



# HAZUS Risk Assessments Support Mitigation Planning

Hazard mitigation is sustained action taken to reduce or eliminate long-term risk to people and their property from hazards.

[www.fema.gov/plan/prevent/hazus](http://www.fema.gov/plan/prevent/hazus)

[www.fema.gov/plan/mitplanning](http://www.fema.gov/plan/mitplanning)

A mitigation plan is the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. All communities need a hazard mitigation plan. Even a small neighborhood flood can overwhelm your community. Being ready will aid in recovery after a natural disaster. State, Indian Tribal, and local governments are required to develop a hazard mitigation plan as a condition for receiving certain types of disaster assistance, including funding for mitigation projects.



## Why use HAZUS?

HAZUS is used for mitigation and recovery as well as preparedness and response. Government planners, GIS specialists, and emergency managers use HAZUS to determine losses and the most beneficial mitigation approaches to take to minimize them.

### What is HAZUS?

HAZUS is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. HAZUS uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. It graphically illustrates the limits of identified high-risk locations due to earthquake, hurricane, and floods. Users can then visualize the spatial relationships between populations and other more permanently fixed geographic assets or resources for the specific hazard being modeled, a crucial function in the pre-disaster planning process.



## What is included in a HAZUS Risk Assessment?

	<b>Earthquake</b> Ground Shaking Ground Failure	<b>Flood</b> Frequency Depth Discharge Velocity	<b>Hurricane</b> Pressure   Missile   Rain
<b>Direct Damage</b>			
General Building Stock	✓	✓	✓
Essential Facilities	✓	✓	✓
High Potential Loss Facilities	✓		
Transportation Systems	✓	✓	
Utility Systems	✓	✓	
<b>Induced Damage</b>			
Fire Following	✓		
Hazardous Materials Release	✓		
Debris Generation	✓	✓	✓
<b>Direct Losses</b>			
Cost of Repair	✓	✓	✓
Income Loss	✓	✓	✓
Crop Damage		✓	
Casualties	✓	<b>Generic Output</b>	
Shelter Needs	✓	✓	✓
<b>Indirect Losses</b>			
Supply Shortages	✓	✓	
Sales Decline	✓	✓	
Opportunity Costs	✓	✓	
Economic Loss	✓	✓	

Potential losses analyzed include:

- **Physical damage** to residential and commercial buildings, schools, critical facilities, and infrastructure;
- **Economic loss**, including lost jobs, business interruptions, repair and reconstruction costs; and
- **Social impacts**, including estimates of shelter requirements, displaced households, and population exposed to scenario floods, earthquakes and hurricanes.

## What is the HAZUS Risk Assessment Process?

Users of HAZUS follow a five-step process to create risk assessment reports for mitigation planning.

