



FEMA

# Building Community Resilience by Integrating Hazard Mitigation Protecting Community Infrastructure

Investing the time and resources needed to develop a local hazard mitigation plan is critical to a community's resilience to disasters. A key aspect of this is integrating hazard mitigation concepts into existing community infrastructure plans and projects. This typically requires long-term planning, coordination, community buy-in, and funding.

A range of hazard mitigation actions may be implemented to protect community infrastructure, including:

- Incorporating hazard mitigation into capital improvement programs;
- Flood protection measures for water or sewer facilities, road elevation, or drainage improvements;
- Increasing hazard resistance when repairing or replacing aging transportation infrastructure such as roads, bridges, and tunnels;
- Bolstering the protection of hospitals, fire stations, emergency operations centers, and other critical facilities through structural retrofits;
- Dam or levee maintenance;
- Underground power lines;
- Tree pruning/canopy management;
- Utility system redundancies; and
- Lightning protection measures.

The integration of mitigation into planned infrastructure projects can provide tangible benefits to the community and its public works staff. These include the reduction or elimination of service outages, which can free up public works personnel to provide response and recovery support elsewhere, and reduced recovery costs.



FEMA/Martin Grube



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Infrastructure damaged by a disaster may not necessarily be replaced in the way it was originally constructed, but rather with hazard mitigation and community resiliency in mind.

## Why is Coordination Important?

Public works officials may benefit from working closely with community planners and hazard mitigation specialists in a comprehensive planning process that addresses the needs of the whole community. Ideally, this coordination would occur in a pre-disaster environment. However, it is not too late to benefit from coordination if the first meeting between public works and other community planners occurs in the days following a disaster.

Some of these mutual benefits may include:

- Hazard mitigation plans may have already identified replacement values for structures or predicted where damages are likely to be greatest;
- Information in the hazard mitigation plan may assist public works officials with post-disaster damage assessments;
- Public works officials may have first-hand knowledge of what damage has occurred in the community and what needs to be done to mitigate it; and
- An opportunity to look at activities that will help the community in the short term, while reducing risk in the long term.

## The Post-Disaster Window of Opportunity

If damaged community infrastructure is replaced in the same manner as it was originally constructed, without integrating hazard mitigation, it may remain vulnerable to future disasters.

Under the FEMA Public Assistance program for example, grant opportunities may fund hazard mitigation measures during the repair or replacement of public facilities damaged by a presidentially declared disaster event. This is often referred to as “Section 406 Mitigation.” Examples can include relocation of facilities from hazardous locations, slope stabilization to protect facilities, and certain types of protection from high winds, floodproofing of buildings, flood protection of bridges and culverts, seismic protection, and utility protection. These activities are intended to enhance a facility’s or system’s resistance to similar events in the future.

It is important for community officials to coordinate with FEMA on the utilization of Section 406 Mitigation funding or other hazard mitigation assistance following a major disaster event to ensure that hazard mitigation is incorporated into the recovery and rebuilding process.



FEMA/Ed Egan



FEMA/Norman Lenburg

Public Assistance funding for hazard mitigation is there to promote measures that reduce future loss to life and property, protect the federal investment in public infrastructure, and ultimately help build disaster resistant communities.

### For More Information on Section 406 Mitigation

Go to: <http://www.fema.gov/public-assistance-local-state-tribal-and-non-profit/hazard-mitigation-funding-under-section-406-0>