



TsuInfo Alert

prepared on behalf of the

National Tsunami Hazard Mitigation Program

by the Washington Department of Natural Resources

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New Planning Guide Helps Communities Become Disaster-Resistant

The American Planning Association (APA) and the Federal Emergency Management Agency (FEMA) have released a new guidebook for changing the way communities, planning practitioners and planning students prepare for natural hazards. (*see* Book Review, p. 3.)

Planning for Post-disaster Recovery and Reconstruction published by the APA and funded by FEMA, "is the first ever guidebook to address planning issues in the post-disaster environment," FEMA Associate Director for Mitigation Michael Armstrong said. "Our guidebook spells out the steps communities can take to turn a natural disaster into an opportunity for developing a safer, more sustainable and more disaster-resistant place to live and work." APA Executive Director Frank So, AICP, said Armstrong described the release of the 346-page book as "an enormous forward step in promoting the idea that we can create livable, disaster-resistant communities. We depend on our planners to help communities recover smartly after disasters," Armstrong said. "Until now they have not had a single source providing all the tools needed do the job. This publication will serve as a focal point and a textbook in post-disaster planning for community planners and for students pursuing planning degrees."

During the past 10 years, FEMA alone spent approximately \$20 billion to help people repair and rebuild their communities after natural disasters. That figure does not include the billions of dollars in insurance claim payments, lost revenues from businesses, lost employee wages and millions of dollars spent by other federal agencies. "Natural disasters have become increasingly expensive problems for the public," Jim Schwab, principal author of the publication, said. "There are dozens of ways to reduce the growing costs associated with such disasters. Such measures, however, must be developed before - not after - a disaster occurs.

Communities that develop and implement a post-disaster plan give themselves a leg up when it comes to applying for competitive hazard mitigation grants and other funds."

To be successful, it is important for communities to bring together all stakeholders, from business owners and environmentalists to insurance companies, public safety advocates, and parks and recreation officials, in order to gain support for a comprehensive post-disaster plan, So said. "This guidebook provides under one cover all of the information communities need to devise a plan that helps them become less prone to building damages and economic losses that invariably result from devastating natural disasters."

The guidebook includes several examples of communities that have undergone this process, including Arnold, Mo., located 20 miles southwest of St. Louis. The town developed a plan and later used FEMA hazard mitigation grants and other funds to acquire more than 200 commercial and residential properties along the Mississippi and Meramec Rivers for a new greenbelt system following the great floods of 1993. Damages exceeded \$4 million in 1993. However, two years later floods hit the community again but subsequent claims were less than \$50,000. Other examples of post-disaster planning efforts detailed in the publication include Valmeyer, Ill., and Pattonsburg, Mo., which also relocated existing businesses following the 1993 floods; Soldiers Grove, Wisc, which moved the entire town following a 1979 flood; Santa Cruz and Watsonville, Calif., in the aftermath of an earthquake in 1989; Oakland, Calif., following wildfires that ravaged that city in 1991; and by the Florida panhandle in the wake of Hurricane Opal in 1995. To date only a handful of states, including Florida, North Carolina, Rhode Island and California, have laws requiring that natural hazards be taken into account when developing or revising a comprehensive local plan. Schwab said such mandates are an important next step if post-disaster planning is going to become the norm and not the exception in the United States.

Copies of *Planning for Post-Disaster Recovery and Reconstruction* may be ordered from the American Planning Association's Planners Book Service online at www.planning.org or by calling 312-786-6344.

(from: Western States Seismic Policy Council press release)

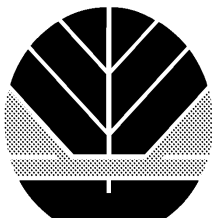
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BOOK REVIEWS

by
Lee Walkling

Planning for Post-Disaster Recovery and Reconstruction, by Jim Schwab and others. American Planning Association (APA) Planning Advisory Service, 346 pages, Report 483/484, 1998, ISBN: 1-884829-25-2

While most hazard mitigation and preparedness information focuses on pre-disaster decision-making, this thorough and practical report deals with reconstruction and recovery planning. "The purpose of this document is to help 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" (preface, p. 1). To do this, the book is divided into two parts: a how-to section and a section with case studies, background information, and appendices. "This report introduces planners to their role in post-disaster reconstruction and recovery and provides guidance on how to plan for post-disaster reconstruction side by side with all the other players involved (city/county managers, business owners, and others)." (preface, p. 2)

A full table of contents is available online at <http://www.planning.org/bookstore>. Either enter the title in the Title search line, or click on the tab "PAS Reports."

The report includes comprehensive discussions on the planning process, with practical guidelines and pertinent case studies. Extremely helpful are the examples of recovery plans. Chapter 5 "A Planner's Tool Kit," includes the complete *Model Recovery and Reconstruction Ordinance* by Kenneth C. Topping. A chart on page 59 says that "each state has a state-level mitigation plan that all local planners in that state can request from their state emergency management office." (see this issue, p. 7)

Although most of the hazards detailed are floods, hurricanes, and earthquakes, there is a small section specifically about tsunamis and seiches (p. 189-192), including Oregon's requirements for new construction in tsunami inundation zones.

The frequent charts and diagrams provide useful information, in easy-to-understand graphics, about the disaster life cycle (p. 19), major federal legislation defining disaster policy (p. 35), and the disaster declaration process (p. 34), just to name a few. The appendices contain a reference list, a glossary of key technical terms, a chart of the Disaster Recovery Programs (Federal Response Plan), and a directory of regional FEMA offices.

The \$34 report is available from APA Planners Book Service: 122 S. Michigan Avenue, Suite 1600, Chicago, IL 60603; by fax (312) 431-9985, by email: pasreports@planning.org, or online at <http://www.planning.org/bookstore/>

Not Just for a Rainy Day...

The worst thing that could happen to the knowledge any planner gains concerning planning for post-disaster recovery and reconstruction would be for that planner or the planning department or community to assume that it was relevant only in disaster situations. The tools and approaches involved are all relevant and applicable in everyday planning for hazard mitigation. As the case studies and other parts of this report will show, communities have gained the most from their post-disaster reconstruction plans when they have applied them to ongoing, routine planning activities long before a disaster strikes--for example, by monitoring the enforcement of hazard-related building code provisions, by preventing inappropriate types of development in hazard-prone areas, and by identifying targets of opportunity for hazard mitigation when funds become available. The community that makes hazard mitigation a routine part of planning will invariably find that it is better prepared for the task of post-disaster recovery and reconstruction than one that has ignored these questions.

from: Planning for Post-Disaster Recovery and Reconstruction, p. 18

Disaster Management in the U.S. and Canada--The politics, policymaking, administration and analysis of emergency management; 2d ed., by Richard T. Sylves and William L. Waugh, Jr.: Charles C. Thomas, 1996.

The title gives a good idea of the book's scope and focus. The easy-to-read chapters are written to explore the stated central theme: "the need for all levels of government to develop a cooperative effort to plan for, and handle, emergencies." (p. xiii, Foreword) "The heart of this compilation is the intergovernmental relations of disaster management." (p. xvi, Introduction) The authors "hope this book is used as a text and/or reader in emergency management-related courses, whether in public administration, political science, intergovernmental relations, disaster sociology, organizational studies, or urban studies." (p. xvi, Introduction) The only mention of tsunamis happens on page 145. Other hazards are dealt with only as examples of programs and responses.

The book is divided into five sections. Part I is a history of emergency management as it evolved in the 1990's, including Canadian emergency management and the

renovation of FEMA. Part II deals with California because that state has received the most federal disaster relief money and because California has experienced such a wide range of disasters, its emergency management is deemed "cutting edge." Part III is concerned with the heartland of the USA and floods. Part IV talks about municipal disaster management in Canada, N.Y.C., and all jurisdictions regulating building. Part V gives general technical advice for administrators, to help them understand emergency management issues. Particularly useful is Chapter XIV, "Emergency Management Training and Education for Public Administrators," by Nancy K. Grant (p. 313-326). Each chapter within the sections has references to other articles; and there is a 21 page bibliography.

Emergency managers "have advocated disaster preparedness, mitigation, response, and recovery to policymakers and the public with modest success. However, the differing philosophies, priorities, and perceptions of others have created conflict and competition, making it ever more difficult for them to collect, maintain, and organize the people and resources needed to perform emergency management. Today, emergency managers must be masters of anticipatory thinking, exhibit leadership, and exercise artful powers of persuasion in order to overcome incessant turf wars among public agencies and officials. They must use their talents to save emergency management from indifference, complacency, and the daily crush of other public business." (p. xiii, Foreword) *Disaster Management in the U.S. and Canada--The politics, policymaking, administration and analysis of emergency management* is a pep talk, a compendium of case studies, and a resource for emergency managers.

TSUNAMI NEWS...

A tsunami information display was dedicated March 27, 1999 at Beverly Beach State Park, seven miles north of Newport, Oregon. This ceremony marked the 35th anniversary of the 1964 tsunami that killed four children there.

An Editorial Comment...

A new decision from the King County Superior Court may establish a legal precedence for hazard mitigation.

Recent heavy winter rainfall triggered numerous landslides in the Pacific Northwest, including slides on Perkins Lane in Seattle. That part of Magnolia Bluff is a very well-documented landslide area and was even a focus of a landslide stabilization project by the Works Projects Administration in the 1930s.

Six Perkins Lane homeowners sued the City of Seattle for damage to their homes from the 1996 landslides. The judge ruled in the City's favor, noting that these landslides are driven by forces beyond the city's control and have been occurring for thousands of years.

Property owners certainly have rights but sometimes they act unwisely. The historian Will Durand wrote, "Civilization exists by geologic consent, subject to change without notice," echoing Sir Francis Bacon's famous comment, that "Nature to be commanded, must first be obeyed." We can hope that this recent court ruling will encourage local governments to use good science to make wise planning and land-use decisions.

New Tsunami Mitigation Materials

Added to the Library, June, 1999

compiled by

Connie J. Manson

Note: Free reprints of these materials are available. (See page 2 for ordering information)

General Works about Natural Hazards and Hazard Mitigation

Burby, R. J., editor, 1998, Cooperating with nature--Confronting natural-hazards with land-use planning for sustainable communities: John Henry Press, 356 p.

A companion volume to Mileti's *Disasters by Design* (below), this advocates land use planning to reduce the vulnerability to natural disasters.

Highly recommended for local emergency managers and government officials.

Czerwinski, S. J., 1999, Disaster assistance--Information on the cost-effectiveness of hazard mitigation projects; Testimony before the Subcommittee on VA, HUD, and Independent Agencies, Committee on Appropriations, U.S. Senate: U.S. General Accounting Office GAA/T-RCED-99-106, 16 p.

Congressional testimony on the cost-effectiveness of FEMA's current mitigation programs.

Mileti, D. S., 1999, Disasters by design--A reassessment of natural hazards in the United States: John Henry Press, 351 p.

In recent years, emergency management has shifted from shear *response* to natural disasters to *planning* for those events. This book makes a strong case for such "sustainable hazard mitigation." It includes case studies, examines the social and economic impacts of disasters, and plans for the future.

Highly recommended for local emergency managers and government officials.

Mileti, D. S., 1999, Disasters by design--A reassessment of natural hazards in the United States; Summary: John Henry Press, 16 p.

A brief, well-illustrated summary of the larger work.

Highly recommended for local emergency managers and government officials. **FREE copies** are available upon request (see p. 2).

National Research Council, Board on Natural Disasters, 1999, Mitigation emerges as major strategy for reducing losses caused by natural disasters: *Science*, v. 284, no. 5422, p. 1943-1947.

This is a significant policy statement from the National Research Council.

Highly recommended for local emergency managers and government officials. **FREE copies** are available upon request (see p. 2)

Sieh, Kerry; LeVay, Simon, 1998, The earth in turmoil--Earthquakes, volcanoes, and their impact on human-kind: W. H. Freeman and Company, 324 p.

A lively discussion of earthquake and volcanic hazards in the United States. Highly readable.

Sylves, Richard T.; Waugh, William L., Jr., editors, 1996, Disaster management in the U.S. and Canada--The politics, policymaking, administration and analysis of emergency management; 2nd ed.: Charles C. Thomas Publisher, 393 p.

This gives recent case studies of emergency management experiences, from hurricanes, earthquakes and other natural disasters. A central theme is the need for government agencies to work cooperatively in emergency planning and response.

Recommended for local emergency managers.

Tsunami Mitigation Policy

Dengler, L. A., 1998, Strategic implementation plan for tsunami mitigation projects: U.S. National Oceanic and Atmospheric Administration Technical Memorandum ERL PMEL-113, 133 p.

This is the official current strategic plan for the National Tsunami Hazard Mitigation Program.

Highly recommended for local emergency managers and government officials.

Hazard Insurance

Kunreuther, Howard; Roth, R. J., Sr., editors, 1998, Paying the price--The status and role of insurance against natural disasters in the United States: John Henry Press, 300 p.

The economic costs of natural disasters are very high and are likely to soar in the future unless steps are taken to change recent trends. This book explores the roles insurance and mitigation can play in reducing future losses.

Recommended for local government officials.

Post-earthquake Building Inspection--Training Manuals

Applied Technology Council, 1993, Postearthquake safety evaluation of buildings training manual: Applied Technology Council ATC-20-T, 160 p.

Gallagher, R. P., Associates, Inc., 1989, Field manual--Postearthquake safety evaluation of buildings: Applied Technology Council ATC-20-1, 114 p.

Gallagher, R. P., Associates, Inc., 1989, Procedures for postearthquake safety evaluation of buildings: Applied Technology Council ATC-20, 152 p.

Gallagher, R. P., Associates, Inc., 1996, Case studies in rapid postearthquake safety evaluation of buildings: Applied Technology Council ATC-20-3, 295 p.

History and Archaeology

Arima, E. Y.; St. Claire, Denis; Clamhouse, Louis; Edgar, Joshua; Jones, Charles; Thomas, John, 1991, Between Ports Alberni and Renfrew--Notes of west coast peoples: Canadian Ethnology Service Mercury Series Paper 121, [excerpts only, p. 230-231]

Regional Studies - Alaska

Acharya, Hemendra, 1989, Estimation of tsunami hazard from volcanic activity--Suggested methodology with Augustine volcano, Alaska as an example: *Natural Hazards*, v. 1, no. 4, p. 341-348.

Brown, J. M.; Crossen, K. J.; Holzman, Jacqueline, editors, 1987, A field guide to the geologic hazards of Anchorage and Turnagain Arm, Alaska: Alaska Geological Society, 62 p.

Regional Studies - British Columbia

Arima, E. Y.; St. Claire, Denis; Clamhouse, Louis; Edgar, Joshua; Jones, Charles; Thomas, John, 1991, Between Ports Alberni and Renfrew--Notes of west coast peoples: Canadian Ethnology Service Mercury Series Paper 121, [excerpts only, p. 230-231].

Clague, J. J.; Naesgaard, Ernst; Nelson, A. R., 1997, Age and significance of earthquake-induced liquefaction near Vancouver, British Columbia, Canada: *Canadian Geotechnical Journal*, v. 34, no. 1, p. 53-162.

Regional Studies - California

Griffin, W. H., 1984, Crescent City's dark disaster--Crescent City, California, March 27-28, 1964 tsunami and 20 years later: Crescent City Printing Co., 188 p.

Regional Studies - Hawaii

Cox, D. C.; Morgan, Joseph, 1984, Local tsunamis in Hawaii--Implications for warning: University of Hawaii Institute of Geophysics HIG-84-4, 104 p.

Ma, J.-F.; Kanamori, Hiroo; Satake, Kenji, 1999, Mechanism of the 1975 Kalapana, Hawaii, earthquake inferred from tsunami data: *Journal of Geophysical Research*, v. 104, no. B6, p. 13, 153-13, 167.

Regional Studies - Japan

Yamamoto, Masahiro; Sasakawa, Iwao; Nagai, Akira; Kakishita, Takeshi; Wakayama, Akahiko; Uhira, Koiche; Seino, Masaaki, 1991, Broadband strong-motion seismic observation network operated by Japan Meteorological Agency. *In* United States-Japan

Cooperative Program in Natural Resources Panel on Wind and Seismic Effects, Wind and seismic effects; Proceedings: U.S. National Institute of Standards and Technology Special Publication 820, p. 75-86.

Yoshii, H., 1990, Responses to a Japanese tsunami warning and lessons for planning countermeasures: *Disaster Management*, v. 3, no. 2, p. 90-93.

Technical Research

Acharya, Hemendra, 1989, Estimation of tsunami hazard from volcanic activity--Suggested methodology with Augustine volcano, Alaska as an example: *Natural Hazards*, v. 1, no. 4, p. 341-348.

Chubarov, L. B.; Shokin, Y. I.; Simonov, K. V., 1992, Using numerical modelling to evaluate tsunami hazard near the Kuril Island: *Natural Hazards*, v. 5, no. 3, p. 292-318.

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Guilbault, J.-P.; Clague, J. J.; Lapointe, Martine, 1996, Foraminiferal evidence for the amount of coseismic subsidence during a late Holocene earthquake on Vancouver Island, west coast of Canada: *Quaternary Science Reviews*, v. 15, p. 913-937.

Gusakov, V. K.; Chubarov, L. B., 1987, Numeric modeling of tsunami generation and propagation in the coastal zone: *Physics of the Solid Earth*, v. 23, no. 11, p. 910-918.

Phipps, J. B.; Jol, .M.; Peterson, C. D.; Vanderburgh, Sandy, 1997, The effect of a great subduction zone earthquake on a coastal Washington beach [abstract]: *Eos (American Geophysical Union Transactions)*, v. 78, no. 46, Supplement, p. F335.

Stanley, W. D.; Villasenor, Antonio; Benz, H. M., 1999, Subduction zone and crustal dynamics of western Washington--A tectonic model for earthquake hazards evaluation: U.S. Geological Survey Open-File Report 99-311, 90 p., also available at <http://geohazards.cr.usgs.gov/pacnw/structure/structure.html>.

Yamaguchi, D. K.; Jacoby, G. C.; Atwater, B. F.; Bunker, D. E.; Benson, B. E.; Reid, M. S.; Woodhouse, C. A., 1997, Tree-ring dating of an earthquake at the Cascadia subduction zone to within several months of January 1700. *In* Proceedings of the First Joint Meeting of the U.S.-Japan Conference on Natural Resources (UJNR) Panel on Earthquake Research: U.S. Geological Survey Open-File Report 97-467, p. 143-150.

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<http://www.ak-prepared.com/>

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Infrequently Asked Questions

compiled by
Lee Walkling

What is EENET?

According to the Federal Emergency Management Agency, the Emergency Education **NET**work "is a satellite-based distance learning system used by FEMA to bring interactive training programs to virtually any community nationwide. This system provides fire and emergency management training on a regularly scheduled basis through EENET's "National Alert" monthly broadcasts, as well as a variety of "special" videoconferences, training courses, and town hall meetings. Schedules are updated periodically. All programming is open, and is in the public domain, so that any community with access to a C-band or Ku-band satellite dish or a community cablevision provider can receive broadcasts and participate in the training programs."

For the latest schedule, go to

<http://www.fema.gov/emi/eenet.htm> or write to Emergency Education NETWORK, National Emergency Training Center, 16825 South Seton Avenue, Emmitsburg, Maryland 21727 (800 500-5164 or EENET@fema.gov.) Write to the same address to be placed on the mailing list. Email updates are also available by filling out the form online at:

http://www.fema.gov/cgi-shl/mail_sc/eenet_mlist1.cfm

Some EENET programs are carried on the internet. Call 1-800-500-5164 for more information or go to the website <http://www.fema.gov/emi/eenet.htm>.

What is EMWIN?

The acronym stands for Emergency Managers Weather Information Network, a product designed to provide local emergency managers with 24-hours per day weather forecasts, warnings, watches, advisories and other weather data directly from the National Weather Service (NWS). The service is intended primarily for emergency managers and public safety officials, but anyone with a computer and Windows software can use EMWIN.

Users can get the EMWIN feed from direct satellite broadcast or repeat radio broadcast, but it requires special hardware. Special software is also needed to store, manage, and display the weather data on a computer. Once the special hardware and software have been purchased, there is no additional cost to receiving weather information from EMWIN. (For more information, go to <http://iwin.nws.noaa.gov/emwin/user-intro.htm>)

What is IWIN?

Interactive Weather Information Network provides EMWIN weather data on the internet. The URL is <http://iwin2.nws.noaa.gov/iwin/graphicsversion/testmain.html>. The selections include local, national and world weather reports, as well as AVI and MPEG videos of unique weather events. Local reports, updated hourly, give forecasts, watches, aviation weather, warnings, and advisories.



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