Preface

This annotated bibliography assembles all the sources of information listed in the handbook, *Holistic Disaster Recovery. Ideas for Building Local Sustainability after a Natural Disaster.* Readers who have a printed copy or downloaded version of that handbook already have the information contained in this bibliography. This document is intended rather for the person who wants lists of or links to information about disaster recovery and the principles of sustainability without the explanatory material that appears in the main handbook.

The bibliography is organized by topics that correspond to the chapters in the handbook. Each section can be downloaded separately.

Section 1. Introduction to Sustainability
Section 2. The Disaster Recovery Process
Section 3. Participatory Processes in Disaster Recovery
Section 4. Using Disaster Recovery to Maintain and Enhance Quality of Life
Section 5. Building Economic Vitality into Recovery
Section 6. Promoting Social and Intergenerational Equity during Disaster Recovery
Section 7. Protecting Environmental Quality during Disaster Recovery
Section 8. Incorporating Disaster Resilience into Disaster Recovery

This bibliography was produced under a 20-month project funded by the Public Entity Risk Institute entitled "A Project to Develop Guidance and Expertise on Sustainable Recovery from Disaster for Communities." The project developed out of a recognition that small- and medium-sized towns can have difficulty figuring what to do, or how to do it, when they are confronted with the need to recover from a disaster. The intent of the project was to try to consolidate what is known about sustainable recovery at the local level and to fill in the gaps by suggesting ways to do things in innovative ways. The handbook on holistic recovery produced during the project describes a new approach to disaster recovery at the local level that incorporates the principles of sustainability into the recovery process. It explains the concept and procedures of holistic recovery, gives examples, and lists places to get more information. This bibliography reprints in a concise format the sources of information listed in the handbook.

SUSTAINABILITY
— WHERE TO FIND INFORMATION —

Training Courses and Workshops

Federal Emergency Management Agency, Emergency Management Institute, Higher Education Project Courses. Emmitsburg, Maryland. http://www.fema.gov/emi/edu/aem_courses.htm [accessed June 15, 2001] (301) 447-1233 or email Barbara Johnson: barbara.l.Johnson@fema.gov

- "Building Disaster Resilient and Sustainable Communities." Course developed by Raymond Burby. http://www.fema.gov/emi/edu/bldcomm.htm, [accessed June 15, 2001] This course introduces the concepts of sustainable development, resilient communities, and smart growth. Public and private sector planning are discussed. The last quarter of the class focuses on resilience, including financing resilience projects, creating resilience among vulnerable populations, and creating resilience for specific hazards.

Organizations

American Planning Association
The APA is a non-profit organization representing "30,000 practicing planners, officials, and citizens involved with urban and rural planning issues. Sixty-five percent of APA's members are employed by state and local government agencies." APA's mission is to "encourage planning that will contribute to public well-being by developing communities and environments that meet the needs of people and society more effectively." The website is an excellent source of books about community planning that incorporate the principles of sustainable development.
See http://www.planning.org [accessed June 15, 2001]

Center of Excellence for Sustainable Development
The CESD website is a project of the Denver Regional Office of Department of Energy's Office of Energy Efficiency and Renewable Energy. Since 1995, the CESD website has offered users access to comprehensive resources on community sustainability. It is an excellent source for resources on sustainable development.
See http://www.sustainable.doe.gov [accessed June 29, 2001]

Minnesota Sustainable Communities Network (MnSCN)
MnSCN, sponsored by the Minnesota Office of Environmental Assistance, seeks to "encourage networking, information exchange, and better access to assistance." The network contains over 1500 individuals, businesses, local governments, educational institutions, and organizations who are interested in promoting sustainability in Minnesota.
See http://www.nextstep.state.mn.us/index.cfm [accessed June 22, 2001]

Redefining Progress
Redefining Progress is an organization that "seeks to ensure a more sustainable and socially equitable world for our children and our children's children." Information about the group's sustainability program is available on its website.
See http://www.rprogress.org [accessed June 15, 2001]

Sustainable Development Communications Network
In addition to over 1,200 documents about sustainable development, this website has a calendar of events, a job bank, the Sustainability Web Ring, a roster of mailing lists (listservs) and news sites dealing with sustainable development.
See http://sdgateway.net [accessed September 21, 2001]

Videos, CD-ROMs, and DVDs

Quality Redevelopment of Eastern North Carolina. Horizon Video Productions. 2000. Durham, NC.
This 20-minute video was produced by the state in the aftermath of Hurricane Floyd to introduce and educate local and state officials about the "better ways" available to recover from the disaster and at the same time address other local concerns such as environmental quality, economic vitality, housing, sense of community, business and job opportunities, and disaster mitigation. It introduced a framework espoused by the state for sustainable community action and features the governor explaining the tenets of "quality redevelopment" and how it can—and did—benefit North Carolina communities and help ensure a better future for the state's citizens. Available from North Carolina Department of Emergency Management, 1830-B Tillery Place, Raleigh, NC 27699; (919) 751-8000; fax: (919) 715-9763.

Planning for Natural Hazards: Oregon Technical Resource Guide. Oregon Natural Hazards Workshop. 2000. University of Oregon: Oregon Natural Hazard Workshop.
The purpose of the project leading to this resource guide was to "develop.. technical resource guides for Oregon cities and counties to plan for, and limit the effects of, threats posed by natural hazards." More information about the guide in available on-line at http://www.uoregon.edu/~onhw/text/projects/tfeatured.html [accessed June 22, 2001]

The Link Between Sustainability & Disaster Resistant Communities. Slide show produced by the U.S. Department of Energy and the Federal Emergency Management Agency. http://www.sustainable.doe.gov/disaster/impact [accessed July 23, 2001]
This slide show explains the concept of sustainable redevelopment and gives examples of redevelopment in three communities: Soldiers Grove, Wisconsin; Valmeyer, Illinois; and Arkadelphia, Arkansas.

Mitigation Revitalizes a Floodplain Community: The Darlington Story. Wisconsin Department of Natural Resources. 1997 Madison, WI.
This is a splendidly produced videotape about the efforts of a small rural Wisconsin community to reverse the effects of neglect and disinvestment in its historic downtown area caused by repeated flooding and economic change. Using a multi-objective planning and management strategy, officials and citizens, in partnership with government agencies and private entities,

identified six goals: 1) preserve the historic character of the downtown; 2) restore community pride; 3) acquire and relocate commercial properties at risk; 4) elevate and flood proof commercial and residential structures; 5) stimulate investment downtown; and 6) pursue tourism as an economic strategy. The video follows the mitigation process from early meetings through floodproofing and relocation. Produced by the Wisconsin Department of Natural Resources. 27 minutes. 1997. Available free from Wisconsin DNR, P.O. Box 7921, Madison, WI 53707-7921; (608) 264-9200.

Books, Articles, and Papers

Arnold, Matthew B. and Robert M. Day. 1998. *The Next Bottom Line: Making Sustainable Development Tangible.* Washington, D C.: WRI Publications. 64 pp.

This report tries to bring sustainable development down to earth for a business audience. Its authors seek to break down the abstract ideals of sustainable development into ideas small enough to grasp and powerful enough to lead to new business opportunities. The authors offer a road map for businesses to find financial success in the solutions to our environmental and social challenges.

Becker, William S. and Roberta F. Stauffer. 1994. *Rebuilding the Future--A Guide to Sustainable Redevelopment for Disaster-Affected Communities.* Golden, CO: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Center of Excellence for Sustainable Development. 18 pp.

This document summarizes why sustainability is important and gives an example of sustainable development in one community, Soldiers Grove, Wisconsin. The reader is walked step-by-step through the sustainable recovery process. The last chapter discusses real-life problems the planner may encounter, and an appendix contains a comprehensive list of resources. This document is available online at http://www.sustainable.doe.gov/articles/RFTF1.shtml [accessed June 15, 2001]

Berke, Philip R. and Jack Kartez. 1994. *Sustainable Development as a Guide to Community Land Use Policy: A Conceptual Framework.* HRRC Publication 37P. College Station, TX: Texas A&M University, College of Architecture, Hazard Reduction & Recovery Center. 25 pp.

The authors explore how "sustainable development" can be used to describe the common good in land use and development and present a set of principles for land use policy formation. Principles for land use policy that the report identifies are: 1) include public participation in the decisionmaking process; 2) build consensus through conflict resolution mechanisms; 3) build local decisionmaking on a realistic capacity to carry out policies; 4) recognize local rights to devise rules for guiding human settlement patterns; 5) land use policy must work in harmony with nature and recognize the limits of ecosystems; 6) the built environment should be in harmony with people's needs and aspirations; 7) realistic land use policy must be able to alleviate local poverty and account for the least advantaged; 8) polluters, or culpable parties/corporations, must pay for the adverse affects they have imposed on ecosystems; and 9) responsible regional planning needs to be promoted.

Berke, Philip and Maria Manta. 1999. *Planning for Sustainable Development· Measuring Progress in Plans*. Lincoln Institute of Land Policy Working Paper. Lincoln, NE: Lincoln Institute of Land Policy. 23 pp.

Using six principles that define and operationalize the concept of sustainable development, the authors evaluated 30 comprehensive plans to determine how well the policies of these plans supported sustainable development. Findings indicate no significant differences in how extensively sustainability principles were supported between plans that state an intention to integrate sustainable development and those that did not. In addition, plans did not provide balanced support of all six sustainability principles; they supported one–the livable built environment principle–significantly more than the others.

Burby, Raymond J., ed. 1998. *Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities*. Washington, D.C.: The Joseph Henry Press. 356 pp. Available at http://www.nap.edu/catalog/5785.html. [accessed September 21, 2001]

This book focuses on the breakdown in sustainability that follows disaster. The authors follow the history of land use planning and identify key components of sustainable planning for hazards. The authors explain why sustainability and land use have not been taken into account in the formulation of public policy. They also lay out a vision of sustainability, concrete suggestions for policy reform, and procedures for planning. The volume has an excellent bibliography on local land use planning and management for natural hazard mitigation.

Burby, Raymond J., Timothy Beatley, Philip R. Berke, Robert E. Deyle, Steven P. French, David R. Godschalk, Edward J. Kaiser, Jack D. Kartez, Peter J. May, Robert Olshansky, Robert G. Paterson, and Rutherford H. Platt. 1999. "Unleashing the Power of Planning to Create Disaster-Resistant Communities." *Journal of the American Planning Association* 65 (Summer).

Human suffering and loss of lives and property in natural disasters can be reduced with appropriate planning for hazardous areas. However, the authors of this paper assert that federal policies addressing these problems have yet to recognize the importance of planning as the cornerstone of effective local hazard mitigation. In fact, federal programs make planning more difficult, the authors suggest, because they encourage the intensive use of hazardous land and shield local governments and private decisionmakers from financial losses in the disasters that inevitably follow. To use planning for hazard mitigation, federal policies must be revised so that they help build local understanding of risk, commitment to hazard mitigation, and support for planning.

Casey-Lefkowitz. 1999. *Smart Growth in the Southeast: New Approaches for Guiding Development*. Washington, D.C.: Environmental Law Institute Research Publications.

The southeastern United States has been trying to find ways to continue to reap the benefits of the region's bustling economy without the mounting fiscal, health, and environmental costs of poorly planned development. This report provides an overview of land use and transportation trends in seven states–Alabama, Georgia, Florida, North Carolina, South Carolina, Tennessee, and Virginia–and shows how these states are beginning to shape the pace and location of development by promoting community revitalization, conservation, and transportation alternatives.

Civil Engineering 63(10)(October 1993): 39-76.
This topical journal issue begins with an essay by John Prendergast titled, "Engineering Sustainable Development " Following this are nine articles that describe projects that incorporate principles and current practices used by the civil engineering profession in its efforts to achieve sustainable development. Topics explored include reusing stormwater runoff, geogrid reinforcement to solve hillside erosion, and solving local wastewater treatment problems.

Darmstadter, Joel. 1994. *Global Development and the Environment: Perspectives on Sustainability*. Washington, D.C.: Resources for the Future.
The first two essays in this volume set the stage for considering requirements to develop sustainably by, first, explaining the problem of global population growth, and second, discussing how to move from sustainability as a concept to a reality. The remainder of the essays in the book discuss individual issues such as fairness; practical difficulties; the future of specific natural resources such as water, agriculture, and energy; climate variability and its effect on agriculture; climate change and carrying capacity; and biodiversity and carrying capacity.

Federal Emergency Management Agency. 1997. *Project Impact Guidebook. Building a Disaster Resistant Community*. Washington, D.C.: U.S. Government Printing Office.
This handbook is designed to help communities protect residents, organizations, businesses, infrastructure, and stability and growth of the economy as much as possible against the impact of natural disasters before they happen.

Federal Emergency Management Agency. 2000. *Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability*. FEMA Report 364. Washington, D.C.: Federal Emergency Management Agency. 40 pp. Available at http://www.fema.gov/mit/planning_toc.htm [accessed September 21, 2001]
This booklet is about hazard mitigation, disaster resilience, sustainable development and livability, and describes the linkages among these concepts. It shows how communities that undertake hazard mitigation planning become more disaster resilient and reap further benefits. Hazard mitigation links disaster resilience to broad community objectives of economic health, social well-being, and environmental protection.

Federal Emergency Management Agency. 2000. *Rebuilding for a More Sustainable Future: An Operational Framework*. FEMA Report 365. Washington, D.C.: Federal Emergency Management Agency. Available at http://www.fema.gov/mit/planning_toc2.htm. [accessed September 21, 2001]
This document provides guidance to the Federal Emergency Management Agency (FEMA) Sustainability Planner in the post-disaster response and recovery process. State emergency management officials, local jurisdictions, and other FEMA staff may also use it as a reference during non-disaster time.

Hart, Maureen. 1999. *Guide to Sustainable Community Indicators*. 2nd edition. North Andover, MA: Hart Environmental Data. 202 pp.
The document identifies indicators of sustainable community: ways to measure how well a community is meeting the needs and expectations of its present and future members. The author explains what indicators are, how indicators relate to sustainability, how to identify good

indicators of sustainability, and how indicators can be used to measure progress toward building a sustainable community. A website contains the information in the document, plus links and contact information for sources of assistance and advice, along with a list of communities in the United States that are developing indicators of sustainability:
http://www.sustainablemeasures.com [accessed June 15, 2001]

Krizek, Kevin J. and Joe Power. 1996. *Planners Guide to Sustainable Development.* Chicago, IL and Washington, D.C.: APA Planning Advisory Service. 66 pp.
This report urges planners to incorporate sustainable development objectives into their everyday work. It describes the history, concepts, and theories behind sustainable development; evaluates progress at the global, national, and state levels; and proposes strategies to help planners become more actively involved in local sustainable development programs. The book includes case studies of sustainable development initiatives in five communities.

May, Peter J., Raymond J Burby, Neil J. Ericksen, John W. Handmer, Jennifer E. Dixon, Sarah Michaels, and D. Ingle Smith. *Environmental Management and Governance: Intergovernmental Approaches to Hazards and Sustainability.* New York: Routledge. 254 pp.
The book addresses aspects of environmental management that raise fundamental questions about human actions and government roles. The authors examine "cooperative" and "coercive" governments by comparing polices in New Zealand and Australia with the more coercive and prescriptive approaches used in the U.S. They also focus on how the different regimes influence choices by local governments about land use and development in areas subject to natural hazards Separate chapters are devoted to growth management in Florida, resource management in New Zealand, and flood management in New South Wales. Other chapters describe how policy design is implemented, the role of regional governments, policy compliance and innovation at the local planning level, strategies for sustainable development, and examine the outcomes of cooperative policies.

Mazmanian, Daniel A. and Michael E. Kraft, eds 1999. *Toward Sustainable Communities. Transition and Transformations in Environmental Policy.* Cambridge, MA: The MIT Press. 322 pp.
This book reviews and assesses environmental policy over the past three decades, primarily in the United States but with implications for other nations. The editors place U.S. environmental policy within the framework of the transition from 1970s-era policies that emphasized federally controlled regulation, through a period of criticism and efficiency-based reform efforts, to an emerging era of sustainability in which decisionmaking takes place increasingly at the local and regional levels. The book looks at what does and does not work and how social, economic, and environmental goals can be integrated through policy strategies ground in the concept of sustainability.

McElfish. 1999. *Sustainability in Practice.* Washington, D.C.: Environmental Law Institute Research Publications.
As sustainable development becomes one of our nation's top priorities, how are U.S. communities envisioning and implementing their sustainability goals? This report identifies trends in community sustainable development efforts based on nearly 600 applications for the U.S. Environmental Protection Agency's Sustainable Development Challenge Grant Program. It

features a variety of charts and graphs that identify popular subject areas, partnerships, the urban and rural breakdown, tools, and goals of these projects. It also includes descriptions of funded projects.

Mileti, Dennis S. 1999. *Disasters by Design.* Washington, D.C.: The Joseph Henry Press. 351 pp. Available at http://books.nap.edu/catalog/5782.html. [accessed September 21, 2001]
This book is a summary volume of the Second National Assessment of Research on Natural Hazards with the formal mission of summarizing what is known in the various fields of science and engineering that is applicable to natural and related technological hazards in the United States, and making some research and policy recommendations for the future. It summarizes the hazards research findings from the last two decades, synthesizes what has been learned, and outlines a proposed shift in direction in research and policy for natural and related technological hazards in the United States. *Disasters by Design* is intended for a general audience, including policy makers and practitioners.

National Research Council. 1999. *Our Common Journey: A Transition toward Sustainability.* Washington, D.C.: National Academy Press. 363 pp.
This report of the National Academy of Sciences' three-year Global Commons Project documents large-scale historical currents of social and environmental change and reviews methods for "what if" analysis of possible future development pathways and their implications for sustainability. The book also identifies the greatest threats to sustainability–in areas such as human settlements, agriculture, industry, and energy–and explores what the Board perceives to be the most promising opportunities for circumventing or mitigating these threats. It goes on to discuss what indicators of change, from childrens' birth-weights to atmospheric chemistry, will be most useful in monitoring a transition to sustainability.

North Carolina Emergency Management Division and Federal Emergency Management Agency. 2000. *Hazard Mitigation in North Carolina: Measuring Success.* Raleigh, NC.
To accelerate the institutionalization of hazard mitigation in North Carolina, the North Carolina Emergency Management Division established the Hazard Mitigation Planning Initiative, a long-term program to build local capacity to implement mitigation policies and programs in communities across the state. Through a series of case studies, this study documents losses avoided as a result of the implementation of a wide range of mitigation measures, including elevations and the acquisition and relocation or demolition of floodprone properties.

Schwab, Jim; Kenneth C. Topping, Charles C. Eadie, Robert E. Deyle, and Richard A. Smith. 1998. *Planning for Post-Disaster Recovery and Reconstruction.* PAS Report No. 483/484. Chicago, IL: American Planning Association. 346 pp. Abstract available at http://www.planning.org/apapubs/details.asp?Num=1178. [accessed September 21, 2001]
This document helps community leaders and planners educate their constituents on how informed decisions and choices can affect the rebuilding process and yield a safer, more sustainable community. This report introduces planners to their roles in post-disaster reconstruction and recovery, and provides guidance on how to plan for post-disaster reconstruction side by side with all other players involved. A key theme throughout this report is to rebuild to create a more disaster-resilient community. The report contains many references to technical resources.

U.S. National Science and Technology Council. 1994. *Technology for a Sustainable Future: A Framework for Action.* Washington, D.C.: U.S. National Science and Technology Council. 154 pp.

This report summarizes the Clinton White House's plan for developing a comprehensive environmental technology strategy. It examines the use of environmental technologies to facilitate long-term environmental, energy, and economic goals and asks for suggestions for improving federal policies related to advancing environmental technologies. It includes a section on technology needs for natural disaster reduction. The document also provides examples of avoidance, monitoring and assessment, and remediation and restoration. Appendices contain lists of federal sources for agency offices (names, contact information) and online data resources.

U.S. President's Council on Sustainable Development. 1997. *Sustainable Communities Task Force Report.* Washington, D.C.: U.S. Government Printing Office 186 pp.

This report and its companion volume, *Sustainable America: A New Consensus for Prosperity, Opportunity, and a Healthy Environment for the Future*, published in 1996, lay out a set of policy recommendations for planning for sustainable communities. One of the recommendations is to "shift the focus of the federal disaster relief system from cure to prevention." The appendix contains case studies of communities that have set forth sustainability principles, profiles of communities in the 50 states, state-led sustainability initiatives and organizations, and a list of resources for sustainable communities.

Wilhite, Donald, Deborah A. Wood, and Kelly Helm Smith. n.d. *Planning for a Sustainable Future. The Case of the North American Great Plains.* IDIC Technical Report Series 95-1. Lincoln, Nebraska: International Drought Information Center.

The participants at this symposium addressed the complex economic, social, and environmental issues facing the Great Plains region in anticipation of climate change in the years to come. In addition to essays on sustainable development and global change policies, the volume contains four case studies that deal with sustainable land use, education and research agendas, the Groundwater Guardian Program, and the use of reverse engineering to enhance the lessons learned over the past eight decades. Also included are focus group reports on agricultural production, land and water resources, human and community resources, biological resources and biodiversity, and integrated resource management.

World Bank. 1994. *Making Development Sustainable.* Environmentally Sustainable Development Occasional Papers Series. Washington, D.C.: The World Bank: The International Bank for Reconstruction and Development. 270 pp.

Eight essays attempt to capture current thought on a number of key conceptual, methodological, and practical issues. The authors cover poverty and the environment; gender and ecosystem management; the sociologist's, economist's, and ecologist's approaches to sustainable development; the integration of environmental concerns into development policy making; the World Bank's agenda for the environment; and an epilogue regarding the expansion of capital stock.

World Commission on Environment and Development. 1987. *Our Common Future*. Oxford, UK: Oxford University Press.

In 1983, the World Commission on Environment and Development was asked by the United Nations General Assembly to formulate "a global agenda for change." This document, also known as the Brundtland Report, is the report of the Committee chaired by Gro Harlem Brundtland. The Committee undertook to: 1) propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond; 2) recommend ways concern for the environment may be translated into greater cooperation among developing countries and between countries at different stages of economic and social development and lead to the achievement of common and mutually supportive objectives that take account of the interrelationships between people, resources, environment, and development; 3) consider ways and means by which the international community can deal more effectively with environmental concerns; and 4) help define shared perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long-term agenda for action during the coming decades, and aspirational goals for the world community.

Additional Reading

Beatley, Timothy. 1995. *Planning and Sustainability: The Elements of a New (Improved?) Paradigm.* HRRC Publication No. 132A. College Station, TX: Texas A&M University, College of Architecture, Hazard Reduction & Recovery Center. 13 pp.

Berke, Philip R., Jack D. Kartez, and Dennis E. Wenger. 1993 "Recovery after Disaster: Achieving Sustainable Development, Mitigation and Equity." *Disasters* 17(2):93-109.

Clark, William C. 2001. "America's National Interests in Promoting a Transition to Sustainability: Issues for the New U.S. Administration." *Environment* 43(1)(January/February):18-27.

Reid, David. 1995. *Sustainable Development: An Introductory Guide*. London: Earthscan Publications. 261 pp.

World Commission on Environment and Development. 1987. *Our Common Future*. New York: Oxford University Press. (The Brundtland report.) Abstract available at http://www.oup.co.uk/isbn/0-19-282080-X#desc.

THE DISASTER RECOVERY PROCESS
— WHERE TO FIND INFORMATION —

Training Courses and Workshops

DRI International Education Program. (703) 538-1792; email driinfo@drii or http://www.dr.org/01sched2us.htm [accessed June 29, 2001]

- "Introduction to Business Continuity Planning." DRP-111.
- "Managing and Developing the Business Continuity Plan." DRP-112.
- "Implementing and Testing the Business Continuity Plan." DRP-113.
- "Crisis Communication, Coordination, Data Communications." DRP-114.

Federal Emergency Management Agency, Emergency Management Institute, National Emergency Training Center. Emmitsburg, MD. (301) 447-1035; http://www.fema.gov/emi [accessed June 15, 2001]

- "Introduction to Mitigation." Independent Study Course. Federal Emergency Management Course IS393.
  At the end of the course, the student should be able to. explain the rationale for mitigation and its function as a component of emergency management; define the principles, purposes, and priorities of mitigation; describe mitigation measures that are applicable to local hazard risk problems; summarize responsibilities and resources for mitigation; and outline mitigation planning considerations.

- "Integrated Emergency Management Courses for Specific Communities." Federal Emergency Management Agency Courses E930/S390, E931/S391, E932/S932.
  These courses place emphasis on community response and short-term recovery issues. They are tailored to fit the community and are based on a selected hazard type. The courses use classroom instruction, planning sessions, and exercises to allow for structured decisionmaking in a learning, yet realistic, environment. A key outcome is to assist with making the transition from response to short-term recovery. The three classes offered are: E930/S390 IEMC/Community Specific/All Hazards: Response and Recovery; E931/S931 IEMC/Community Specific/Hurricane· Response and Recovery; and E932/S932 IEMC/Earthquake: Response and Recovery.

- "IEMC/All Hazards: Recovery and Mitigation." Federal Emergency Management Agency Course E901/S901.
  This course emphasizes recovery and mitigation and is conducted for two types of audiences. The course places public officials and other key community leaders in a simulation that begins after a disaster has affected the community.

Federal Emergency Management Agency, Emergency Management Institute, National Emergency Training Center. Emmitsburg, Maryland. http://www.fema.gov/emi [accessed June 15, 2001] (301) 447-1035.

- "Mitigation and Recovery Exercises." Federal Emergency Management Agency Courses G398.1, G398.2, and G398.3.
  These are 1-day exercises for local building officials, zoning officers, commissioners,

councils, and chief executive officers. The exercises provide a series of challenges to a local government that could face a threat from earthquake, flood, or hurricane. The local government will have to solve how it intends to deal with temporary housing issues, building permits, and temporary business locations as well as long-term recovery issues. Courses include: G398.1, Earthquake; G398.2, Flood; and G398.3, Hurricane.

- "Recovery From Disaster." Federal Emergency Management Agency Course E210. The resident version of this course is designed for local disaster recovery teams. These teams, consisting of emergency managers, elected city/county/parish administrators, public works directors, building inspectors, and community planners, are taught how to develop a disaster recovery plan. Participants are given the opportunity to develop their own recovery plan outline during the course.

Organizations

American Planning Association
The APA is a non-profit organization representing "30,000 practicing planners, officials, and citizens involved with urban and rural planning issues. Sixty-five percent of APA's members are employed by state and local government agencies." APA's mission is to "encourage planning that will contribute to public well-being by developing communities and environments that meet the needs of people and society more effectively." The website is an excellent source of books about community planning that incorporate the principles of sustainable development.

Through its *Growing Smart Legislative Handbook: Model Statues for Planning and the Management of Change*, the APA promotes the solution to overcoming the barriers of successful hazard mitigation and holistic disaster recovery. APA has developed a model "Natural Hazards Element" for local comprehensive plans. The model incorporates practices taken from numerous state statutes, combining them to create a mechanism whereby hazard mitigation, a stepping-stone for holistic disaster recovery, may be institutionalized.
See http://www.planning.org [accessed June 15, 2001]

Federal Emergency Management Agency
See "Response and Recovery" at http://www.fema.gov/r-n-r/ [accessed June 29, 2001] and "After a Flood: The First Steps" at http://www.fema.gov/DlZAS/aftrfld.htm [accessed June 29, 2001]

Institute for Business and Home Safety. "Showcase Community Program."
The Institute for Business and Home Safety's Showcase Community Program has three objectives: 1) help a community help itself by reducing its vulnerability to hurricanes, earthquakes, tornadoes, wildfires, floods or whatever natural disasters threaten it; 2) generate a "me too" attitude among other communities by showcasing the successful efforts of particular jurisdictions: and 3) learn what works and what does not work to reduce the emotional and financial devastation caused by natural disasters.
See http://www.ibhs.org/ibhs2/html/ibhs_projects/projects_showcase.htm [accessed September 21, 2001]

Rothstein Catalog on Disaster Recovery.
This is a catalog of books, software, videos, and research reports that date to 1989.
See http://www rothstein.com/catalog.html [accessed June 29, 2001]

Books, Articles, and Papers

Arnold, Christopher. 1993. *Reconstruction After Earthquakes: Issues, Urban Design, and Case Studies*. Palo Alto, CA: Building Systems Development, Inc. 170 pp.
After a major earthquake (1976) devastated the Chinese city of Tangshan, planners decided to build a new reinforced concrete city in a western style that was completely different from the masonry construction of the destroyed city. A visit to Tangshan five years after the quake provided an opportunity for the author to raise questions about the reconstruction process. What are the aspirations of those most closely connected to reconstruction planning? Can planners grasp and realize the opportunities for urban renewal presented by a seismic disaster? To what extent does the threat of future earthquakes dictate the urban design and construction of the new city? Why were cities in earthquake-prone areas so often repaired and rebuilt, when rational planning considerations might suggest that they be abandoned and rebuilt elsewhere? This study explores these questions and attempts to examine the reconstruction process from a qualitative rather than an administrative viewpoint. Most of the study is about city planning and urban design, utilizing five case studies to illustrate the author's perspective: Tokyo (1923 & 1945); Tangshan (1976); Spitak, Armenia (1988); and Santa Cruz, California (1989) .

Association of State Floodplain Managers (ASFPM) 1996. *Using Multi-Objective Management to Reduce Flood Losses in Your Watershed*. Madison, WI: Association of State Floodplain Managers. 72 pp. Abstract available at http://www floods org/PDF%20files/PUBSLIST.pdf. [accessed September 21, 2001]
This publication explores planning and implementation techniques for multi-objective watershed management. It provides a general introduction to multi-objective management and the planning process that helps a community select the flood-loss reduction measures most suitable to its situation. It explains how to define problems and goals, build partnerships, combine needs and solutions creatively, and begin formal implementation procedures. Both riverine and coastal flood watersheds are examined. Much of the document focuses on multi-objective management planning details, involving subjects such as fish and wildlife issues, water supply, housing improvement, transportation, and lifelines. Preparation of a multi-objective management plan involves problem definition, involvement of non-local groups, and public and official acceptance of the plan.

Bay Area Regional Earthquake Preparedness Project. 1990. *Putting the Pieces Together: The Loma Prieta Earthquake One Year Later*. Oakland, CA: Bay Area Regional Earthquake Preparedness Project. 253 pp.
This report grew out of a conference held to determine the lessons learned from the Loma Prieta earthquake and its aftermath. The conference examined preparedness and mitigation efforts before the quake, political and management issues of disaster response, recovery and reconstruction programs, and mitigation activities since the event. Among the numerous topics addressed in the volume, separate chapters are given to seismological and geological considerations, geotechnical aspects, the performance of lifelines, buildings, and transportation

systems and the implications for future design of these elements, effective emergency management, emotional and psychological aftereffects, economic impacts, emergency public information and the media, the restoration of lifelines, emergency medical services, business recovery, and housing reconstruction.

Becker, William S. and Roberta F. Stauffer. 1994. *Rebuilding the Future–A Guide to Sustainable Redevelopment for Disaster-Affected Communities*. Golden, CO: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Center of Excellence for Sustainable Development. 18 pp.

This document summarizes why sustainability is important and gives an example of sustainable development in one community, Soldiers Grove, Wisconsin. The reader is walked step-by-step through the holistic recovery process. The last chapter discusses real-life problems that the planner may encounter. There is an appendix to the report with a comprehensive list of resources. This document is available online at http://www.sustainable.doe.gov/articles/RFTF1.shtml [accessed June 15, 2001]

Berke, Philip and David Godschalk. 1996. *Hazard Mitigation in California following the Loma Prieta and Northridge Earthquakes*. Natural Hazard Working Paper No. 14. Chapel Hill, NC: University of North Carolina, Center for Urban and Regional Studies. 59 pp.

This report documents a case study conducted almost six years after the Loma Prieta quake and one and one-half years after Northridge. The strengths and weaknesses of the California 409 Plans are identified, state and federal mitigation planning and implementation processes are reviewed, and local mitigation examples are drawn from San Francisco, Berkeley, Watsonville, and Los Angeles and Ventura counties. One finding was the present mitigation systems (policies and institutions) will not be adequate to mitigate the impacts of a future major earthquake catastrophe. Two recommendations were that California should pursue a coordinated, interdisciplinary effort to further the understanding of earthquake prediction and of earthquake impacts and should reinvigorate efforts to mandate local multi-hazard mitigation planning before and after a disaster.

Comerio, Mary C., John D. Landis, Catherine J. Firpo, and Juan Pablo Monzon. 1996. "Residential Earthquake Recovery: Improving California's Post-Disaster Rebuilding Policies and Programs." *California Policy Seminar* 8(7) 11 pp.

Between 1989 and 1994, California suffered 13 presidentially declared disasters, including the Loma Prieta and Northridge earthquakes, leading to major concerns about the disaster recovery process. This report examines the current state of earthquake recovery practice in California, particularly as it relates to housing. The authors examine the complementary and overlapping roles of different federal, state, private, and nonprofit recovery and rebuilding institutions, as well as the distribution of post-Northridge rebuilding funds. They conclude that relatively little preparation has gone into coordinating and paying for postdisaster rebuilding, and that victims cannot expect private insurers or the federal government to compensate them at a level of assistance comparable to that following the Northridge quake. In particular, the authors conclude that linking earthquake mitigation, particularly residential retrofitting, to assistance holds significant potential for reducing rebuilding costs.

Federal Emergency Management Agency. 1997. *Framework for Federal Action to Help Build a Healthy Recovery and Safer Future in Minnesota, North Dakota, and South Dakota.* Washington, D.C.: Federal Emergency Management Agency.
This document identifies and explains the wide range of grants, loans, and technical assistance that the federal government can offer to ensure the recovery needs of people and communities. Although the document summarizes these programs for the states of Minnesota, North Dakota, and South Dakota, the descriptions are applicable to other areas recovering from flooding. Programs summarized include: comprehensive flood hazard mitigation; housing repairs, rehabilitation, reconstruction, and replacement financing; the National Flood Insurance Program; economic recovery programs; agriculture programs, infrastructure programs; health and mental health programs; and programs for special needs populations.

Federal Emergency Management Agency. 1999. *Federal Response Plan.* Washington, D.C.: Federal Emergency Management Agency.
This document is the principal organizational guide for defining the roles and responsibilities of the 26 federal member agencies and the American Red Cross that are engaged to deliver a broad range of emergency aid during a major crisis.

Federal Emergency Management Agency. 2000. *Rebuilding for a More Sustainable Future: An Operational Framework.* FEMA Report 365. Washington, D.C.: Federal Emergency Management Agency. Available at http://www.fema.gov/mit/planning_toc2.htm. [accessed September 21, 2001]
This document provides guidance to the Federal Emergency Management Agency (FEMA) Sustainability Planner in the post-disaster response and recovery process. State emergency management officials, local jurisdictions, and other FEMA staff may also use it as a reference during non-disaster time.

French and Associates, Ltd. and The Mitigation Assistance Corporation. 1994. *Post-Flood Recovery Assistance Plan. A Plan to Help Residents Recover from a Flood and Protect Themselves from Future Floods.* Arvada, CO: City of Arvada, Colorado, Department of Public Works, Engineering Division.
This plan was developed to guide the City of Arvada's actions to help residents after a flood, to assist them in both recovering from the damage and taking steps to protect themselves from future floods. It is based on successful strategies undertaken by other communities that have had similar flooding experiences.

Godschalk, David and Timothy Beatley. 1996. *Hazard Mitigation in Iowa Following the Great Midwest Floods of 1993.* Natural Hazard Working Paper No. 10. Chapel Hill, NC: University of North Carolina-Chapel Hill, Center for Urban and Regional Studies. 31 pp.
The report examines how the Stafford Act influenced recovery in eight localities in Iowa. Questions explored include: What constitutes mitigation? Who is in charge after a disaster occurs? What good is the 409 (Stafford) Plan? Who pays for disasters? Other topics considered include grant administration accountability, equity issues, the promotion of sustainable communities, and problems caused by confusing rules and guidance.

Mileti, Dennis S. 1999. *Disasters by Design.* Washington, D.C.: The Joseph Henry Press. 351 pp. Available at http://books.nap.edu/catalog/5782.html. [accessed September 21, 2001]

This book is a summary volume of the Second National Assessment of Research on Natural Hazards with the formal mission of summarizing what is known in the various fields of science and engineering that is applicable to natural and related technological hazards in the United States, and making some research and policy recommendations for the future. It summarizes the hazards research findings from the last two decades, synthesizes what has been learned, and outlines a proposed shift in direction in research and policy for natural and related technological hazards in the United States. *Disasters by Design* is intended for a general audience, including policy makers and practitioners.

Minnesota Department of Public Safety. *Recovery From Disaster Handbook.* St. Paul, MN: State of Minnesota. Available at http://www.dem.state.mn.us/publications/Recovery_Handbook/index.html [accessed July 23, 2001]

This handbook provides local units of government with guidance in long-term recovery after a disaster. The restoration process places great demands on government and the private sector. This manual will lessen the stress by providing answers and advice to many questions that arise from those who have dealt with recovery from disasters. Tool kits at the end of each chapter provide additional information specific to individual topics, some forms, and information to hare with the victims of the disaster as they recover.

Mittler, Elliott. 1997. *An Assessment of Floodplain Management in Georgia's Flint River Basin.* Boulder, CO: University of Colorado, Institute of Behavioral Science, Natural Hazards Research and Applications Information Center. 190 pp.

On July 3, 1994, Tropical Storm Alberto struck the Florida panhandle and proceeded northeast before stalling just south of Atlanta, Georgia, inflicting over $1 billion in damage. The flood provided an opportunity to identify and document the successes and failures of state and local floodplain management programs and activities. The author assessed the impact of federal, state, and local floodplain management activities on losses in the Flint River Basin, paying particular attention to the impact of the National Flood Insurance Program (NFIP) and local floodplain management efforts. He examines previous floodplain studies; evaluates the political situation affecting flood recovery in each community; examines federal, state, and local responses to the disaster, concentrating on recovery plans and the use of hazard mitigation programs to reduce future flood losses; analyzes the effectiveness of the NFIP; and offers a series of findings and recommendations based on the relatively successful recovery programs he found.

Reddy, Swaroop. 1992. *A Study of Long Term Recovery of Three Communities in the Aftermath of Hurricane Hugo.* HRRC Monograph 9B. College Station, TX: Texas A&M University, College of Architecture, Hazard Reduction Recovery Center. 171 pp.

The objectives of this report–a doctoral dissertation–included 1) to determine the factors that explain the successful adoption of hazard mitigation measures during recovery, 2) to develop a conceptual understanding of the problems inherent in the adoption of mitigation during disaster recovery, and 3) to gain an understanding about the influence of pre-storm institutional regulations on mitigation during the recovery period. The major findings were: the stronger and greater the presence of eight implementation factors in a community, the greater the successful adoption of mitigation measures, local institutional involvement is essential in the successful

adoption of mitigation; there is a strong linkage between development management and hazard mitigation; a strong linkage also exists between the protection of coastal resources and coastal hazard mitigation; and the existence of strong pre-storm institutional regulations help local jurisdictions promote the adoption of mitigation during recovery.

Rubin, Claire B. Martin D. Saperstein, and Daniel G. Barbee. 1985. *Community Recovery from a Major Natural Disaster*. Monograph No. 41. Boulder, CO: Natural Hazards Research and Applications Information Center. 295 pp.

The publication describes what was learned by a team that spent four years observing how 14 communities coped with the deleterious effects of disasters. The focus of the research was on the ways in which the local government's activities, as well as its interactions with other levels of government, affected the speed and/or efficiency of recovery. The role of community officials in recovery and post-disaster mitigation, the kind of disaster agent involved, the level of emergency planning and preparedness, the community's sense of itself and its future are all analyzed. Part I of the monograph discusses previous research, describes the design of the study, presents a framework for thinking about recovery, and explains how various elements of that framework affected the actual recovery processes of the communities studied. Part II of the monograph presents case studies.

Schwab, Jim, Kenneth C. Topping, Charles C. Eadie, Robert E. Deyle, and Richard A. Smith. 1998. *Planning for Post-Disaster Recovery and Reconstruction*. PAS Report No. 483/484. Chicago, IL: American Planning Association. 346 pp Abstract available at http://www.planning.org/apapubs/details.asp?Num=1178. [accessed September 21, 2001]

This document helps community leaders and planners educate their constituents on how informed decisions and choices can affect the rebuilding process and yield a safer, more sustainable community. This report introduces planners to their roles in post-disaster reconstruction and recovery, and provides guidance on how to plan for post-disaster reconstruction side by side with all other players involved. A key theme throughout this report is to rebuild to create a more disaster-resilient community. The report contains many references to technical resources.

Southern California Earthquake Preparedness Project. 1991. *Earthquake Recovery and Reconstruction Planning Guidelines for Local Governments*. Sacramento, CA: Southern California Earthquake Preparedness Project (SCEPP) and California Governor's Office of Emergency Preparedness. 75 pp.

This document recommends that local governments adopt a planning team approach to anticipate problems associated with community recovery from an earthquake. Following an introductory discussion of earthquake recovery concepts, the guidelines present separate sections dealing with the planning process, rehabilitation and rebuilding, local business recovery, housing displaced persons and families, the restoration of public facilities and services, and financing the recovery process. Recommended actions for local governments are provided for preparedness and mitigation, emergency relief, short-term recovery, and long-term reconstruction phases. Appendices list a set of lessons learned from previous earthquake recovery efforts and reprint California's Disaster Recovery Reconstruction Act of 1986.

Wetmore, French and Gil Jamieson.. 1999. "Flood Mitigation Planning: The CRS Approach." *Natural Hazards Informer* 1 (July). Boulder, CO: Natural Hazards Research and Applications Information Center. Available at http://www.colorado/edu/hazards/informer/index.htm. [accessed September 21, 2001]

Under the National Flood Insurance Program's Community Rating System, flood insurance premiums are reduced based on a community's floodplain management activities. This issue of *Natural Hazards Informer* reviews the CRS planning criteria and offers some suggestions for implementing a plan locally. It is based on the authors' 40 years of combined experience in flood mitigation planning and the lessons learned by others who have helped refine the CRS criteria.

Additional Reading

American Planning Association, 1994. *Growing Smart Legislative Handbook: Model Statues for Planning and the Management of Change*. Chicago, IL: APA.

Berke, Philip R. Timothy Beatley, and Clarence Feagin. 1993. *Hurricane Gilbert Strikes Jamaica: Linking Disaster Recovery to Development*. HRRC Article 89A. College Station, TX: Texas A&M University, College of Architecture, Hazard Reduction and Recovery Center. 23 pp.

Berke, Philip R. Jack D. Kartez, and Dennis E. Wenger. 1993. "Recovery after Disaster: Achieving Sustainable Development, Mitigation and Equity." *Disasters* 17(2):93-109.

Eadie, Charles. 1991. *Phases of Earthquake Response and Recovery Planning*. Santa Cruz: CA: Santa Cruz Redevelopment Agency.

Emmer, R. E. 1994. *Flood Damage Reduction and Wetland Conservation. Three Successful Projects in Louisiana have Common Characteristics*. Topical Paper #6. Madison, WI: Association of State Floodplain Managers, Inc. (September.) 23 pp.

Executive Office of the President. 1998. *Federal Programs Offering Non-Structural Flood Recovery and Floodplain Management Alternatives*. A Federal Interagency Publication. Washington, D.C. 90 pp.

National Academy of Sciences. 1990. *Practical Lessons from the Loma Prieta Earthquake*. Washington, D.C.: National Academy Press.

Nigg, Joanne M. 1995. *Disaster Recovery as a Social Process*. Article No. 284. Newark, DE: University of Delaware, Disaster Research Center. 13 pp.

Plafker, George and John P. Galloway, eds. 1989. *Lessons Learned from the Loma Prieta, California, Earthquake of October 17, 1989*. Washington, D.C.: U.S. Department of the Interior, Geological Survey.

Spangle, William & Associates, Inc. 1991. *Rebuilding After Earthquakes: Lessons from Planners*. Portola Valley, California: William Spangle & Associates, Inc.

Spangle, William E., ed. 1987. Pre-Earthquake Planning for Post-Earthquake Rebuilding (PEPPER). Los Angeles, California: Southern California Earthquake Preparedness Project.

Wilson, Richard C. 1991. *The Loma Prieta Quake: What One City Learned.* Washington, D.C.: International City Management Association.