FEMA

Building Community Resilience by Integrating Hazard Mitigation

Integrating Hazard Mitigation Into the Local Comprehensive Plan

FEMA/Jocelyn Augustino

FEMA/Charles Powell

Local comprehensive plans, also referred to as master plans or general plans, provide a framework for the physical design and development of a community over a long-term planning horizon. They address social, economic, and environmental issues by the manner in which they guide overall growth and development. The vision, goals, and policies of the comprehensive plan are routinely implemented through other local planning instruments such as zoning ordinances, subdivision regulations, and capital improvement programs. Integrating hazard mitigation into the local comprehensive plan thereby establishes resilience as an overarching value of a community and provides the opportunity to continuously manage development in a way that does not lead to increased hazard vulnerability.

Land Use and Future Development

Strong land use policies are the foundation of successful comprehensive planning efforts—they establish the general pattern for the location, distribution, density, and type of future development throughout all areas of the community. The land use element of a comprehensive plan is based on an analysis of present and future conditions, including physical setting and natural surroundings. This creates opportunities to guide future growth and development away from areas with known hazards, or to ensure design standards for new or improved construction take potential hazards into account. Land use policies can build community resilience by taking information on the location, frequency, and severity of hazards into consideration and setting forth recommendations that influence development in a way that does not increase risks to life and property.

Transportation

Transportation and land use are intricately linked; therefore, the transportation element can reflect land use principles that reduce the community's vulnerability to hazards. Building community resilience through transportation planning can be accomplished by adopting policies that direct growth away from known hazard areas. Another opportunity to be seized is ensuring that transportation systems and other critical infrastructure are designed to withstand the effects of known hazards so that they still function in the event of an emergency or disaster.

"Hazard Mitigation works best as a policy objective of local planning when it is so completely integrated into the comprehensive plan that it becomes a normal assumption behind all daily planning activities."

American Planning Association, Planning for Post-Disaster Recovery and Reconstruction
http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=1558

Housing

Housing policies focus on the provision of safe and sanitary housing to meet existing and future needs of the community. The housing element can help strengthen community resilience by ensuring that the location and design of new or improved housing complies not only with existing building codes, but with potential hazards in mind. Opportunities to strengthen or replace structures identified as vulnerable to hazards can be promoted through existing maintenance or rehabilitation programs, and particularly through policies regarding non-conforming, substantially damaged, or substantially improved properties.

Economic Development

The relationship between economic development and resilience is rooted in the shared objective to sustain and enhance community sustainability. Hazard mitigation can be integrated with economic development policies by promoting commercial or industrial expansion in areas that are not vulnerable to damage or disruption from hazards, and by making community resilience a key feature in attracting, expanding, and retaining businesses and industry.

Public Facilities and Infrastructure

Similar to the transportation element, a community's facilities and infrastructure policies are directly linked to land use patterns and community development. These linkages provide opportunities to build community resilience by establishing policies that limit the extension of public facilities or services and the provision of other capital expenditures in areas that are vulnerable to hazards. Policies may be adopted to ensure critical facilities such as police and fire stations, as well as key infrastructure such as water and wastewater treatment plants, are protected from the effects of hazards. This element also provides opportunities to establish goals and policies in support of mitigation projects such as stormwater drainage improvements or the public acquisition of hazard areas for open space.

Natural Resource Protection

There are an abundance of opportunities to achieve multiple objectives when it comes to hazard mitigation and natural resource protection. Policies designed to preserve or enhance environmental areas of concern, such as wetlands, riparian corridors, and floodplains, often include the added benefit of avoiding or minimizing development in hazard areas. These policies build community resilience by not only protecting lives and property from hazards, but also maintaining natural and beneficial functions of systems that often act as buffers against those hazard effects.

Historic Properties and Cultural Resources

Policies designed to protect and preserve historic and cultural sites, buildings, and other resources may be linked with existing mitigation strategies to prevent damage or losses from hazards—particularly due to the fact that such resources are irreplaceable. The policies aimed at protecting these unique resources, by their very nature, can be tailored in a manner consistent with the location, design, or material to be preserved.

FEMA/Andrea Booher

FEMA/Jennifer Smits

"In the end, it is important both to focus on hazards in a specific element devoted to identifying and assessing the hazards a community faces and to integrate those concerns more broadly into other elements, since hazards do not operate in isolation from the built environment."

American Planning Association, Hazard Mitigation: Integrating Best Practices into Local Planning
http://www.fema.gov/library/viewRecord.do?id=4267