

Hazard Mitigation and Disaster Recovery Resources



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APA Hazard Mitigation Policy Guide

The American Planning Association and its Chapters and Divisions support measures and policies to enhance awareness of risks and efforts to improve community preparedness, resilience, and sustainability in the face of both natural and human-caused hazards. Throughout this Policy Guide is a discussion of the use of green infrastructure approaches to hazard protection as a cost-effective method for mitigating the effects of natural hazards, while also supporting other benefits in the community. The policy guide encourages communities to strive to balance environmental and community economic considerations to ensure that hazard mitigation planning is successful and effective.

Planning Information Exchange Webinars

APA, in partnership with the Association of State Floodplain Managers, has delivered 14 webinars to more than 10,000 participants, with an average of 743 attendees per session. The webinars focus on all hazards with an emphasis on hazard mitigation planning and recovery.

- Adapting Urban Vacant Land to Mitigate Hazards
- Climate Change Adaptation & Resilience
- Combining Climate Adaptation and Hazard Mitigation Plans
- The Fire/Flood Dynamic: Linkages, Tools and Actions
- Flood Hazard Mitigation in Historic Districts
- Hazard Mitigation Implementation
- Hazards Planning and Resilience: The Elected Official's Perspective
- Know your Dam Risk!
- Naturally Resilient Communities
- Planning Integration for Resilience Scorecard
- Post-Disaster Temporary Housing: Urban Planning Considerations
- Subdivision Design and Flood Hazard Areas
- State Resiliency Initiatives: From Issue to Action!
- The Role of Hazard Mitigation in Post-Disaster Recovery

Webinar recordings and presentations can be found [here](#).

Briefing Papers

APA's Briefing Papers outline policy-related issues and provide background to guide policy formation and public decision making. APA developed these briefing papers as tools to help planners guide their communities through major recovery issues in the post-disaster environment. These succinct, downloadable PDFs are ideal handouts for meetings with officials and the public.

[Adopt a Pre-Event Recovery Ordinance](#)

In the immediate days and weeks following a disaster, it may be difficult to assemble a quorum of the governing body to enact emergency authorizations organizing and directing initial recovery efforts.

This briefing paper details an action a community can take in advance of a disaster. Adoption of a pre-event recovery ordinance can help overcome these difficulties and move the community toward better management of post-disaster crises.

[Affordable Housing](#)

A natural disaster can destroy large portions of a community's housing stock, which devastates all affected. Low-income households are most vulnerable to displacement and have fewer resources to rebuild and recover.

This briefing paper outlines why local elected officials and planners must proactively facilitate the repair and rebuilding of affordable housing, including where and how to rebuild affordable housing, as part of disaster recovery efforts.

[Economic Recovery for Manufacturing](#)

This briefing paper outlines how public and private partners can play a vital role in helping manufacturers recover from disasters, both in the short and long term, including training and other support to help manufacturers develop and implement disaster response and business continuity plans. It also discusses grant funding, technical assistance, and support in identifying alternative sites, equipment, and suppliers to resume normal operations.

[Financial Recovery](#)

Money fuels community recovery and reconstruction. Every element of a disaster-impacted community will need funds to offset displacement costs and lost income, and to finance repairs and rebuilding. This briefing paper outlines local government's important leadership role in understanding major disaster financing resources, getting a clear picture of the overall damages as well as the fiscal and economic impacts of a disaster on its entire community, developing a comprehensive plan to use a diverse set of financing tools, and ensuring that all financing approaches are accurate and well documented.



10 PLANNING FOR POST-DISASTER RECOVERY
BRIEFING PAPERS

GREEN INFRASTRUCTURE AND POST-DISASTER RECOVERY

KEY POINT #1
Green infrastructure can reduce damage from natural disasters and provide a range of other benefits to communities.

KEY POINT #2
Resilient green infrastructure can help reduce the impact of natural disasters on communities.

KEY POINT #3
Green infrastructure can provide a range of other benefits to communities, including improved air quality, reduced stormwater runoff, and increased property values.

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[Green Infrastructure and Post-Disaster Recovery](#)

Green infrastructure is a network of natural areas and open spaces that provide multiple benefits for people and wildlife, such as regional parks and nature preserves, river corridors and greenways, and wetlands, as well as the urban forest and street plantings at the local level.

This briefing paper shows how green infrastructure plays a key role in preparation for and recovery from natural disasters. By incorporating green infrastructure into post-disaster recovery, communities can become more resilient to future disasters.

[Flood Insurance and Design Requirements](#)

Complex flood problems cannot be solved using a single approach, and it is not effective to rely on minimum standards alone to rebuild in a comprehensive and resilient way. This briefing paper discusses important steps that a community can take to set itself up for resilient recovery, including taking the time to develop a deliberate rebuilding approach that reduces future risk and incorporating a variety of mitigation measures to reduce future flood losses.

[Hazard Mitigation in Disaster Recovery](#)

This briefing paper outlines hazard mitigation by emphasizing wise land use that anticipates risk in advance of a natural hazard events as well as how to effectively use post-disaster hazard mitigation funding to promote whole community disaster recovery.

[Measuring Success in Recovery](#)

Recovery from disasters is a key capability for federal, state, and local governments. To support this capability, practitioners at all levels need useful and validated metrics to measure and monitor how well a community is recovering from a disaster over time.

This briefing paper outlines practitioners' needs for these metrics. Over the last decade, the hazards research community has made the case for more systematic ways of measuring the disaster-recovery process across events and over time to improve planning for and recovery from disasters. A high-quality recovery process informed by data can provide an opportunity to build future resilience by taking advantage of the increased interest and present resources.

Planning Advisory Service Reports

PAS reports are authoritative guidance on trending issues and practices. They include a detailed investigation and analysis of a single planning-related topic written by an author or authors with specialized knowledge of expertise related to the subject matter.

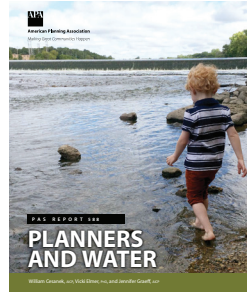
[Coastal Zone Management](#)

This report gives planners the tools they need to keep their heads above water and their feet on the ground. Chapters cover the broad expanse of coastal activities and uses, from preservation to recreation, tourism to transportation, industry to infrastructure. Specialists explore essential issues such as water quality, erosion, habitat, conservation, stormwater management, responsible development and redevelopment, offshore energy, development and the promise—and limitations—of new geospatial technologies.

[Hazard Mitigation: Integrating Best Practices into Planning](#)

Every year, communities face natural hazards—floods, wildfires, landslides, earthquakes—that can cause millions of dollars in property damage. Development patterns of the past that ignored the risks of building on vulnerable sites such as floodplains and hillsides have exacerbated the problem. Well-crafted plans, policies, and land-use regulations can help mitigate the impacts of natural disasters. This guide offers practical guidance on how to incorporate risk reduction strategies into existing local plans, policies, codes, and programs that guide community development or redevelopment patterns.

This report is available free to all thanks to funding from the Federal Emergency Management Agency.



[Planners and Water PAS](#)

Historically, the work of land-use planners has not extended to water resource management. We have relied upon water utilities, public water departments, and the engineering community to deliver and manage the supply of water for cities and towns and to provide wastewater collection

and treatment. While planners have become more involved in floodplain management and green infrastructure provision in recent years, most planners do not routinely work with water service or utility professionals. For these reasons, land-use planners have not needed to know much about water science, water infrastructure, and water resource management. This report describes the integrated approach to planning and water resource management known as the One Water approach, provides foundational concepts that are commonplace in water disciplines, lays out water issues and challenges facing planners, and presents best practices, case studies, and practical information that planners can apply and integrate into their work.



[Planning for Post-Disaster Recovery: Next Generation](#)

Planning for Post-Disaster Recovery: Next Generation (2014), offers a no-nonsense explanation of the benefits—and limitations—of planning for unpredictable events. Case studies from big cities and smaller towns show what it takes to come back stronger from a natural disaster.

This report is available free to all thanks to funding from the Federal Emergency Management Agency.

[Subdivision Design and Flood Hazard Areas](#)

This updated report gives guidance to bring subdivision design into line with the best of floodplain planning. Six planning and design principles help put subdivisions on the right footing. Standards for review, inspection, and maintenance cover all types of terrain and infrastructure. And nine concrete recommendations lay out steps to keep subdivisions safe and dry. Readers will get the tools they need to save lives, protect property, and build a better future.

This report is available free to all thanks to funding from the Federal Emergency Management Agency.



PAS Memo

Written by practicing planners and experts in the field and published six times a year, *PAS Memo* has illuminating case studies with links to online resources for planners who want to dig deeper.

[Collaborating on Water and Planning: A Perspective for Planners](#)

This *PAS Memo* builds on the PAS Report, *Planners and Water*, which provided examples of sustainable water provisions in general plans, local regulations, development projects, and financing techniques, as well as basic information about water utilities and water infrastructure. It addresses how to collaborate with water utilities to make those sustainable practices a reality. Most of the material has been adapted with permission from a report by the Water Research Foundation on collaboration between water agencies and planners.

[The Effectiveness of Green Infrastructure for Stormwater Management](#)

This *PAS Memo* explores the effectiveness and some of the economic implications of many common green infrastructure practices that are used to manage the water quality and flood risks associated with urban stormwater runoff. Many of its insights and findings arose in a study undertaken for the Illinois Environmental Protection Agency in 2010 by a research team from the University of Illinois at Chicago, the Center for Neighborhood Technology, the Chicago Metropolitan Agency for Planning, and the Illinois-Indiana Sea Grant College Program at the University of Illinois and Purdue University. The Illinois Green Infrastructure Study examined the best practices for green infrastructure in the United States and the effectiveness of these practices when compared with conventional stormwater management approaches, making its findings relevant to a national planning audience.

On-Demand Courses

Access training resources from APA, including courses on how to prepare a recovery plan for a community after a disaster, the next generation of post-disaster recovery, and post-disaster recovery in a changing climate.

[Planning for Disaster Recovery](#)

Learn about best practices for specific subtopics of post-disaster recovery planning and effective ways to use the briefing papers described above for public meetings and meetings with public officials.

[Post-Disaster Recovery in a Changing Climate](#)

Demographic shifts and climate change are making disasters bigger and costlier. Learn about the next generation of post-disaster recovery so you have the tools for a safer, stronger community.

[Principles for Preparing a Community's Disaster Recovery Plan](#)

The two-hour interactive webinar, sponsored by APA's [Hazard Mitigation and Disaster Recovery Planning Division](#), features a broad perspective on preparation of a recovery plan for a community after a disaster. Distinguish between short-term response and longer-term recovery, awareness of successful recovery strategies, and types of available funding.



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Current Projects

[Building Coastal Resilience Through Capital Improvements Planning](#)

To further its mission to help bolster the economic and environmental health of coastal communities nationwide, the [National Oceanic and Atmospheric Administration](#) has funded a project to help communities adapt to and mitigate coastal hazards. Led by and in partnership with the [Association of State Floodplain Managers](#), APA will work to mainstream a variety of techniques to help practitioners incorporate climate, flood, and hazard data into local and regional capital improvement plans. Both organizations have a longstanding partnership in the realm of hazard mitigation and climate adaptation. With over 57,000 combined members, the techniques and guidance developed as part of this project will be targeted at planners, floodplain managers, and all practitioners directly involved in the creation and updating of capital improvement plans.

[Drought Mitigation Planning in a Multi-Hazards Context](#)

APA, in partnership with the National Drought Mitigation Center, is working with FEMA to engage experts and stakeholder organizations alike to assess communities' needs for drought mitigation assistance and planning best practices.

The project will emphasize a multihazard approach to floodplain mitigation in the context of interrelated consequences of drought, such as soil impermeability, wildfire, and mudslides.

Though many may think of drought and flood risks as mutually exclusive, they are not. Drought conditions can exacerbate flood susceptibility, particularly when heavy rainfall occurs. Thus, in communities across the U.S, needs for integrative approaches to drought and flood mitigation continue to influence comprehensive plans, capital improvement projects, and regulation.

[Innovations in Planning and Public Engagement for Community Resilience](#)

In this FEMA-funded project, APA, in partnership with the [University of California, San Diego](#) and the [National Charrette Institute](#), Focused Plan, and City Explained, will develop a set of web-based tools and techniques to help planners engage their communities to help them prepare for and recover from disasters. These tools and processes could be used by planners in the context of an overall community plan update, as part of special purpose plans, or in developing a stand-alone community resilience plan and implementation strategy.

[Survey of State Land-Use and Natural Hazards Planning Laws](#)

With funding from the [Federal Emergency Management Agency](#) (FEMA), APA is improving upon past efforts to survey state land-use and natural hazard planning laws.

From 2002 to 2010, APA maintained a comparative database of state planning legislation that included map data, identification codes, and relevant updates in respect to specific criteria. A reevaluation of this project will expound upon existing criteria by incorporating the following inquiries into the survey:

- Legislation that encourages or requires the incorporation of hazard planning principles into plans
- Legislation or programs that encourage or require that plans address climate change/climate science in some way
- Legislation or programs aimed at assessing or enhancing the hazard resiliency of local communities
- States that enforce building code standards that go above and beyond minimum standards in response to multiple hazards
- Legislation or programs that instate floodplain management laws, e.g., "No Adverse Impact" policies that disallow the development actions of a single property owner to increase the flood damage risk to another

The project will culminate in a published legislative survey report as well as an annual update.



American Planning Association

Making Great Communities Happen

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