

Integrating Hazard Mitigation into Local Planning: A Literature Review and Resource List

**American Planning Association
Hazards Planning Research Center**

The *Integrating Hazard Mitigation into Local Planning* literature review and resource list contains three sections:

1. PUBLICATIONS. Book, article, and government document citations.
2. CASE EXAMPLES. Suggested communities/regions that have undergone significant hazard mitigation planning exercises in recent years; recommended by participants in the November 2007 APA-FEMA Scoping Symposium in Chicago.
3. RESOURCES. Resources were selected based on several criteria: relevance to the topic of municipal planning, timeliness, and ability to convey concepts accurately and concisely to an audience of planners.

CONTENTS

PUBLICATIONS.....	2
CASE EXAMPLES.....	21
INTERNET RESOURCES.....	25

PUBLICATIONS

Acosta, M., J. Schwab, K. Topping, and A. Zelinka. 2005. *Planning for Safe Growth*. American Planning Association Education and Lincoln Institute of Land Policy Audio/Web Conference Series (CD-ROM).

This planning tool offers a broader understanding of the benefits of smart and safe growth among communities. It highlights the essential components of safe growth and specific examples used by communities to deal with natural hazards. Strategies for community planning for community safety are examined.

This CD-ROM includes audio recording synchronized with PowerPoint presentation, program transcript, PowerPoint presentation note sheets, questions and answers, and supplemental reading materials.

American Planning Association. 1998. "Modernizing state planning statutes: The growing smart working papers, Volume 2." *Planning Advisory Service Report No. 480/481*. Chicago: Same as author.

Section covers integrating hazard mitigation and local land-use planning recommendations.

American Planning Association, Institute for Business and Home Safety. 2007. *Summary of State Land Use Planning Laws* (retrieved 3/11/08 from <http://www.disastersafety.org/publications/view.asp?id=8021>).

Includes current information on what state planning legislation says both with regard to planning in general and natural hazards specifically. One special concern has been extending the reach into the academic community, with hope that this CD-ROM, with a PowerPoint presentation and explanatory notes for instructors, will help facilitate the use of the *Summary* in university classrooms and introduce many more students to its subject matter.

Bartholomew, B. 2007. "Pre-disaster mitigation and urban planners." *Utah Planner*, 34(9), 8-12.

This article from APA's Utah Chapter newsletter explains how local comprehensive plans can and should reference pre-disaster mitigation plans, and/or have a mitigation section within the comprehensive plan. The DMA2000 and SHMP are introduced, with emphasis on the emergency management community and planning community working together. Local and state agencies that have resources and tools available to help local communities in mitigating disasters are mentioned.

Beatley, T., and P. Berke. 1997. *After the Hurricane: Linking Recovery to Sustainable Development in the Caribbean*. Harrisonburg, Va.: John Hopkins University Press.

This book presents research on recovery programs that worked in the Caribbean: programs that provide immediate aid to victims and also lay the basis for sustainable development and growth. The focus is on how to build the capacity of local governments to undertake predisaster mitigation. Chapter 7, *Linking Disaster Recovery and Sustainable Development*, lays out future directions.

Beatley, T., D. Brower, and A. Schwab. 2002. *An Introduction to Coastal Zone Management (second ed.)*. Washington, D.C.: Island Press.

Chapter 3 discusses the impact of natural hazards along the coast and the importance of mitigation. Chapter 8 addresses local planning policy and Chapter 9 presents sustainable building practices within the coastal zone.

Berg, E., and B. Boyarsky. 2004. *Losing Ground: How Taxpayer Subsidies and Balkanized Governance Prop up Homebuilding in Wildfire and Flood Zones*. Los Angeles: Center for Governmental Studies.

This report studies the phenomenon of hillside homebuilding in California, and the responsibilities government has to protect its residents and environment, while driving the state's economic growth. The goal of the report is not to stop development but to enhance safety controls and to identify and reduce the public subsidies discussed in the report.

Berke, P. and Beatley, T. 1992. *Planning for Earthquakes: Risk, Politics and Policy*. Baltimore: Johns Hopkins University Press.

The book is interestingly written, and presents clear and practical suggestions for changing local seismic policy. It should be of interest to geographers and other social scientists who study natural-hazards policy

Berke, P. and Beatley, T. 1997. *After the Hurricane: Linking Recovery to Sustainable Development in the Caribbean*. Baltimore: Johns Hopkins University Press.

Hugo... Andrew... Felix... Fran... The names of hurricanes that have devastated the Caribbean region are firmly implanted in the minds of those who survived them. Beyond the scrutiny of the press and television cameras, those survivors often struggle not only with the destruction left in the hurricane's wake but also with the chaotic and disruptive circumstances brought about by massive infusions of well-intentioned "aid." In *After the Hurricane*, Philip R. Berke and Timothy Beatley present state-of-the-art research on recovery programs that work -- programs that provide immediate aid to victims and lay the basis for sustainable development and growth.

Berke, P. and Campanella, T. 2006. "Planning for resiliency after Hurricane Katrina." *The Annals of the American Academy of Social and Political Sciences*, 604(5), 192-208.

Berke, P., Godschalk, D., Kaiser, E., with Rodriguez, D. 2006. *Urban Land Use Planning* (5th ed.). Chicago: University of Illinois Press.

Berke, P.R., Roenigk, D.J., Kaiser, E.J., and Burby, R.J. (1996). "Enhancing plan quality: Evaluating the role of state planning mandates for natural hazard mitigation." *Journal of Environmental Planning and Management*, 39(1), 79-96.

This paper uses empirical data from natural hazard elements of 139 community plans in five states to assess whether such state mandates actually result in better local plans. The authors find that a state mandate not only achieves plans from communities that otherwise would not make a plan, but in addition those plans are of higher quality than plans made voluntarily in communities not under a mandate to plan.

Birch, E. and Wachter, S. 2006. *Rebuilding Urban Places After Disaster: Lessons From Hurricane Katrina*. Philadelphia: University of Pennsylvania Press.

This volume examines the rebuilding of cities and their environs after a disaster and focuses on four major issues: making cities less vulnerable to disaster, reestablishing economic viability, responding to the permanent needs of the displaced, and recreating a sense of place. Success in these areas requires that priorities be set cooperatively, and this goal poses significant challenges for rebuilding efforts in a democratic, market-based society.

Birkland, T. 1997. *After Disaster: Agenda Setting, Public Policy, And Focusing Events*. Washington, D.C.: Georgetown University Press.

Birkland, T. 2007. *Lessons of disaster: Policy change after catastrophic events*. Washington, D.C.: Georgetown University Press.

Brody, S. 2003. "Are we learning to make better plans? A longitudinal analysis of plan quality associated with natural hazards." *Journal of Planning Education and Research*, 23, 191-201.

This article examines the degree to which the quality of local plans changes over an eight-year period with respect to natural hazards mitigation. Jurisdictions in Florida and Washington were sampled in 1991 and in 1999 to determine the extent to which their plans' hazard mitigation components changed and to identify factors driving communities to adopt stronger policies. Results indicate the plans of local jurisdictions improved and that legal reform, repetitive damage to property, and citizen participation can facilitate an adaptive learning process. This article discusses policy implications and provides recommendations for improving learning capabilities to prepare plans that prevent natural hazards.

Burby, R. 1998. *Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities*. Washington, D.C.: Joseph Henry Press.

This volume focuses on the breakdown in sustainability -- the capacity of the planet to provide quality of life now and in the future -- that is signaled by disaster. The authors bring to light why land use and sustainability have been ignored in devising public policies to deal with natural hazards. They lay out a vision of sustainability, concrete suggestions for policy reform, and procedures for planning. The book chronicles the long evolution of land-use planning and identifies key components of sustainable planning for hazards. Stressing the importance of balance in land use, the authors offer principles and specific reforms for achieving their visions of sustainability. See Chapter 4 by Godschalk, Kaiser and Berke on preparation of hazard mitigation plans and integration of hazards plans with local comprehensive plans and Chapter 6 by Olshansky, Kartez, and Paterson on development management tools.

Burby, R. 2001. "Involving citizens in hazard mitigation planning: Making the right choices." *Australian Journal of Emergency Management*, 16(3), 45-51.

This article focuses on the importance of citizen participation in the hazard mitigation planning process. An examination of the importance of constituency-building is highlighted. The author categorizes "...the efficacy of citizen involvement" into the following five choices: objectives, timing, participants, citizen involvement techniques, and information given to citizens.

Burby, R. 2005. "Have state comprehensive planning mandates reduced insured losses from natural disasters?" *Natural Hazards Review*, 6(2), 67-81.

This article examines the relationship between state requirements for preparation of local government comprehensive plans and claims paid by property insurance companies for losses due to weather-related natural disasters between 1994 and 2000. Over the period studied, if all states had required comprehensive plans with hazard mitigation elements, the toll in insured losses to residential property from natural disasters would have been reduced by approximately \$213 million in constant 2000 dollars.

Burby, R. 2006. "Hurricane Katrina and the paradoxes of government disaster policy: Bringing about wise governmental decisions for hazardous areas." *The Annals of the American Academy of Political and Social Science*, 604(3), 171-191.

Burby, R. et al. 1999. "Unleashing the Power of Planning to Create Disaster – Resistant Communities." *Journal of the American Planning Association*, 65(3), 247-258.

The local government paradox is that while their citizens bear the brunt of human suffering and financial loss in disasters, local officials pay insufficient attention to policies to limit vulnerability. Disaster losses can be blunted if local governments prepare comprehensive plans that pay attention to hazard mitigation.

Burby, R., and Dalton, L. 1994. "Plans can matter! The role of land use plans and state planning mandates in limiting the development of hazardous areas." *Public Administrative Review*, 54(3), 229-37.

Burby, R., Deyle, R., Godschalk, D. and Olshansky, R. 2000. "Creating hazard resilient communities through land-use planning." *Natural Hazards Review*, 1(2), 99-106.

The Second National Assessment on Natural and Related Technological Hazards calls land-use planning the single most promising approach for bringing about sustainable hazard mitigation. This article describes the essential elements of land-use planning for hazard mitigation. It highlights important choices involved in formulating planning processes, undertaking hazard assessments, and crafting programs to manage urban development so that it is more resilient to natural hazards. Research conducted over the past two decades suggests that, if local governments make the right choices in crafting land-use-planning programs, communities will be less likely to suffer severe losses of lives and property in natural disasters.

Burby, R.J., Nelson, A., Parker, D., and Handmer, J. 2001. "Urban containment policy and exposure to natural hazards: Is there a connection?" *Journal of Environmental Planning and Management*, 44(4), 475-490.

Planners throughout much of the past century have advocated containment of urban sprawl through regulatory restrictions that include growth boundaries, green belts, and limits to utility extensions. Containment is widely practiced in Europe and is a key component of "smart growth" being advocated by a number of interest groups in the USA. In fact, it has already been incorporated in growth management policies in use in 73 US metropolitan areas. This paper argues that containment may have a serious side-effect. It can lead to increased exposure to natural hazards and higher losses in disasters. However, it also shows that measures are available to counter this effect, if planners recognize the threat and take vigorous steps to contain hazards, adjust building techniques or limit the development of potentially hazardous areas.

Campanella, T. 2006. "Urban resilience and the recovery of New Orleans." *Journal of the American Planning Association*, 72(2), 141-146.

This article considers the recent catastrophe in New Orleans in terms of "urban resilience," the capacity of a city to rebound from destruction. Plans to rebuild the physical infrastructure of the city must be accompanied by a commitment to rehabilitate its social fabric and communal networks.

Chang, S., Adams, B., Alder, J., Berke, P., Chuenpagdee, R., Ghosh, S., and Wabnitz, C. 2006. "Coastal ecosystems and tsunami protection." *Earthquake Spectra*, 22(S3), 863-877.

Comerio, M. 1998. *Disaster Hits Home: New Policy for Urban Housing Recovery*. Berkeley, Cal.: University of California Press.

Examines the mechanisms used today to finance disaster recovery, paying particular attention to the destruction of housing after earthquakes and hurricanes. Comerio develops a catastrophe index for assessing when a natural disaster causes a housing crisis, and policies should address the insurance system and provide incentives for mitigation building.

Daniels, T. and Daniels, K. 2003. *The Environmental Planning Handbook*. Chicago: APA Planners Press.

This book offers a comprehensive overview highlighting the importance of environmental protection and sustainability awareness. The authors examine the importance of local government integration of effective environmental sustainability initiatives into local and regional comprehensive planning. A variety of topics are covered, which include planning law and ethics, economics, and ecology. Among others, these topics strive to deepen public awareness of the effects of increased environmental protection and sustainability. Of particular interest, Part III (Chapter 12, Planning for Natural and Hazards and Natural Disasters) addresses integrating local planning initiatives and hazard mitigation planning as well as examples of federal and state planning initiatives.

Deyle, R., S. French, R. Olshansky, and R. Paterson. 1998. "Hazard assessment: A factual basis for planning and mitigation," in *Cooperating with nature: Confronting natural hazards with land-use planning for sustainable communities*, Burby, R. (ed.), Washington, D.C.: Joseph Henry Press.

(see description under Burby for *Cooperating with nature*)

Deyle, R. E. and Smith, R. A. 2000. "Risk-based taxation of hazardous land development." *Journal of the American Planning Association*, 66(4), 421-435.

While the impact on most property owners is likely to be modest, this article shows that a risk-based assessment can achieve tax benefit equity and be the means of financing local government costs of disaster response and recovery not covered by federal and state disaster aid.

Federal Emergency Management Agency (FEMA). 2000. *Rebuilding for a More Sustainable Future: An Operational Framework*. Washington, D.C.: FEMA.

Federal Emergency Management Agency (FEMA). 2001. *State and Local Mitigation Planning How-To Guides. Understanding Your Risks: Identifying Hazards and Estimating Losses*. Washington, D.C.: FEMA.

Federal Emergency Management Agency. 2003. *Bringing the Plan to Life: Implementing the Hazard Mitigation Plan*. Washington, D.C.: FEMA.

Federal Emergency Management Agency. 2003. *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementation Strategies*. Washington, D.C.: FEMA.

Federal Emergency Management Agency (FEMA). 2004. *Emergency support function #14 – Long-term community recovery and mitigation annex*. (retrieved 3/11/08 from <http://www.fema.gov/library/viewRecord.do?id=2154>).

Provides a framework for Federal Government support to State, regional, local, and tribal governments, nongovernmental organizations (NGOs), and the private sector designed to enable community recovery from the long-term consequences of an Incident of National Significance. This support consists of available programs and resources of Federal departments and agencies to enable community recovery, especially long-term community recovery, and to reduce or eliminate risk from future incidents, where feasible.

Federal Emergency Management Agency (FEMA). 2007. *Multi-hazard mitigation planning guidance under DMA 2000 (a.k.a. Mitigation Planning “Blue Book”)* (retrieved 3/11/08 from <http://www.fema.gov/library/viewRecord.do?id=2752>).

To help states, tribes, and local governments better understand the Mitigation Planning rule under 44 CFR Part 201, FEMA has prepared this document with two major objectives. First, the "Blue Book" is designed to help federal and state reviewers evaluate mitigation plans from different jurisdictions in a fair and consistent manner. Second, the "Blue Book" is intended to help states, tribes, and local jurisdictions develop new mitigation plans or modify existing ones in accordance with the requirements of the rule.

Florida Department of Community Affairs. 2004. *Protecting Florida’s communities: Land use planning strategies and best development practices for minimizing vulnerability to flooding and coastal storms*, Tallahassee, Fla.: Florida Department of Community Affairs.

One in a series of “best practices” by the FD.C.A. Provides information on an array of planning polices to be implemented before and after disasters. The guidebook identifies ways communities can better integrate hazard mitigation in day-to-day decision making without increasing the overall commitment of resources by local governments.

Florida Department of Community Affairs. 2004. *Wildfire mitigation in Florida: Land use planning strategies and best development practices*, Tallahassee, Fla.: Florida Department of Community Affairs.

One in a series of “best practices” by the FD.C.A. Serves as a manual for communities at risk of wildland fire. The guide identifies wildfire mitigation strategies through case studies, diagrams, and photographs.

Front Range Fuels Treatment Partnership Roundtable. 2006. *Living with fire: Protecting communities and restoring forests* (retrieved 3/11/08 from www.centerwest.org/publications/pdf/fire.pdf).

This report is a product of the Front Range Fuels Treatment Partnership Roundtable, a coalition of individuals from state and federal agencies, local governments, environmental and conservation organizations, the academic and scientific communities, and industry and user groups—all with a commitment to forest health and fire risk mitigation along Colorado's Front Range.

Godschalk, D. et al. 1998. *Coastal hazard mitigation: Public notification, expenditure limitations, and hazard area acquisition*. Chapel Hill, N.C.: Center for Urban and Regional Studies, University of North Carolina at Chapel Hill.

Godschalk, D., Beatley, T., Berke, P., Brower, D., and Kaiser, E. 1999. *Natural hazard mitigation: Recasting disaster policy and planning*. Washington, D.C.: Island Press.

Part IV (chapter 13 *Natural Hazard Mitigation: Planning for Sustainable Communities*) focuses on the need to plan for the future of communities by considering the impacts of natural hazards. Sustainable and resilient communities "...may bend before the extreme stresses of natural hazards, but they do not break." Protecting the built environment, physical infrastructure, the natural environment, and the quality of life for communities is the goal of designing and implementing functionally-sound hazard mitigation planning standards. The chapter also examines reforming mitigation policy and practice to better suit the needs of at-risk communities.

Godschalk, D., Brody, S., and Burby, R. 2003. Public participation in natural hazard policy formation: Challenges for comprehensive planning, *Environmental Planning and Management*, 46(5), 733-754.

Citizen interest in participating in the formulation of hazard mitigation policies in comprehensive plans is low, despite mounting evidence of perils to life and property from floods, hurricanes and earthquakes. Using evidence from case studies in Florida and Washington, the causes of disinterest are dissected and ways to increase public input to hazard mitigation policies in local comprehensive plans are recommended.

Godschalk, D. 2003. Urban hazard mitigation: Creating resilient cities, *Natural Hazards Review*, 4(3), 136-143.

Cities are complex and interdependent systems, extremely vulnerable to threats from both natural hazards and terrorism. This paper proposes a comprehensive strategy of urban hazard mitigation aimed at the creation of *resilient cities*, able to withstand both types of threats. The paper reviews hazard mitigation practice, defines a resilient city, considers the relationship between resilience and terrorism, and discusses why resilience

is important and how to apply its principles to physical and social elements of cities. Contending that current hazard mitigation policy, practice, and knowledge fail to deal with the unique aspects of cities under stress, the paper recommends a major *resilient cities initiative*, including expanded urban systems research, education and training, and increased collaboration among professional groups involved in city building and hazard mitigation.

Godschalk, D. 2007. "Mitigation," Chapter 6 in Waugh and Tierney (eds). *Emergency Management: Principles and Practice for Local Government*, second edition.

Gori, P., Jeer, S., and Schwab, J. 2005. *Landslide Hazards Planning*, Planning Advisory Service Report No. 533/534. Chicago: American Planning Association.

This PAS Report offers planning practitioners guidance and best practices examples of how to minimize the risk of landslides. The report identifies the importance of linking hazard mitigation planning and local comprehensive plans. It identifies tactics that can be sought for existing developments and specific regulatory measures for discouraging developments in landslide-prone areas. The Report assess the importance of considering a variety of land-use decisions including transportation, local economic development, and housing choices. Components of a comprehensive plan, these elements are directly impacted by landslides (and other natural disasters,) and regulatory measures for hazard mitigation.

Government Accountability Office. 2007. *Natural hazard mitigation: Various mitigation efforts exist, but federal efforts do not provide a comprehensive strategic framework* (retrieved 3/11/08 from <http://www.gao.gov/cgi-bin/getrpt?GAO-07-403>).

GAO was asked to examine (1) natural hazards that present a risk to life and property in the United States, areas that are most susceptible to them, factors that may be increasing these risks, and mitigation activities that reduce losses; (2) methods for encouraging and impediments to implementing mitigation activities; and (3) collaborative efforts of federal agencies and other stakeholders to promote mitigation. GAO's 70-page report recommends that the Administrator of the Federal Emergency Management Agency (FEMA), in consultation with other appropriate federal agencies, develop and maintain a national comprehensive strategic framework for mitigation.

Gutowsky, P. and Sasaki, L. 2004. Landslide hazard planning: Incorporating scientific analyses into public policy. *Practicing Planner*. 2(2).

This case describes the landslide hazard study and implementing landslide hazard ordinances adopted by the City of Salem and Marion County, Oregon. The results demonstrate that jurisdictions, by actively involving their citizenry and using GIS can collaborate to reduce the risk from geologic hazards on a local and regional scale.

H. John Heinz III Center for Science, Economics and the Environment. 2000. *The hidden costs of coastal hazards: Implications for risk assessment and mitigation*.

Washington, D.C.: Island Press.

“Hidden costs” offers the first in-depth study that considers the costs of coastal hazards to natural resources, social institutions, business, and the built environment. Using Hurricane Hugo, which struck South Carolina in 1989, as a case study, it provides for the first time information on the full range of economic costs caused by a major coastal hazard event. The book takes a structured approach to the problem of coastal hazards, offering a new framework for community-based hazard mitigation along with specific recommendations for implementation. Decision makers--both policymakers and planners--who are interested in coastal hazard issues will find the book a unique source of new information and insight, as will private-sector decision makers including lenders, investors, developers, and insurers of coastal property.

Inam, A. 2005. *Planning for the unplanned: Recovering from crises in megacities*. New York City: Routledge.

This book provides case studies of recovery efforts with an analysis of what works in urban planning and why. Inam demonstrates the ways in which institutional routines remain powerful effective tools for planning for the unplanned.

Johnson, L. 1999. Empowering local governments in disaster recovery management: Lessons from Watsonville and Oakland in recovering from the 1989 Loma Prieta earthquake and other recent disasters. In *Lessons learned over time, Volume I* (pp. 41-84). Oakland, CA: Earthquake Engineering Research Institute.

Johnson, L., Samant, L.D., and Frew, S. 2005. *Planning for the Unexpected: Land-Use Development and Risk*. Planning Advisory Service Report No. 531. Chicago: American Planning Association.

The link between risk-management analysis and local planning initiatives is highlighted in Chapter 4, *Putting It All Together...*

Kapucu, N., and Van Wert, M. 2006. The evolving role of the public sector in managing catastrophic disasters, *Administration & Society*, 38(3), 279-308.

This article focuses on the emerging role of the public sector in dealing with catastrophic disasters. An empirical analysis of the 9/11 response operations provides a detailed case study with an eye to its implications for not only emergency management practice but public policy as well. The "horde of hurricanes" inundating Florida in 2004 provides a brief example of a "routine" disaster for comparative purposes. The argument is made that the response to the extreme event of 9/11 provides clear evidence of (a) the different standards expected of the public sector in the 21st century and (b) the fundamental difference in kind between routine disasters and catastrophic disasters.

Lindell, M., Tierney, K., and Perry, R. 2001. *Facing the unexpected: Disaster*

preparedness and response in the United States. Washington, D.C.: Joseph Henry Press.

Facing the Unexpected presents the wealth of information derived from disasters around the world over the past 25 years. The authors explore how these findings can improve disaster programs, identify remaining research needs, and discuss disaster within the broader context of sustainable development.

May, P. and Deyle, R. 1998. Governing land use in hazardous areas with a patchwork system, in *Cooperating with nature: Confronting natural hazards with land-use planning for sustainable communities*, Burby, R. (ed.), Washington, D.C.: Joseph Henry Press.

This section examines the role of government regulation in private land-use initiatives. Many times, private landowners may not consider that "...land vulnerable to natural hazards may put their land to use in a way that threatens public safety." Some contend that government is obligated to regulate land uses when public safety is compromised; others believe that, in this regard, government regulation is "...inequitable." The conflicting points of view are highlighted. The 'patchwork' of intergovernmental public policies, regulations, and programs are the focus of this section's discussion, primarily considering the "...the motivations and interests of different levels of government, potential conflict among these levels, and the implications for the design and implementation of natural hazards policies."

Meck, S. (ed.). 2002. *Growing smart legislative guidebook: Model statutes for planning and the management of change*. Chicago: American Planning Association.

Presents new ways states and their local governments have new practical tools available to help combat urban sprawl, protect farmland, promote affordable housing, and encourage redevelopment. The *Guidebook* and its accompanying *User Manual* are the culmination of APA's seven-year Growing Smart project, an effort to draft the next generation of model planning and zoning legislation for the U.S.

Michigan Department of State Police, Emergency Management Division. 2003. *Local hazard mitigation planning workbook. Appendix D: Integrating hazard mitigation into community comprehensive planning*. (retrieved 3/11/08 from http://www.michigan.gov/documents/13-pub207_60749_7.pdf).

Workbook includes the following sections: *Integration into Comprehensive Plans: the Options; Community Development and the Mitigation of Hazards; Hazard Mitigation: Key Land Use Issues for Communities to Consider; Reducing Community Exposure, Risk, and Vulnerability to Natural and Technological Hazards Through the Application of Land Use/Development Measures and; Land Use Development Guidance and Regulatory Measures in Michigan*.

Mileti, D. 1999. *Disasters by design: A reassessment of natural hazards in the United States*. Washington, D.C.: Joseph Henry Press.

This volume provides an overview of hazards and how to manage them through policies and programs. Chapter 9, "Getting from Here to There," recommends ways to implement disaster management consistent with sustainable development.

Morris, M. 1997. *Subdivision Design in Flood Hazard Areas*. Planning Advisory Service Report No. 473. Chicago: American Planning Association.

This PAS Report examines the importance of effective subdivision design and regulatory measures, as means to minimizing possible problems in floodplain areas. Examples such as cluster development, coast-to-road lots, and elevated building are all provided as methods to minimize flood damage. Section 3 (*Planning tools for flood hazard areas*) highlights specific planning techniques used to manage land uses in floodplains.

National Academy of Public Administration. 2002. *Wildfire suppression: Strategies for containing costs*. Washington, D.C.: Author.

The report focuses on why the Academy Panel believes wildfire suppression costs are increasing and what could be done to contain them. They conclude opportunities remain for improving efficiency and accountability for costs in fighting large wildfires. The two most significant controllable causes of rising suppression costs are the accumulation of hazardous fuels and the increasing community development surrounding them.

National Firewise Communities (NFC). 2006. *Firewise: Community solutions to a national problem*. Quincy, Mass.: NFC, National Wildland/Urban Interface Fire Program.

This resource provides information for taking action to reduce the risk from wildfires in local communities through shared responsibility. Some examples of successful projects to use in communities are provided with links to resources.

National Research Council. 1994. *Facing the challenge: The U.S. national report to the IDNDR World Conference on Natural Disaster Reduction*. Report presented at the IDNDR World Conference on Natural Disaster Reduction, Yokohama, Japan, Washington D.C.: National Academy Press.

Natural Hazards Center. 2005. *Holistic discovery recovery: Ideas for building local sustainability after a natural disaster*. Fairfax, Va.: Public Entity Risk Institute.

This updated guide (through Katrina) is for local practitioners on how to build sustainability into a community during the recovery period after a disaster. It encourages communities to incorporate as many of the principles of sustainability into the recovery process as possible, including environmental quality, economic vitality, quality of life, social equity, citizen participation and disaster resiliency. It is intended for local government officials and staff, state planners, activists, emergency management professionals, disaster recovery experts, mitigation specialists, and others who help communities recover from disaster.

Nelson, A. C., and French, S. 2002. Plan quality and mitigating damage from natural disasters, *Journal of American Planning Association*, 68(2), 194-207.

Planners have long believed as an article of faith that land-use planning can reduce damage from natural hazards. After evaluating the relationship between the seismic safety elements of comprehensive plans prepared in the Los Angeles region of California and damage caused by the 1994 Northridge earthquake, the authors provide evidence that this faith is not misplaced. They found that fewer homes were damaged when local governments had developed high-quality factual bases, formulated goals for improving seismic safety, crafted regulatory policies to manage development in hazardous areas, and advanced policies that made the public aware of seismic risks. They conclude that including a high-quality seismic safety element in land use plans can reduce property damage associated with seismic events. This work has broad implications for land-use planning.

Nolon, J. and Rodriguez, D. 2007. *Losing ground: A nation on edge*. Washington, D.C.: Environmental Law Institute.

This book proposes ways to mitigate the impact of emerging issues involved in building on the edge of vulnerable places. It discusses property rights as hurdles to the use of government regulation to mitigate disasters. This volume contains approaches to ecosystem management and regulation that institutions can implement to protect environment and property right.

North Carolina Division of Emergency Management, Hazard Mitigation Section, Mitigation Planning Branch. 1998. *Tools & techniques: Putting a hazard mitigation plan to work* (retrieved 3/12/08 from <http://www.p2pays.org/ref/14/13613.pdf>).

Each tool or technique includes as many as four parts. The first is a definition. The second is a critique that summarizes concerns about and potential problems arising from the use of the tool. Implementation issues are best practices for using the tool for mitigation purposes. Often the implementation issues propose solutions for the concerns raised in the critique. Whenever possible, this guide provides examples of the tools and techniques in action in communities in North Carolina and around the country.

North Carolina Division of Emergency Management, Hazard Mitigation Section, Risk Assessment and Planning Branch. 2003. *Keeping natural hazards from becoming disasters: A mitigation planning guidebook for local governments* (retrieved 3/12/08 from <http://www.dem.dcc.state.nc.us/mitigation/Library/planningGuide.pdf>).

The purpose of this guidebook is to help local communities to prepare a responsible action-oriented mitigation plan using existing staff and local resources. The guidebook will help you explore your community's current and future conditions, including identifying possible hazards, assessing vulnerable areas, and analyzing your community's capability to engage in mitigation activities. The guidebook will help you define goals for

increasing your community's hazard resilience, design effective mitigation policies, and assign responsibility for action.

Okeechobee County Technical Advisory Committee. 2003. *Okeechobee County wildland fire mitigation plan*. Jupiter, Fla.: Continental Shelf Associates, Inc.

The purpose of this mitigation plan is to reduce the risk to life and property from wildland fire in Okeechobee through identification and protection of hazards. The plan focuses on preferred management strategies and prescriptions that reduce the frequency and intensity of wildland fires.

Olshansky, R. 2001. Land use planning for seismic safety: The Los Angeles County experience, 1971-1994, *Journal of the American Planning Association*, 67(2), 173-185.

Seismic hazard information generally has not affected decisions on location, type, or intensity of land uses unless coupled with other concerns. Seismic safety policies, however, have created an environment in which it is easier to implement engineering initiatives, such as building codes or hazard abatement.

Olshansky, R. 2006. Planning after Hurricane Katrina, *Journal of the American Planning Association*, 72(2), 147-153.

Hurricane Katrina was the greatest urban and regional disaster in U.S. history. The rebuilding of New Orleans and surrounding areas of Louisiana and Mississippi will require the largest and most complex planning effort in the author's lifetime. To succeed, planners must learn from disasters of the past, while also applying the planning knowledge of the present. Planners have an obligation to take an active role and advocate for the funding and full participation necessary to achieve these goals.

Palm, R. 1990. *Natural hazards: An integrative framework for research and planning*. Baltimore: The John Hopkins University Press.

In a survey of theoretical approaches from the nineteenth century to the present, Palm sets forth a new integrative framework for hazards study and how to apply the study, with special emphasis on earthquakes and the California housing market. Palm argues the relevance of understanding how the factors of physical environment, societal structure, and individual decision makers interact.

Platt, R. 1999. *Disasters and democracy: The politics of extreme natural events*. Washington, D.C.: Island Press.

Addresses the political response to natural disasters, focusing on the changing role of the federal government. Chapter 3 examines *Stemming the Losses: The Quest for Hazard Mitigation*. Chapter 6, 7, and 8 focus on three case studies: coastal erosion, flood, and earthquake hazards.

Platt, R., Salvesen, D., and Baldwin, G. 2002. Rebuilding the North Carolina coast after Hurricane Fran: Did public regulations matter? *Coastal Management*, 30(3), 249-269.

Post-storm rebuilding of the North Carolina coastal zone is governed by a complex array of federal, state, and local laws, of which the keystone is the state Coastal Area Management Act (CAMA). This act, as augmented by the National Flood Insurance Program and the federal Coastal Barrier Resources Act, seeks to reduce vulnerability to future coastal hazards through post-disaster adjustments in the horizontal and vertical placement of structures, among other measures. This article reviews experience in rebuilding the North Carolina oceanfront after the 1996 hurricanes to discern the influence, if any, of these laws.

Protz, M. 1999. *Communicating hurricane preparedness for agriculture, forestry and fisheries in the Caribbean* (retrieved 3/12/08 from <http://www.fao.org/sd/CDdirect/CDan0028.htm>).

There are measures that can be taken to prepare farm families, fishers, and forest communities in order to reduce the risk that hurricane damage poses to their livelihoods. Through the FAO supported project, "Emergency Assistance for the Formulation of National Hurricane Disaster Preparedness" (TCP/RLM/6616), agricultural communicators and extension professionals came together at a workshop in Grenada in September, 1998, to discuss communication strategies for limiting and preventing hurricane damage in these sectors. Their recommendations are presented here along with a set of practical tips ready to be used by media professionals in their radio and television broadcasts.

Roanoke Valley-Alleghany Regional Commission. 2005. *Regional pre-disaster mitigation plan* (retrieved 3/12/08 from <http://www.rvarc.org/disaster/Ch8.pdf>).

The Plan Maintenance (Chapter 8) section of this document details the process that will ensure that the Mitigation Plan remains an active and relevant document. The process includes a schedule for monitoring the plan on an annual basis and producing the required plan revision every five years. This section describes how the localities will integrate the plan into their overall planning efforts.

Rodriguez, H., Quarantelli, E., and Dynes, R. (eds.). 2006. *Handbook of disaster research*. New York: Springer.

Volume XXXI in the *Handbooks of Sociology and Social Research* series, the editors of this *Handbook* have brought together a comprehensive and interdisciplinary volume with a diverse and international group of contributors. The *Handbook* is based on the principle that disasters are social constructions and focuses on social science disaster research. Attention is given to the concept of "disaster" and to research methods including GIS, and how disaster research is useful in dealing with emergency operations. The *Handbook*

also includes a number of essays focusing on various types of vulnerabilities. In addition, there are discussions on community processes.

Schwab, A., Eschelbach, K., and Brower, D. 2006. *Hazard Mitigation and Preparedness*. New York: Wiley & Sons.

This book is basically a text for emergency management professionals and students looking to create more resilient communities.

Schwab, A. and Brower, D. 1999. *Sustainable development and natural hazards mitigation*. Raleigh, NC: North Carolina Division of Emergency Management.

Neither sustainable development nor hazard mitigation are brand new ideas. Yet it is not until recently that these concepts have become widely recognized as legitimate, “doable” principles to be incorporated into decision-making. And it is not until even more recently that the two concepts have been coupled as complementary methods for reaching the same broad goals. While the concept of sustainable development may be wider in scope, both concepts clearly have many salient aspects in common.

Schwab, J. and Meck, S. 2005. Planning for wildfires, *Planning Advisory Service Report No. 529/530*. Chicago: American Planning Association.

Examines the feasibility of permitting development in fire-prone areas and how best to design such developments to reduce the risk of damage and loss.

Schwab, J., Topping, K., Eadie, C., Deyle, R., and Smith, R. 1998. Planning for post-disaster recovery and reconstruction, *Planning Advisory Service (PAS) Report 483/484*. Chicago: American Planning Association.

Chapters include “A Primer in Disaster Operations,” “The Planning Process,” and “Hazard Identification and Risk Assessment.”

Smith, G. and Wenger, D. 2006. Sustainable disaster recovery: Operationalizing an existing agenda in *Handbook of disaster research*, Rodriguez, H., Quarantelli, E., and Dynes, R. (eds.). 2006, New York: Springer.

Smith, K. 2000. *Environmental hazards: Assessing risk and reducing disaster*. New York: Routledge.

A summary of key findings from the natural and social sciences on most major, rapid hazard events. Offers a broad overview followed by a systematic treatment of each type of disaster. Includes new material.

Srinivasan, D. and Wilson, O. 2005. Sustainable floodplain development: *An integrated*

approach to hazard mitigation using DMA, CRS, and FMA criteria. Paper presented at the Association of State Floodplain Managers (ASFPM) Conference, Madison, WI.

State of Texas. 2002. *Mitigation handbook* (retrieved 3/12/08 from ftp://ftp.txdps.state.tx.us/dem/mitigation/mit_dem_21_060502.pdf).

Mitigation program activities in Texas employ the coordinated and interactive use of at least three components. The organization, responsibilities, and operations of the Hazard Mitigation Team are in the “*Annex P (Hazard Mitigation)*” of a comprehensive “*Emergency Management Plan*”; current, quantifiable vulnerability and risk data, designed to facilitate the prioritization of mitigation and preparedness needs are in the “*Hazard Analysis*”; and the identification and implementation of specific vulnerability and risk reduction actions are contained within the “*Mitigation Action Plan.*” This handbook addresses the relationships and mutually supporting interactions between these three components. Chapter 5 examines *Developing a Comprehensive Mitigation Plan.*

Steinberg, L., Basolo, V., Burby, R., Levine, J., and Cruz, A. 2004. Joint seismic and technological disasters: Possible impacts and community preparedness in an urban setting, *Natural Hazards Review*, 5(4), 159-169.

Tobin, G., and Montz, B. 1997. *Natural hazards: Explanation and integration.* New York, N.Y.: Guilford Press.

Taking stock of what is known about the geophysical and human aspects of natural hazards, this volume provides a cross-disciplinary framework for managing these often cataclysmic events. Unlike traditional texts that utilize a hazard-by-hazard approach, the book integrates perspectives from the physical and social sciences to identify and describe general principles that can enhance our understanding of the physical, social, technical, and economic forces inherent in extreme geophysical events. Focusing on the physical characteristics hazards share, such as magnitude, duration, and frequency, the authors consider individual and community perceptions of these events and explore the effects of different attitudes on behavior and response. In its pragmatic rethinking of hazards policy, the book brings to the fore political and economic factors and provides richly detailed examples of planning-based approaches to hazards management.

Topping, K. 2003. *The role of city planning in reducing disasters*, paper presented at 3rd DPRI-IIASA International Symposium, Integrated Disaster Risk Management: Coping with Regional Vulnerability in Kyoto, Japan.

Topping, K. 2004. *Promoting natural hazards mitigation through land use planning on a national scale: Lessons from the U.S. Disaster Mitigation Act of 2000*, presented as keynote address at Annual Meeting, National Science and Technology Center for Disaster Reduction (NCDR) in the Republic of China (Taiwan).

Topping, K. 2005. *Developing internationally transferable mitigation and recovery*

principles: Community stakeholder-based planning, paper presented at the First International Conference on Urban Disaster Reduction (IICUDR) in Kobe, Japan.

Topping, K. 2006. *Nature's challenge to the planning profession*, paper presented at 20th Annual Land Use Law and Planning Conference, UCLA Extension in Los Angeles, California.

Topping, K., Olshansky, R., and Johnson, L. 2006. Rebuilding communities following disaster: Lessons from Kobe and Los Angeles, *Built Environment*, 32(4), 354-374.

Topping, K., Siembieda, W. and Boswell, M. 2007. *State of California multi-hazard mitigation plan*. Sacramento, Cal.: California Governor's Office of Emergency Services.

Topping, K. and Sorensen, M. (1996). Building disaster-resistant communities, *Environment and Development*, (Jan/Feb), 11.

Transit Cooperative Research Program (TCRP). 2005. Public transportation, emergency mobilization and emergency operations guide. *TCRP Report 86, Vol. 7*. Washington, D.C.: Transportation Research Board.

This guide provides suggestions and tools for public transportation systems to improve their emergency response capabilities and coordination with their local communities. The suggestions are based on research conducted with transit systems; local, state and federal emergency planning agencies.

United Nations, Department of Humanitarian Affairs. (1996). *Mudflows: Experience and lessons learned from the management of major disasters*. New York: Same as author.

DHA provides case studies to formulate strategies for disaster reduction at the national and international level, and among the general population.

University of California-Berkeley, Disaster-Resistant University Project. 2003. *Strategic plan for loss reduction and risk management: A working paper* (retrieved 3/12/08 from www-iurd.ced.berkeley.edu/pub/WP-2000-03.pdf).

This Risk Management Plan was developed through the advice and support of the Disaster-Resistant University Steering Committee. The work was funded in part through a grant from the Federal Emergency Management Agency to the Institute for Urban and Regional Development. It is a companion to IURD Working Paper 2000-02, "The Economic Benefits of a Disaster Resistant University: Earthquake Loss Estimation for UC Berkeley," by Mary Comerio.

University of New Orleans, Center for Hazards Assessment and Response Technology. 2006. *Hazard mitigation plan* (retrieved 3/12/08 from http://www.chart.uno.edu/uno_mitigation.html).

The University of New Orleans with the support of its Center for Hazards Assessment and Response Technology has completed the final draft of its Hazard Mitigation Plan and posted it on the CHART for the public to review. The goal of the pre-disaster hazard mitigation plan, said Monica Farris, CHART assistant director, is to reduce the overall risk to students, faculty and staff, facilities and research assets. It is to be updated every five years.

Vale, L. and Campanella, T. (eds.). 2004. *The resilient city: How modern cities recover from disaster*. New York: Oxford University Press.

Throughout history, cities have been sacked, burned, torched, bombed, flooded, besieged, and leveled. And yet they almost always rise from the ashes to rebuild. Viewing a wide array of urban disasters in global historical perspective, *The Resilient City* traces the aftermath of such cataclysms as: --the British invasion of Washington in 1814 --the devastation wrought on Berlin, Warsaw, and Tokyo during World War II --the late-20th century earthquakes that shattered Mexico City and the Chinese city of Tangshan --Los Angeles after the 1992 riots --the Oklahoma City bombing --the destruction of the World Trade Center Revealing how traumatized city-dwellers consistently develop narratives of resilience and how the pragmatic process of urban recovery is always fueled by highly symbolic actions, *The Resilient City* offers a deeply informative and unsentimental tribute to the dogged persistence of the city, and indeed of the human spirit.

CASE EXAMPLES

Belhaven, North Carolina

Emergency Management Institute, Federal Emergency Management Agency. 2007. "Flood mitigation: Rising above the flood (Belhaven, North Carolina)" in *IS-393.A Introduction to Hazard Mitigation: Lesson 1. Hazard Mitigation: Sustainable Futures for At-Risk Communities* (retrieved January 18, 2008 from <http://training.fema.gov/EMIWeb/IS/is393A.asp>). Author.

Federal Emergency Management Agency. 2003. *Mitigation in action – Belhaven: Rising above the flood*, FEMA News Release #FNF-03-17 (retrieved January 18, 2008 from <http://www.fema.gov/news/newsrelease.fema?id=8412>). Author.

North Carolina Division of Emergency Management & The Department of Homeland Security, Emergency Preparedness and Response Directorate, Federal Emergency Management Agency. 2003. *Mitigation preliminary performance assessment: Losses avoided during Hurricane Isabel in North Carolina* (retrieved January 11, 2008 from www.ncem.org). Author.

Berkeley, California

Chakos, A., Schulz, P., and Tobin, L.T. 2002. Making it work in Berkeley: Investing in community sustainability. *Natural Hazards Review*, 3(2), 55-67.

ESRI. 2005. The city of Berkeley, California, support disaster mitigation planning with GIS, *ArcNews Online* (<http://www.esri.com/news/arcnews/spring05articles/the-city-of-berkeley.html>).

Charlotte-Mecklenburg, North Carolina

Charlotte-Mecklenburg Stormwater Authority.
<http://www.charmeck.org/Departments/StormWater/Flood+Zone/What+are+floodplain+maps+used+for%3F.htm>

<http://www.charmeck.org/Departments/StormWater/Flood+Zone/FEMA+Floodplain+vs+Futur e+Floodplain.htm>

Mecklenburg County Park & Recreation Department. 1999. *Mecklenburg County greenway master plan*, Charlotte, N.C.: Author.

Roanoke Valley Allegheny Regional Commission. 2007. Appendix D: Charlotte Mecklenburg greenway system in *Update to the Roanoke Valley Conceptual Greenway Plan* (retrieved February 7, 2008 from [www.rvarc.org/greenways/Appendix D.pdf](http://www.rvarc.org/greenways/Appendix%20D.pdf)).

Kinsley, Kansas

Literature describing what happened in Kinsley not found; only two documents that identify Kinsley as a Project Impact community, although the town only used the “Project Impact” name and did not receive federal funds.

Federal Emergency Management Agency. 2002. *Second Biennial Report to Congress on the Flood Mitigation Assistance Program*. Available online at www.dnr.state.ne.us/floodplain/flood/Desk_Reference/Tab-08-Flood_Mitigation_Assistance/fmareprt.pdf. Accessed 6/5/2008.

Kinsley is mentioned in this document and cited as a Flood Mitigation Assistance “success story” in connection with receiving a Small Town and Rural Planning Award for Excellence from the American Planning Association.

Federal Emergency Management Agency and the Kansas Division of Emergency Management. 1999. “Disaster resistant communities” in *Recovery times: People helping people, Issue 2* (retrieved January 18, 2008 from www.fema.gov/pdf/rt/rt_ks99.pdf). Author.

United States General Accounting Office. 2002. *Hazard mitigation: Proposed changes to FEMA’s multihazard mitigation programs present challenges*, GAO-02-1035 (retrieved January 18, 2008 from www.gao.gov/cgi-bin/getrpt?GAO-02-1035). Author.

Kinston, North Carolina

Federal Emergency Management Agency. (Unknown). *Innovative floodplain management (FEMA Case Studies: Kinston, North Carolina)* (retrieved January 20, 2008 from www.fema.gov/pdf/casestudys/kinston_cs.pdf).

North Carolina Division of Emergency Management. 2000. *Hazard mitigation in North Carolina: Measuring success*. Raleigh, NC: Author.

North Carolina Division of Emergency Management. 2002. *Kinston-Lenoir County acquisition project: Sustainable redevelopment* (retrieved January 20, 2008 from http://www.ncem.org/mitigation/case_kinston.htm). Author.

The Conservation Fund, the University of North Carolina at Chapel Hill Department of City and Regional Planning, the City of Kinston and the County of Lenoir. 2001. *Kinston-Lenoir County green infrastructure plan for the Neuse River floodplain*. Unpublished Manuscript.

The Conservation Fund, the University of North Carolina at Chapel Hill Department of City and Regional Planning, the City of Kinston and the County of Lenoir. 2002. *Linking natural and historic assets: Green infrastructure as economic development in Lenoir County, NC*. Unpublished Manuscript.

Lee County, Florida

Deyle, R., Smith, R., Boswell, M., Baker, J., Falconer, M., and MacDonald, J. 2002. *The costs of hurricane emergency management services: A risk-based method for calculating property owners' fair share*. Gainesville, Fla.: University of Florida Institute of Food & Agricultural Sciences.

Medina County, Ohio

Hambley, S. and Willhoite, D. 2006. *Eliminating the flood hazard: Flood plain regulations in Medina County 2006* (presented at CCAO/CEAO Winter Conference, December 11, 2006).

Village of Chippewa Lake, Medina County, Ohio. 2005. *Special purpose: Flood damage reduction ordinance, Ordinance #596-04*. Chippewa Lake, OH: Author.

Mississippi Gulf Coast

Federal Emergency Management Agency (FEMA). 2007. Mississippi making the most of mitigation (retrieved 2/29/2008 from <http://www.fema.gov/news/newsrelease.fema?id=38989>).

Federal Emergency Management Agency (FEMA). 2008. A year of progress in Mississippi's Katrina recovery, *Gulf Coast News* (retrieved 2/29/2008 from <http://www.gulfcoastnews.com/GCNnewsKatrinaFEMAupdate020408.htm>).

Governor's Office of Recovery and Renewal 2007. *Two years after Katrina: Progress report on recovery, rebuilding, and renewal* (retrieved 3/12/08 from <http://www.governorbarbour.com/recovery/documents/TwoYearreport.pdf>).

Post, Buckley, Schuh and Jernigan. 2006. Building the better city: Disaster as a springboard for opportunity, *PBSJ Highlights* (retrieved 2/29/2008 from <http://www.pbsj.com/Press/Highlights/Fall2006/06.asp>).

New Orleans, Louisiana

American Planning Association. 2005. *Charting the course for rebuilding a great American city: An assessment of the planning function in Post-Katrina New Orleans*. Chicago: Author.

City of New Orleans, Office of Emergency Preparedness. 2006. *Orleans Parish hazard mitigation plan*. New Orleans, LA: Author.

Pierce County, Washington

Pierce County Department of Emergency Management. 2004. *Pierce County natural hazard*

mitigation plan (Breaking the disaster cycle: Planning for disaster-resistant communities) (retrieved January 20, 2008 from <http://www.co.pierce.wa.us/pc/abtus/ourorg/dem/EMDiv/MitPCP.htm>). Author.

Roseville, California

City of Roseville, California. 2005. *City of Roseville hazard mitigation plan*. Roseville, Cal.: Author.

Teller County, Colorado

Colorado Department of Local Affairs, Office of Smart Growth. 2003. *Colorado heritage report: Best practices in natural hazards planning and mitigation*. Denver: Author.

Colorado Mountain Estates Wildfire Protection Group. 2007. *Colorado Mountain Estates community wildfire protection plan*. Florissant, Colo.: Author.

Teller County Community Wildfire Protection Plan Commission. 2005. *Community wildfire protection plan*. Cripple Creek, Colo.: Author.

Tulsa, Oklahoma

Flanagan, R.D. & Associates, Meshek & Associates & French & Associates. 2002. *Multi-hazard mitigation plan*. Tulsa, Okla.: City of Tulsa.

INTERNET RESOURCES

American Red Cross

www.redcross.org

The American Red Cross provides extensive information on disaster mitigation, management, and recovery.

Association of State Floodplain Managers (ASFPM)

www.floods.org

The Association of State Floodplain Managers is an organization of professionals involved in floodplain management, flood hazard mitigation, the National Flood Insurance Program, and flood preparedness, warning and recovery.

Bibliography of books/reports on Floods

www.jibc.bc.ca/library/Bibliographies/FLOODS - JIBC Library.pdf

Justice Institute Library of British Columbia

Community Engagement in Health Emergency Planning

www.riskinstitute.org/PERI/PTR/Community+Engagement+in+Health+Emergency+Planning

The Working Group (WG) on Community Engagement in Health Emergency Planning was an advisory body convened by the Center for Biosecurity of the University of Pittsburgh Medical Center in 2006. The purpose of the group was to counsel government leaders and public health and safety professionals on the value and feasibility of active collaborations with citizens and civil society institutions in preparing for, responding to, and recovering from an extreme health event.

Dealing with Public Risks Involved in Land Use Planning

www.riskinstitute.org/NR/rdonlyres/F9C77BAD-3B84-47F7-A6F1-6AC0C35623EE/0/Land Use Compilation.pdf

These Issues and Ideas Papers were presented during one of PERI's "virtual" Symposium Programs, programs that are conducted entirely via the Internet. This program focused on land-use planning issues that raise fiscal, safety, and legal risks to local communities in a variety of critical areas. The symposium covered ways cities and counties can minimize these risks in developing long-range land-use policy strategies, and in carrying out day-to-day development review responsibilities.

EMI Floodplain Management Home Study Course (FEMA)

www.fema.gov/emi/is9.htm

The purpose of this home study course is to enhance the knowledge and skills of local officials responsible for administering and enforcing local floodplain management regulations.

FIREWISE

www.firewise.org

This is a service of the National Wildland/Urban Interface Fire Program.

Flood Mitigation Assistance

www.fema.gov/mit/fmasst.htm

Florida's Best Practice Guides include:

www.dca.state.fl.us/fdcp/D.C.P/publications/

Disaster Planning for Florida's Historic Resources

Guiding the Way to Waterfront Revitalization

Preparing a Boating Facility Siting Plan

Minimizing Vulnerability to Flooding and Coastal Storms

Wildfire Mitigation

Front Range Fuel Treatment Project

www.frftp.org/

An alliance of federal, state, and local governments; land management agencies; private landowners; conservation organizations; and other stakeholders committed to reducing wildland fire risks through sustained fuels treatment. FRFTP was formed to reduce wildland fire risks through sustained fuels treatment along the Colorado Front Range.

HAZUS (FEMA)

www.fema.gov/hazus

FEMA, under a cooperative agreement with the National Institute of Building Sciences, has developed a standardized, nationally applicable earthquake loss estimation methodology. This methodology is implemented through PC-based Geographic Information System (GIS) software called HAZUS.

Institute for Business and Home Safety (IBHS)

www.disastersafety.org

“The Institute for Business and Home Safety’s mission is to reduce the social and economic effects of natural disasters and other property losses by conducting research and advocating improved construction, maintenance and preparation practices.” IBHS is largely underwritten by insurance companies interested in supporting public policies aimed at disaster loss reduction.

The Interaction between Hazards and GIScience: A Bibliography (Hazards and Vulnerability Research Institute)

www.cas.sc.edu/geog/hrl/nasa_biblio.html

1. Hazards & Technology (general) 2. Biological Hazards 3. Chemical Hazards 4. Natural Hazards 4a. Droughts 4b. Earthquakes 4c. Floods 4d. Hurricane/Tropical Storms 5.

Technological Hazards 6. Terrorism 7. Modeling & Forecasting 8. Decision Making & Planning 9. Vulnerability

International Association of Emergency Managers (IAEM)

<http://www.iaem.com>

IAEM is an organization of local emergency management professionals.

Mitigation Technical Assistance Programs (FEMA)

www.fema.gov/MIT/flmitast.htm

National Center for Appropriate Development

www.ncat.org

Championing sustainable technologies and community-based approaches that protect natural resources and assist people, especially the economically disadvantaged, in becoming more self-reliant.

National Emergency Management Association (NEMA)

www.nemaweb.org/index.cfm

NEMA is the professional association of state and Pacific Caribbean insular state emergency management directors.

National Fire Protection Association (NFPA)

www.nfpa.org

The mission of NFPA International is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training, and education.

National Flood Insurance Program (NFIP)

www.fema.gov/nfip

The NFIP makes Federally-backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

Natural Hazards.org

www.naturalhazards.org

This site provides quick access to basic information on all types of natural hazards.

Natural Hazards Center at the University of Colorado, Boulder

www.colorado.edu/hazards/index.html

The Natural Hazards Center is a national and international clearinghouse for information on natural hazards and human adjustments to hazards and disasters.

Natural Hazards Informer

www.colorado.edu/hazards/publications/informer/informer.html

Written by expert practitioners and researchers, each volume of the *Natural Hazards Informer* summarized current state-of-the-art knowledge about a specific aspect of natural hazards research and policy, saving readers the time and effort needed to research and update their understanding of a topic.

Natural Hazards Research and Applications Information Center

www.colorado.edu/hazards/wp/wp106/wp106.html

Network of State Hazard Mitigation Officers

www.hazmit.net/index.htm

This represents the networking input of each State Hazard Mitigation Officer for the purposes of learning from each other, getting new, innovative ideas, and becoming friends and effective colleagues.

NOAA Coastal Services Center

www.csc.noaa.gov/themes/coasthaz

The Coastal Hazards page includes current information on Center projects and activities, identifying hazard impacts and solutions, and linking people, information and technology.

Rothstein Catalog on Disaster Recovery. Natural Hazards: Earthquakes, Hurricanes

www.rothstein.com/data/cg220001.htm

A catalog of books/reports on disaster recovery.

Smart Communities Network, US Department of Energy

www.sustainable.doe.gov

This center's website includes extensive sections that offer information on how long-term community sustainability relates to disaster preparedness, mitigation, and recovery.

State Hazard Mitigation Officers (list)

www.fema.gov/about/contact/shmo.shtm

U.S. Department of the Interior - Natural Hazards Page

www.doi.gov/nathaz/index.html

The DOI has devoted this portion of its website entirely to natural hazards, with sections on wildfires, volcanoes, earthquakes, floods, landslides, storms, tsunamis, and other hazards.

U.S. Geological Survey

www.usgs.gov

The USGS website provides lots of information on geologic hazards including earthquakes, landslides, volcanoes, floods, and coastal storms.