Spennemann, Dirk H. R. & David W. Look (1998 [2004])'Managing disasters and managing disaster responses: an introduction', in *Disaster Management Programs for Historic Sites*, eds Dirk H. R. Spennemann & David W. Look. San Francisco and Albury: Association for Preservation Technology (Western Chapter) and The Johnstone Centre, Charles Sturt University. Pp. 1-5.

Managing disasters and managing disaster responses: an introduction

DIRK H. R. SPENNEMANN [¶]
DAVID W. LOOK [†]

Over the last several years, the United States has experienced an unprecedented series of disasters: earthquakes; hurricanes; typhoons; tornadoes; floods; landslides; oil spills and accidents involving other toxic substances; fires; civil disturbances; and terrorist attacks. Most of these have destroyed or severely damaged archaeological and historic sites including cultural landscapes.

Heritage conservation and disaster management in the United States are two fields that depend on a working relationship at the federal, state and local levels. They are both good examples of partnerships in government, but the two fields have not always interacted effectively. What are the respective responsibilities, roles and functions? As federal, state and local governments downsize, there will be fewer cultural resource management staff to respond to future disasters. How can we be more effective and efficient? There was a certainly a need to look at a number of agreements developed after various disasters and at a proposal for an 'umbrella' agreement developed by the Advisory Council on Historic Preservation and the Federal Emergency Management Agency (FEMA). The umbrella agreement would be in place before future disasters and amended for each disaster.

The contributions to this volume can be grouped under six major headings:

- Intergovernmental cooperation on the national and local level;

[¶] The Johnstone Centre, Charles Sturt University, PO Box 789, Albury NSW 2640, Australia.
E-mail: dspennemann@csu.edu.au
[†] US National Park Service, Western Regional Office, 600 Harrison Street, San Francisco, CA 94104-1372, USA.
E-mail: david_w._look@nps.gov

- The recognition of significant historic character and fabric in a post-disaster situation;
- Seismic safety and rehabilitation;
- Floods and cyclones;
- Terrorist Attack;
- Communication and training.

Intergovernmental cooperation at the national, state and local level

The effects of natural disasters transcend the boundaries of responsibilities of any federal government agency. Too often in the past, the various agencies were in disagreement on how to proceed, and the resulting tension often lingered well after the disaster and its aftermath had been overcome. Clearly, cooperation was needed.

Memoranda of agreement and programmatic agreements among the key players of disaster mitigation and historic preservation have been in place since 1993. How the Advisory Council on Historic Preservation, the Federal Emergency Management Agency (FEMA), the National Park Service and other federal and state agencies can cooperate and assist in future disasters is explored by a number of papers drawing on past experiences in California, the Midwest and Washington State. The key component of a successful programmatic agreement is that both sides stand to benefit.

Lisa Katchka traces the development of programmatic agreements from a FEMA perspective. Following the 1993 Midwest Floods, which affected several states, regional cooperation and standardized approaches were required. Programmatic agreements allowed federal agencies, such as FEMA, to use a *uniform* process for all states signing that agreement to facilitate rapid responses. Some instances were deemed outside the umbrella of the programmatic agreement, resulting in individual memoranda of agreement.

Cherilyn Widell outlines a Memorandum of Agreement between the California State Historic Preservation Office (SHPO) and FEMA signed two weeks after the Northridge Earthquake of 17 January 1994. It governed the actions of the Section 106 process. The programmatic agreement allowed SHPO staff to draw on technical and engineering expertise which was unavailable in-house and which allowed rapid assessment of National Register eligible structures.

The interplay of state and local governments and the historic preservation community following the Loma Prieta (1989) and Northridge (1994) events is chronicled and critically addressed by *Steade Craigo*. In the days following Loma Prieta, many historic properties were demolished with little, if any, input from the preservation community.

As *Wayne Donaldson* points out, the vast majority of crucial decisions on the future of damaged historic properties are made in the first ten days following the disaster event. He advanced a number of issues that should be taken into account to mitigate the impact of disaster managers.

The last two papers in this section look at more practical aspects of pre- and post-disaster management. *Alex Kimmelman* discusses practicalities of disaster planning and hazard mitigation of identification of historic sites; distribution and archiving of studies and resources; and the processes of selecting suitable contractors. He also highlights the opportunities presented by damaged structures to assess and document their method of construction.

Jorge Alfaro considers the issue of funding the disaster recovery programs. He argues that local communities need to take the lead in the funding programs and use federal funds to augment the required funding. He exemplifies this with the success of San Francisco's bond programs and the seismic retrofit and rehabilitation that could be funded through these opportunities.

The recognition of significant historic character and fabric in a post-disaster situation

A common thread through many accounts of post-disaster situations is the comment that the historic fabric of a building was not been recognized as being of appropriate cultural value. As a result, the structure was pulled down.

George Siekkinen addresses the ethical issues and argues that any loss of historic fabric is deplorable as it diminishes the integrity of the building. He points to the conceptual schism in the minds of many administrators who happily apply different standards of integrity to items of moveable cultural heritage on the one hand, and buildings on the other.

Good documentation of the existing structure and fabric, and detailed disaster preparedness planning can minimize the impact of a disaster event on cultural properties. *Blaine Cliver* demonstrates this well in the case example of the Franklin Delano Roosevelt Mansion.

Wayne Donaldson makes the comment that several historic buildings have been exceptionally well designed, but that the lack of knowledge about the nature and capabilities of the designs has led to the demolition of many buildings which were only slightly damaged. He demonstrates the variability in building design in California and argues for a systematic and detailed assessment of historic building practices.

Commonly damaged buildings are pulled down following a disaster event regardless of whether the building is worth saving from a conservation point of view and regardless of the feasibility of such action. *John Kariotis* highlights the fact that the reasons of 'life safety' so often put forward as arguments for demolitions rarely warrant demolition. He presents a number of cases where the acceptable risk of earthquake-related injury posed by historic buildings is very low, even though the structure may sustain (repairable) damage.

Seismic safety and rehabilitation

Given that the conference was held in San Francisco, it is not surprising that the majority of the papers dealt with earthquakes and seismic retrofit rather than other forms of disasters.

When is seismic rehabilitation required? *Diana Todd* outlines the work by the Interagency Committee on Seismic Safety in Construction which develops standards for federally owned or leased buildings. She specifies activities which automatically trigger a seismic (re-)evaluation. Essentially, each fundamental change in a building's use or modification can act as a trigger.

Private sector buildings are considered by *Ugo Morelli*. The development of the seismic retrofit standards developed by FEMA are described in his paper.

Robert Mackensen discusses the California State Historical Building Code and its application to pre- and post-disaster situations. He argues that some of the seismic retrofit work required after an earthquake event may be prohibitively expensive, leaving an owner little choice but to take up the offer to have the damaged building demolished for free. The California Building Code essentially allows the reconstruction of a building with little modification as long as basic safety standards are met.

Randolph Langenbach addresses a number of practical and ethical issues in seismic retrofit, illustrating the need for structure specific investigations lest the unique historic records of each building be lost accidentally. His paper critically evaluates the current design standards and questions their applicability to historic structures. Gutting of structures and a radical redesigning of the internal layout following seismic retrofit are only too common.

While *Daniel Shapiro* provides some background on national guidelines for the seismic rehabilitation of buildings, *Stephen Mathison* addresses the application of the Secretary of the Interior Standards for Rehabilitation to structures affected by disasters.

The final two contributions in this section look at case studies of earthquakes. *Steade Craigo* provides an overview of the past history of earthquake-affected heritage properties in California. *Thomas Winter* describes the impact of the 1994 Northridge earthquake on a structure in Los Encinos State Historic Park and the restoration and seismic retrofit work required.

Floods and cyclones

Circular high speed wind systems (cyclones/typhoons/hurricanes, tropical storms and tornadoes) wreak havoc on historic and archaeological sites. The associated rain causes flooding of low-lying places and urban areas.

Dirk Spennemann discusses the effects of cyclones on archaeological sites in Australia and the Pacific and discusses the management options available. His paper demonstrates the destructive forces of cyclones on coastal sites and shows that there are no protection options available given the number and spread of the sites.

Daryl Barksdale describes the impact of Tropical Storm Alberto on Georgia. The storm, a 500-year event, caught the Historic Preservation Office by surprise. Barksdale describes the recovery experiences and shows that, because of the rural setting, only few sites had been assessed prior to the flooding event.

In the final paper in this section, *Alice Baldrica* addresses the problems caused by sheet flooding of archaeological sites. Following continued rains, the internal overflow lakes of

the Humboldt and Carson Rivers were full and threatened communities with flooding. A natural dyke between the two basins was artificially beached to reduce flooding. Wind and wave action in the shallow lakes which formed had stripped the sediment cover from several archaeological sites causing their exposure and subsequent erosion. As with the case of the tropical cyclones, the number of sites affected was such that salvage excavation was deemed impractical.

Terrorist Attack

Urban unrest and terrorist attack not only exact human casualties and often deaths, but the accompanying destruction of property also causes damage to historic structures. The attack on the Uffici in Florence in 1993 is a prime example where cultural institutions became the prime target. To highlight the increasing importance of the issue we have dedicated a separate section to the single paper addressing the issue.

Eva Osborne describes the aftermath of the terrorist bombing of the Alfred P. Murrah Federal Building, Oklahoma City, on 19 April 1995. The bombing caught the historic preservation community, as well as the rest of the population, completely unprepared. The physical effects of the bomb blast on the structures were complex, as they combined a number of forces. The blast air wave caused effects similar to tornadoes, while the underground shock wave caused damage similar to those by severe earthquakes of very short duration.

Communication and training

The final section touches upon issues of training and communications. In his paper, *Dirk Spennemann* argues the case for an integrated training course on historic heritage management in disaster and post-disaster context. *Dirk Spennemann* and *David Green* describe a model for a information network based on the World Wide Web. Both papers stress the need for communication to overcome the shortcomings of current problems.

The final chapter is a summation of the key issues by the editors with a suggestion of the directions we may need to take to ensure the survival of our historic buildings in future disaster events. Clearly, these papers are only a first step, but a necessary one.