

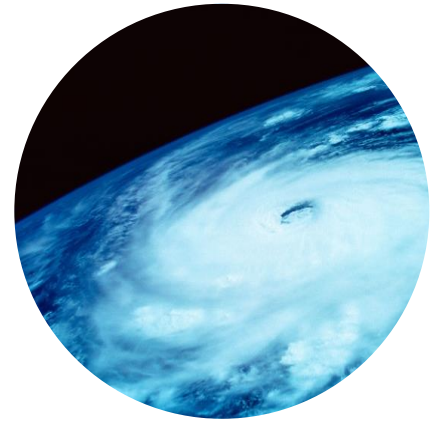


College & University Campus Hazard Mitigation Planning

Background

The Disaster Mitigation Act was signed by the President in October 2000.

- Incentive for states and local governments to undertake natural hazard mitigation planning.
- Promotes sustainability as a strategy for disaster resistance.
- Encourages state and local governments to work together, and facilitates cooperation between state and local authorities.
- Results in faster allocation of funding and more effective risk reduction projects.
- Colleges and Universities can plan in concert with similar planning efforts in their community.



Background

- Hazard Mitigation Plans identify cost effective mitigation measures to reduce or eliminate long-term risk to life and property from hazards
- Allows campuses to be eligible to receive non-emergency disaster assistance, including state and federal funding for mitigation and recovery projects
- Projects must be pre-identified in the hazard mitigation plan to receive future funding



Examples of Types of Hazards

- Avalanche
- Earthquake
- High winds
- Hurricanes
- Tornadoes
- Urban Fire
- Floods
- Extreme Heat/Cold
- Drought
- Winter storm
- Ice storm
- Hailstorm
- Tsunami
- Thunder/Lightning



Benefits of Hazard Mitigation Planning

Campuses benefit from Mitigation Planning by:

- Identifying cost effective actions for risk reduction that are agreed upon by stakeholders
- Focusing resources on the greatest risks and vulnerabilities
- Building partnerships by involving the campus community, organizations, local government and businesses
- Increasing education and awareness of hazards and risk
- Communicating priorities to local, state and federal officials
- Aligning risk reduction with other University objectives



Mitigation Planning Goals

- Promote the Safety of Students, Faculty, Staff and Visitors
- Minimize Hazard Impacts to Physical Assets and Operations
- Reduce or Avoid Long-Term Vulnerabilities from Hazards
- Fulfill Federal, State, Local and University Hazard Mitigation Planning Requirements
- University Eligibility for Future Funding



Hazard Mitigation Overview

- Hazard mitigation is defined as “any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards.”
- Hazard mitigation activities may be implemented prior to, during, or after an event; however, it is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs.
- Hazard mitigation is often focused on reducing repetitive loss, as many damaging events tend to occur in the same locations over time (e.g. flooding).



Hazard Mitigation Planning Process

- The planning process should closely follow FEMA's recommended four-stage approach.
- Initial and ongoing community support is critical.



Comprehensive Methodology

1. Planning Process

- Community engagement
- Build on existing information

2. Hazard Identification and Risk Assessment

- Systematically identifying hazards through the use of GIS and other tools to assess/prioritize risk

3. Mitigation Strategy

- Reach across broad skill sets to identify hazard mitigation goals
- Draw upon broad campus experience to develop mitigation strategies

4. Plan Review, Evaluation, and Implementation

- Work collaboratively and proactively with regulators

Hazard Mitigation Planning Process

Phase 1 – Organize Resources – identifies the resources available and necessary to complete the process:

- Assess community support
- Build the planning team
 - Identify and organize interested members of the community (stakeholders – on and off campus)
 - Identify the necessary technical expertise
- Establish a steering committee
 - Develop a mission statement
 - Hold a project kick-off meeting
 - Establish a meeting schedule and goals
 - Engage the public

Hazard Mitigation Planning Process

Phase 2 – Assess risks – identify the hazards that present risks to the campuses and the assets that are vulnerable to those hazards.

- Gather historical information, review existing university plans/reports, communicate with local planning experts, DEMHS and FEMA.
- Determine which hazards present the greatest risk to the campus community
 - Assess vulnerability
 - Create a base map to profile potential hazard events
- Inventory campus assets
 - Show how hazard events could impact campus (physically and operationally)
 - Estimate losses

Hazard Identification Example

Worksheet 3

Identify the Hazards

Date: _____ What kinds of natural hazards can affect you?

1. List the hazards that may occur on campus.

- Research newspapers and other historical records. (Check campus archives in library.)
- Review existing university and community plans and reports.
- Talk to the experts on campus and in your community, state, or region.
- Gather information on Internet Web sites.

In the hazard list below, put a check mark in the boxes on the left (Column I) beside all hazards that may occur on your campus.

2. Focus on the most prevalent hazards in your community or state, and your campus.

- Go to hazard Web sites.
- Locate your campus on the Web site map.
- Determine whether you are in a high-risk area. Get more localized information if necessary.
- In the hazard list below, put a check mark in the boxes on the right (Column II) beside all hazards that pose a significant threat to your community and/or campus.

Use this space to record information you find for each of the hazards you will be researching. Attach additional pages as necessary.

	I	II	Hazard or Event Description (Type of hazard, date of event, number of injuries, cost and types of damage, etc.)	Source of Information	Map Available for This Hazard?	Scale of Map
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>				
Coastal Erosion	<input type="checkbox"/>	<input type="checkbox"/>				
Coastal Storm	<input type="checkbox"/>	<input type="checkbox"/>				
Dam Failure	<input type="checkbox"/>	<input type="checkbox"/>				
Drought	<input type="checkbox"/>	<input type="checkbox"/>				
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>				
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>				
Extreme Heat	<input type="checkbox"/>	<input type="checkbox"/>				
Flood	<input type="checkbox"/>	<input type="checkbox"/>				
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>				
Hurricane	<input type="checkbox"/>	<input type="checkbox"/>				
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>				
Landslide	<input type="checkbox"/>	<input type="checkbox"/>				
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>				
Tornado	<input type="checkbox"/>	<input type="checkbox"/>				
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>				
Volcano	<input type="checkbox"/>	<input type="checkbox"/>				
Wildfire	<input type="checkbox"/>	<input type="checkbox"/>				
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>				
Other _____	<input type="checkbox"/>	<input type="checkbox"/>				
Other _____	<input type="checkbox"/>	<input type="checkbox"/>				
Other _____	<input type="checkbox"/>	<input type="checkbox"/>				

Natural Hazard	Frequency 0-5	Duration 0-5	Severity 0-5	Intensity 0-5	Probability F,D,I (40%)	Consequence S (60%)	Total	Ranking L,M,H,S
Coastal Storm	3	3	3	3	3.00	3.00	3.00	H
Earthquake	1	2	4	4	2.33	4.00	3.17	H
Hurricane	2	2	4	4	2.67	4.00	3.33	H
Tornado	1	1	4	4	2.00	4.00	3.00	H
Flood	2	2	2	2	2.00	2.00	2.00	M
Drought	1	2	1	1	1.33	1.00	1.17	L
Winter Storm	3	2	2	2	2.33	2.00	2.17	M
Thunderstorm/Lightning	3	2	2	2	2.33	2.00	2.17	M
Hailstorm	1	2	3	2	1.67	3.00	2.33	M
Wildfire	1	3	2	2	2.00	2.00	2.00	M
Extreme Heat	2	2	1	1	1.67	1.00	1.33	L
Dam Failure	1	1	3	1	1.00	3.00	2.00	M
Windstorm	2	1	2	1	1.33	2.00	1.67	L
Ice Storm	2	2	3	2	2.00	3.00	2.50	M

Hazard Mitigation Planning Process

Phase 3 – Develop the mitigation plan – lays out in detail the proposed mitigation actions.

- Establish priorities
 - Compare System mission with the results of the hazard identification and risk assessment
- Develop hazard mitigation goals
 - Minimize interruption to campus operations and mission
 - Protect research
- Determine appropriate mitigation actions
- Prioritize mitigations actions
- Prepare an implementation strategy

Hazard Mitigation Plan Contents

Executive Summary

- Purpose, Process, Major Recommendations

Goals and Objectives

Hazard Identification and Risk Assessment

- Hazard Background, Asset Inventory, Loss Estimation

Mitigation Strategy

- Identification of Mitigation Actions, Prioritization of Actions and Methodology, Timeline

Implementation and Plan Maintenance

- Responsibilities, Integration with Other Plans, Schedule

Hazard Mitigation Planning Process

Phase 4 – Implement the plan and monitor progress

- Formally adopt the Hazard Mitigation Plan
- Implement mitigation measures
- Monitor, evaluate and update the plan as needed
- Continue to engage stakeholders from the campus and community

Summary

- Hazard Mitigation Planning reduces risk and can open up funding for mitigation and recovery projects
- Four-stage process:
 1. organize resources
 2. assess risks
 3. develop a plan
 4. implement and monitor progress
- Collaboration with external stakeholders and regulators from the outset can be hugely beneficial

For more information



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