plan that fulfills the criteria for multiple programs, particularly the Community Rating System (CRS). The lecture material found in this course will not dwell on the particulars of meeting CRS planning requirements; however, the reading materials will cover these requirements in a fair amount of detail.

Readings:

Student and Instructor Reading:

NC Division of Emergency Management, Hazard Mitigation Section, Risk Assessment and Planning Branch. May, 2003. *Keeping Natural Hazards From Becoming Disasters: A Mitigation Planning Guidebook for Local Governments*, pp. 1-21.

Disaster Mitigation Act of 2000 (P.L. 106-390) and attendant regulations (Interim Final Rule 44 CFR 201.4 – 201.5, published by FEMA on Feb.28, 2002).

Additional Readings:

FEMA. 2002. *Getting Started: Building Support for Mitigation Planning*. Washington, D.C.: FEMA 386-1.

FEMA. 2001. *Understanding Your Risks: Identifying Hazards and Estimating Losses*. Washington, D.C.: FEMA 386-2.

PowerPoint Slides

PowerPoint 37.1	Disaster Mitigation Act of 2000 (DMA2000)
PowerPoint 37.2	DMA2000 Section 322
PowerPoint 37.3	State Hazard Mitigation Plans
PowerPoint 37.4	Benefits of Hazard Mitigation Planning
PowerPoint 37.5	Organize to Prepare the Plan
PowerPoint 37.6	Mitigation Planning Tree
PowerPoint 37.7	Steps in the Planning Process
PowerPoint 37.8	Identify Potential Natural Hazards: What is the Community's Problem?
PowerPoint 37.9	Worksheet #1: Hazard Identification and Analysis
PowerPoint 37.10	Likelihood of Occurrence
PowerPoint 37.11	Measures of Hazard Intensity
PowerPoint 37.12	Hazard Impact
PowerPoint 37.13	Sources of Data

General Requirements:

Session 37 should be presented as lecture, supplemented by PowerPoint slides. At the end of Session 37, the Instructor will divide the class into groups and make assignments for presentations to be made on each of the main steps in the planning process.

During sessions 38 through 43, students will make presentations for the first 30 minutes of class on the topic introduced in the previous session. The Instructor will then give a brief lecture, supplemented by PowerPoint slides to introduce the concepts that will be covered by student presentations in the following session.

The Instructor should choose a coastal community (either a county or municipality) on which to base the student activities. Preferably, the community chosen as the model should be nearby or one with which the students are familiar. Students will be expected to gather data regarding natural hazards, past disasters, development patterns, local land use policies, maps and other pertinent information in order to carry out the mitigation planning steps and to prepare their presentations. If time is a limiting factor, students may create hypothetical "data" for the coastal community chosen. The point is for the students to learn about the tasks involved in preparing a local hazard mitigation plan.

Assignments for group presentations are as follows:

Group 1 (to be presented during Session No. 38):

Step 1: “Identify Potential Natural Hazards”

Group 2 (to be presented during Session No. 39):

Step 2: “Assess Vulnerability”

Group 3 (to be presented during Session No. 40)

Step 3: “Assess Community Capability”

Class Debate and Discussion during Session No. 41:

Step 4: “Form Interim Conclusions”

Step 5: “Establish Values and Goals”

Group 4 (to be presented during Session No. 42)

Step 6: “Formulate Mitigation Policies”

Group 5 (to be presented during Session No. 43)

Step 7: “Establish Procedures for Monitoring, Evaluating, and Reporting Progress”

Step 8: “Establish Procedures for Revisions and Updates”

Step 9: “Adoption”

It is important that the students perform each of the steps in the planning process, although each group will be responsible for preparing a class presentation for only one of the steps. The nine steps of the planning process that are described in the *Guidebook* are designed to be followed sequentially. Each step builds on work performed in the previous steps, and the students must go through each step in order to comprehend the planning process in its entirety. Every group should be prepared to critique, pose questions, and summarize its own version of the planning step(s) being presented during each of the mitigation planning sessions.

Objective 37.1 **Become familiar with the hazard mitigation planning provisions of the Disaster Mitigation Act of 2000.**

Requirements:

The content should be presented as lecture, supported by PowerPoint slides.

PowerPoint 37.1 Disaster Mitigation Act of 2000 (DMA2000)

PowerPoint 37.2 DMA2000 Section 322

PowerPoint 37.3 State Hazard Mitigation Plans

Remarks:

Disaster Mitigation Act of 2000

[PowerPoint 37.1 Disaster Mitigation Act of 2000 (DMA2000)]

- On **October 30, 2000**, the President of the United States signed into law the Disaster Mitigation Act of 2000 (DMA2000) to **amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988**.
- This legislation reinforces the importance of **pre-disaster mitigation planning** to reduce the Nation's disaster losses, and is aimed primarily to control and streamline the administration of federal disaster relief and mitigation programs.
- The Federal Emergency Management Agency (**FEMA**) is responsible for administering the DMA2000. FEMA issues regulations and guidelines to implement the provisions of the Act.

[PowerPoint 37.2 DMA2000 Section 322]

- **Section 322** provides a new and revitalized approach to mitigation planning by specifically doing the following:
 - Establishes a new requirement for local and tribal mitigation plans;
 - Authorizes up to 7% of the Hazard Mitigation Grant Program (HMGP) funds available to a state to be used for development of state, local and tribal mitigation plans; and
 - Provides for states to receive an increased percentage of HMGP disaster funds (from 7.5% to 20%) if, at the time of the declaration of a major disaster, they have in effect an approved State Mitigation Plan that meets the factors in the law.

[PowerPoint 37.3 State Hazard Mitigation Plans]

- Under the DMA2000, **state hazard mitigation plans** are expected to outline processes to:
 1. Identify the natural hazards, risks, and vulnerabilities of areas in the state;
 2. Support development of local mitigation plans;
 3. Provide for technical assistance to local and tribal governments for mitigation planning; and

4. Identify and prioritize mitigation actions that the state will support, as resources become available.
- States may develop a **Standard Plan**, which allows them to receive 7.5% of federal Stafford Act disaster expenditures, or an **Enhanced Plan**, which allows them to receive greater funding (20%) for hazard mitigation planning and projects.
 - An approved 322 Plan is **required** for eligibility to receive funds from the **Pre-Disaster Mitigation Program (PDM)** and the **Flood Mitigation Assistance Program (FMA)**, both available annually to state and local governments.
 - **Without an approved 322 plan**, states, and all eligible local jurisdictions, would be **ineligible to receive a variety of disaster recovery programs**, including the Public Assistance Program to repair or replace damaged public facilities, and the Fire Management Assistance Program to help the state and communities recover the costs of fighting major wildland fires.
 - However, the state and local communities would remain eligible for certain emergency assistance and Human Services programs available through the Stafford Act.
 - Clearly, Section 322 of the DMA2000 places greater emphasis on state and local mitigation planning, further moving federal disaster assistance from the traditional, reactive, disaster-based formula to a proactive, pre-disaster approach.
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Objective 37.2 Discuss the benefits of hazard mitigation planning.

Requirements:

The content should be presented as lecture, supported by PowerPoint slides.

PowerPoint 37.4 Benefits of Hazard Mitigation Planning

Remarks:

Why Prepare a Hazard Mitigation Plan?

- Mitigation plans, especially those that are prepared well in advance of a hazard event, can help a state or local government **avoid the ad-hoc approach** to mitigation that occurs when individual projects are carried out in isolation from each other or from other state and local activities.
- By providing an overall context for mitigation, a mitigation plan can help to **articulate a vision** of what the state or local community wants to look like in the

future. The plan can establish goals, objectives, policies, and strategies for attaining that vision in a thoughtful and methodical way.

- In this way, the mitigation plan can serve to **educate the public** and to **guide policy makers** so that decisions regarding development, growth, and infrastructure are made with an eye towards reducing vulnerability to natural hazards. Such informed decision-making is more likely to increase the resiliency of the state or community as a whole.
- Another pragmatic reason for preparing a mitigation plan appears in the **DMA2000** itself: state and local governments must have a mitigation plan that meets FEMA's approval in order to be eligible for certain federal disaster recovery program funds.
- Mitigation plans are required for or facilitate access to many government programs, such as:
 - Hazard Mitigation Grant Program (HMGP)
 - Flood Mitigation Assistance Program (FMA)
 - Public Assistance Program
 - Small Business Administration Disaster Assistance Program
 - Community Development Block Grant Program
 - National Hurricane Program
 - National Earthquake Hazards Reduction Program
 - Community Rating System (CRS)
- Hazard mitigation plans may also partially fulfill requirements under various **state programs that mandate local plans** for land use, growth management, or coastal management.
 - *For example, the **North Carolina Coastal Area Management Act** (CAMA) requires coastal counties to prepare a local land use plan, a section of which must address natural hazard issues.*
 - *For example, the **Washington State Growth Management Act** requires all cities, towns and counties in the State to identify and protect the function and values of critical areas, which include areas that are frequently flooded, geologically hazardous areas, fish and wildlife habitat conservation areas, wetlands, and recharge areas for aquifers used for potable water.*

Objective 37.3 Overview of the mitigation planning process.

Requirements:

The content should be presented as lecture, supported by PowerPoint slides.

PowerPoint 37.5	Organizing to Prepare the Plan
PowerPoint 37.6	Mitigation Planning Tree
PowerPoint 37.7	Steps in the Planning Process

Remarks:

Keeping Natural Hazards From Becoming Disasters: A Mitigation Planning Guidebook for Local Governments

- The material that has been assigned as class reading was developed by the State of North Carolina as a form of technical support to local governments for preparing local hazard mitigation plans, as required under Section 322 of the DMA2000. The materials, therefore, are slanted towards planning at the local level. **The process itself, however, is applicable to both state and local mitigation planning.**
- The guidebook includes sample maps, worksheets, and step-by-step instructions for developing a local hazard mitigation plan. The guidebook also includes suggestions for sources of the information and data that is needed for each planning step.
- We will be using the guidebook to go through the mitigation planning process for a nearby coastal community: [insert name of selected coastal community]. Students will be making group presentations on the planning steps as described in the Guidebook.
- The students are encouraged to use the worksheets and sample maps for their own presentations. Data can be real data gathered for the selected community, or hypothetical data of the type that would be found for that community if students had the time and resources to devote to data gathering.

Organize to Prepare the Plan

[PowerPoint 37.5 Organize to Prepare the Plan]

- **Marshalling Resources:** Before embarking on the planning process itself, the community must identify and gather the resources necessary to carry out all the steps involved.
 - Who will be **responsible for the plan?**

- Some communities rely on professional **consultants** to prepare the plan
 - A **local official, employee, or citizen** must be ultimately in charge
- Many communities establish an **advisory committee** or task force to meet regularly and oversee the mitigation planning process.
- It is also important to **coordinate with other agencies** within the local government, and with other jurisdictions. This is particularly important if the plan is to be a **multi-jurisdictional plan**, that is, one that covers all the local governments in a county or region.
- **Key Stakeholders:** It is also important to involve key stakeholders at the very beginning of the planning process.
 - These may include residents of the community that will be affected by mitigation policies and activities, homeowners and business owners that have been impacted by past disasters, developers or major employers in the area, neighborhood groups, community leaders, among others.
- **Public Participation:** Regulations of the DMA2000 specify a minimum level of public participation in the planning process. Public meetings, workshops, informational presentations, resident mailings and other forms of communication are often effective ways to solicit citizen participation.
- **Documentation:** The planning process, including efforts to engage the public, must be documented fully in order to meet FEMA planning criteria.

The “Mitigation Planning Tree”

[PowerPoint 37.6 Mitigation Planning Tree]

- The planning process can be likened to a tree. The **tree analogy** emphasizes the **interrelations** among each planning step and the **dynamism** of the final plan. Each of the steps in the process is designed to be supported by the previous step, and in turn, provides support for the next.

[PowerPoint 37.7 Steps in the Planning Process]

- **Step One: Identify Potential Natural Hazards**
 - The first “root” step involves identification of the natural hazards that affect the community. Hazards will be analyzed in terms of:

- likelihood
 - intensity
 - potential impact
- Data that must be gathered for this step include:
 - Past hazard events
 - State and federal hazard data
- **Step Two: Assess Vulnerability**
 - The second “root” step requires analysis of the community’s vulnerability to the hazards identified in Step One.
 - Potential locations of hazard damage are mapped
 - Existing development and potential future development are identified to see where development intersects with hazard areas
 - Critical facilities and community assets are located
 - Geographic Planning Areas are established
 - Data that must be gathered for this step include:
 - Topographic maps
 - Hazard maps
 - Tax assessment and census data
 - Land use maps
 - Zoning maps
 - Critical facilities inventories and maps
- **Step Three: Assess Community Capability**
 - The final “root” step is an assessment of the community’s capability to carry out mitigation strategies.
 - Capability includes taking a look at the institutional, fiscal, and political conditions in the community
 - The capability assessment reviews policies, practices, regulations, and programs that can both facilitate mitigation, as well as those that hinder mitigation action, or which increase the community’s vulnerability.
 - Data that is needed for this step include:
 - Local land use policies and regulations
 - Local comprehensive or land use plan
 - Capital improvements plan
 - Local budget and fiscal documents
- **Step Four: Form Interim Conclusions:**

- This is the “ground level” of the planning process. Steps One, Two, and Three presented a snapshot of the community; Step Four allows the community to decide, based on the analyses performed thus far, whether a mitigation plan is necessary.
- **Step Five: Establish Values and Goals**
 - Goal statements serve as the “trunk” of the mitigation planning tree. Goals and values are the central supporting element of the entire plan.
 - Goals must be crafted carefully so that they are not overly ambitious (they should be attainable), but also so that they provide an incentive for the community to move forward and improve its resiliency.
 - Resources to help carry out this step include:
 - Community documents that contain existing goal statements
 - Local policy makers’ views
 - Citizen contributions
- **Step Six: Formulate Mitigation Policies**
 - The policies form the “branches” of the mitigation planning tree. Policies put into action the goals created in the previous step.
 - Strategies in various mitigation categories are formulated.
 - Policies must be selected according to established criteria, prioritized, and applied to Geographic Planning Areas.
 - Policies must also be implemented and funded
- **Step Seven: Establish Procedures for Monitoring, Evaluating, and Reporting Progress on the Plan**
 - This step serves as the “leaves” on the mitigation tree: constantly growing, keeping the tree alive.
 - The plan must not remain static, sitting on the shelf. The plan must be periodically reviewed to check whether policies are being implemented, and goals are being accomplished.
 - This step involves establishing benchmarks and indicators to check on progress of the plan.
 - This step also involves setting responsibility for progress reports.

- **Step Eight: Establish Procedures for Revisions and Updates of the Plan**
 - Changing conditions in the community require changes in the plan as well.
 - The plan should be reviewed annually, and revised and updated if necessary.
 - FEMA requires a formal review every five years.

- **Step Nine: Adoption**
 - The local government must formally adopt the mitigation plan to meet DMA2000 criteria.
 - Documentation of the adoption process is required.
 - Adoption more readily assures that the plan will be taken seriously in the community, and fully implemented.

Objective 37.4 Become familiar with the first step in the mitigation planning process: “Identify Potential Natural Hazards.”

Requirements:

The content should be presented as lecture, supported by PowerPoint slides.

- PowerPoint 37.8** Identify Potential Natural Hazards: What is the Community’s Problem?
- PowerPoint 37.9** Worksheet #1: Hazard Identification and Analysis
- PowerPoint 37.10** Likelihood of Occurrence
- PowerPoint 37.11** Measures of Hazard Intensity
- PowerPoint 37.12** Hazard Impact
- PowerPoint 37.13** Sources of Data

Remarks:

- Identifying the natural hazards that could potentially impact the community is the first step in the planning process. After all, the community must **be aware of the problems it faces** in order to take any action.

[PowerPoint 37.8 Identify Potential Natural Hazards: What is the Community’s Problem?]

- The following **information** will be obtained in this step:
 - The **type** of natural hazards that threaten the community
 - The **characteristics** associated with each hazard
 - The **likelihood** the hazards will occur
 - The likely magnitude or **intensity** of the hazards
 - The potential **impacts** on the community

- **Worksheet #1: Hazard Identification and Analysis**

[PowerPoint 37.9 Worksheet #1: Hazard Identification and Analysis]

- **Worksheet #1**, which appears in the Guidebook, will help you identify the potential natural hazards that could occur in our chosen coastal community.

- List the **Types of Natural Hazards** that could occur in the community.
 - Some types of hazards have more than one **associated element**. Hurricanes involve high winds, storm surge, flooding, etc. Each of these elements could impact the community, and need to be identified as well.

 - The worksheet should be filled out with *all* the potential hazards in the community. While many local and state governments focus on one particular hazard, FEMA encourages the creation of **multi-hazard plans** that include both regularly occurring hazards, as well as those which may be less frequent, but which could have devastating impacts.

- Indicate the **Likelihood of Occurrence** for each hazard identified

[PowerPoint 37.10 Likelihood of Occurrence]

- Based on regional data and local historical evidence, the likelihood that each hazard will occur should be estimated and recorded on Worksheet #1.
- Frequency of occurrence can help determine how likely a particular hazard can be:

Likelihood	Frequency of Occurrence
Highly Likely	Near 100% probability in the next year
Likely	Between 10% and 100% probability in the next

	year, or at least one chance in the next 10 years
Possible	Between 1% and 10% probability in the next year, or at least one chance in the next 100 years
Unlikely	Less than 1% probability in the next year, or less than one chance in the next 100 years.

- Note that **Flood Frequency** is a **statistical expression** of the average time period between floods equaling or exceeding a given magnitude. For example, a 100-year flood has a magnitude expected to be equaled or exceeded in any given year. The term is often used interchangeably with “recurrence interval.”
- Indicate the **Hazards Intensity**
 - Intensity is a measure of the strength of a hazard event. The intensity (also referred to as severity) of a given hazard event is usually determined using technical measures specific to the hazard.

[PowerPoint 37.11 Measures of Hazard Intensity]

- Scales have been created to rate levels of intensity for several types of hazards.
 - The Modified Mercalli scale ranks **earthquakes**
 - The Fujita scale rates **tornadoes**
 - The Dolan-Davis scale ranks **nor’easters**
 - The Saffir-Simpson scale ranks **hurricanes**
 - **Flood** intensity is measured in terms of water depth and velocity
 - **Wildfire** intensity is expressed as fire line intensity (the rate fire releases heat), fire spread (feet per second) and flame length
 - In Worksheet #1, intensity can be ranked according to mild, moderate or severe.
- Estimate **Level of Impact**

[PowerPoint 37.12 Hazard Impact]

- Impact measures the amount of damage that could occur from a hazard event.
- Impact includes an estimation of the magnitude of the event, the geographic extent, and the amount of human activity (buildings, people) in the impacted area.

Level	Area Affected	Impact
Catastrophic	More than 50%	<ul style="list-style-type: none"> ▪ Multiple deaths ▪ Complete shutdown of facilities for 30 days ▪ More than 50% of property severely damaged
Critical	25 – 50%	<ul style="list-style-type: none"> ▪ Multiple severe injuries ▪ Complete shutdown of critical facilities for at least 2 weeks ▪ More than 25% of property severely damaged
Limited	10 – 25%	<ul style="list-style-type: none"> ▪ Some injuries ▪ Complete shutdown of critical facilities for more than 1 week ▪ More than 10% of property severely damaged
Negligible	Less than 10%	<ul style="list-style-type: none"> ▪ Minor injuries ▪ Minimal quality-of-life impact ▪ Shutdown of critical facilities and services for 24 hours or less ▪ Less than 10% of property severely damaged

- Document the Community’s **Hazard History**
 - In order to formulate suppositions as to possible future hazards, the community must be aware of past hazard events.
 - A hazard history can be a narrative description, accompanied by maps, of all significant hazard events in the past. How far back into the past the hazard history delves is a matter of time, resources, and availability of information.
 - The hazard history should include information on the dates, the extent of the past hazards, their locations within the community, their duration, and their impacts.

- **Formulate Conclusions**
 - The hazards that have been identified must be **ranked and prioritized** according to how serious they are for the community.
 - This final assessment will allow the community to **focus** on those hazards with the most potential to impact the community, and will be the targets for later steps in the planning process, including the formulation of mitigation strategies and policies.

[PowerPoint 37.13 Sources of Data]

- **Sources of Data**

- There is a wide variety of data sources available in most communities to carry out Step One of the mitigation planning process.

- **Local Sources:**

- Local historical evidence and community knowledge
- Newspaper accounts
- Local library
- Local archives
- Weather records
- First-hand knowledge of residents
- Local weather stations
- Local floodplain manager
- Local planning office
- Local emergency manager

- **State Sources**

- State emergency management office
- State weather or climatology office
- State planning department
- State floodplain management office/NFIP Coordinator
- State Department of Transportation

- **Federal Sources**

- FEMA
- US Army Corps of Engineers
- National Weather Service
- National Oceanic Atmospheric Administration (NOAA)
- NOAA Coastal Services Center
- US Natural Resources Conservation Service

- **Regional Sources**

- Regional planning organizations
- Sanitary, drainage or soil and water conservation districts
- Watershed or River Basin organizations
- Universities