



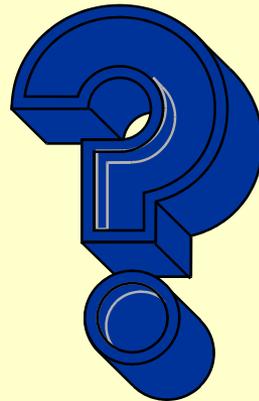
Hazard Analysis

Objectives

- Identify hazards that threaten your community.
- Develop a hazard profile.
- Quantify and prioritize risks.

Question

What types of information would you hope to gain from a hazard analysis?



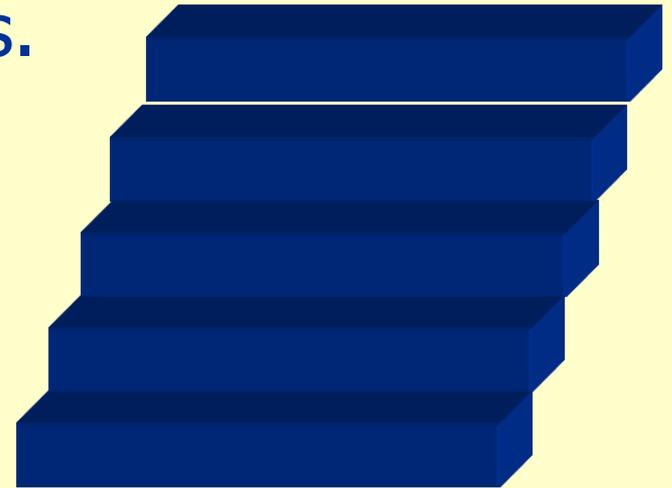
Hazard Analysis

Provides information about:

- What can occur.
- How often it is likely to occur.
- The damage it is likely to cause.
- How it is likely to affect the community.
- How vulnerable the community is to the hazard.

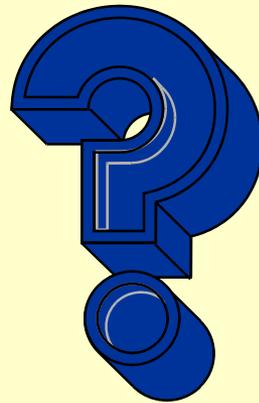
Hazard Analysis Steps

1. Identify hazards.
2. Profile each hazard.
3. Develop a community profile.
4. Determine vulnerability.
5. Create and apply scenarios.



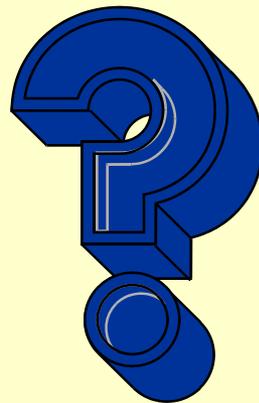
Question

What hazards are you aware of in your community?



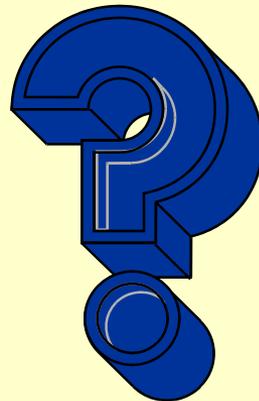
Question

How did you know what hazards to mention?



Question

What other sources might you consult for hazard information?



Sources of Hazard Information

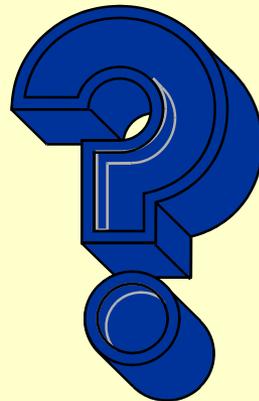
- State agencies
- Professional/scientific organizations
- State Library
- National Weather Service (NWS)
- Local newspaper files and archives
- Historical societies
- Anecdotal information from long-time residents
- The web (LLIS.gov)
- State and Federal Planning Documents

Ohio HIRA – Top Ten

- Flood/Flash Flood/Seiche Wave
- Tornado/Windstorm
- Emerging Diseases
- Earthquakes
- Snow/Ice/Hail/Sleet
- Landslide, Mudslide, Subsidence
- Building/Structure Collapse
- Water Control Structure Failure
- Product Defect or Contamination
- Terrorism (CBRNE and Cyber)

Question

What types of changes in a community might affect the hazard analysis?

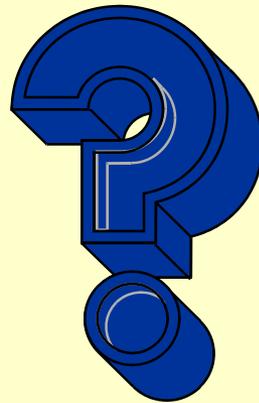


Changes in Hazards

- New mitigation measures (e.g., stronger building codes)
- The opening or closing of facilities (e.g., hazardous materials facilities)
- Local development activities
- Climatic changes
- Terrorist threats
- New hazards
 - ◆ Mandates

Questions

What characteristics of a hazard would you want to know in planning for it?





Hazard Profile

- Probability / Frequency of occurrence
- Magnitude (physical force)
- Intensity / Severity (impacts or damages)
- Time available to warn
- Speed of onset
- Location(s)
- Size of affected area
- Duration
- Cascading effects

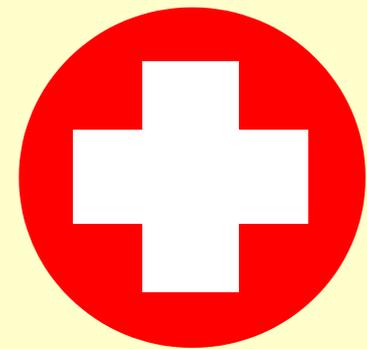
Quantifying Risk

- Identify the elements of the community (e.g., populations, facilities) at risk.
- Develop response priorities.
- Assign severity ratings.
- Compile risk data into community risk profiles.

Risk is the predicted impact that a hazard would have on people, services, and facilities in the community.

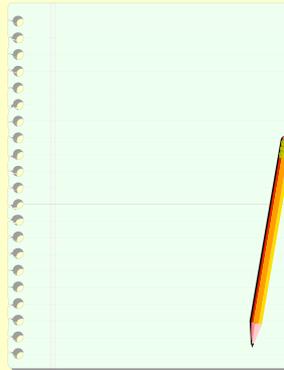
Response Priorities

- Priority 1: Life safety (including hazard areas, high-risk populations, and search and rescue situations)
- Priority 2: Essential facilities
- Priority 3: Critical infrastructure



Prioritizing Risk

- Assign a value for each hazard characteristic.
- Average the value for each characteristic to determine overall risk for the hazard.



Creating Scenarios

Describe the:

- Initial warning of the event.
- Potential overall impact on the community.
- Potential impact on specific community sectors.
- Potential consequences, such as damage, casualties, loss of services.
- Actions and resources needed to deal with the situation.

Summary

A hazard analysis determines:

- What can occur.
- How often it is likely to occur.
- The damage it is likely to cause.
- How it is likely to affect the community.
- How vulnerable the community is to the hazard.

5 steps in hazard analysis:

- Identify hazards.
- Profile each hazard.
- Develop a community profile.
- Determine vulnerability
- Create and apply scenarios.

Activity

- Split into to equal groups
- Each group must contain a member familiar with the greater Greenville area
- Use the Hazard Analysis worksheet to profile the following two hazards:
 - ◆ Tornado
 - ◆ Flash Flood
- Report out to the class when complete