

Disaster Planning, Preparedness, and Recovery: A Resource Guide

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Disasters that impact museums and historical organizations include floods, hurricanes, tornadoes, winter storms, extreme cold, earthquakes, volcanoes, tsunamis, fire, hazardous substances, nuclear power plant accidents, nuclear weapons attack and radioactive fallout, chemical spills, riots, and terrorism. For local history organizations, pests in the collection can also constitute a disaster. Contemplating all of the things that can go wrong can quickly lead to a sense of futility. However, by identifying, prioritizing, and addressing these dangers with a thoughtful plan of action for prevention and response, the situation can appear to be much less dire.

The good news is that there are myriad resources available to assist and guide organizations of all sizes with planning. This technical leaflet presents many of those resources. While every attempt has been made to provide the reader with current, accurate information, the authors and AASLH neither endorse nor assume responsibility for any particular resource, organization, service, or product.

ONLINE RESOURCES

❖ The September 2005 issue of the **Western Association of Art Conservation (WAAC) Newsletter** focused on salvage of paper, textiles, three dimensional artifacts, and fundamental information on mold. Copies can be ordered at [Stanford.edu/waac/](http://palimpsest.stanford.edu/waac/).

❖ The **Northeast Document Conservation Center (NEDCC)** (www.nedcc.org) has published technical leaflets on disaster recovery and a comprehensive Web site specifically devoted to links and information about hurricane recovery including funding sources at www.nedcc.org/news/hurricane.htm.

❖ The **National Park Service** publishes Conserve-O-Grams on a variety of topics including disaster response and recovery and security, fire, and curatorial safety. These can be found at www.cr.nps.gov/museum/publications/conserveogram/cons_toc.html.

❖ The **National Center for Preservation Technology & Training** has resources for condition assessment and disaster management at <http://www.ncptt.nps.gov/default.aspx?m=208>.

❖ The **American Institute for Conservation of Historic & Artistic Works (AIC)** Web site includes publications on disaster response and recovery and other conservation topics at aic.Stanford.edu/library/online/disaster/index.html. The Journal of the American Institute for Conservation has also included disaster response and recovery articles, which are also available at this Web address.

❖ The **National Trust for Historic Preservation** includes advice for salvaging flood-damaged historic structures at <http://www.nationaltrust.org/hurricane/index.html>.

❖ **Solinet** includes a comprehensive list of funding sources on its site at http://www.solinet.net/Disaster_temp1.cfm?doc_id=3789.

❖ The **Museum SOS** site, hosted by the **American Museum of Natural History**, is labeled “a comprehensive resource for museum disaster preparedness and response.” It includes “presentations, case studies, and other resources related to protecting your collections” and a list of links to other resources at <http://www.museum-sos.org/htm/index.html>.

❖ The **U.S. National Archives and Records**



Rust developed on a damp textile after a metal artifact landed on it during Hurricane Katrina, Old Spanish Fort, Pascagoula, MS.

Administration includes emergency preparedness information specifically targeted at archivists at <http://www.archives.gov/preservation/emergency-prep/>.

❖ The **Regional Alliance for Preservation** Web site at <http://www.preservecollections.org/index.php> includes lists of educational opportunities, services, and publications. Searching their bibliography for emergency preparedness will lead you to over three dozen articles from member publications.

❖ The **Bibliographic Database of the Conservation Information Network** allows searches of “a worldwide network of libraries and documentation centres [that] contribute data on their combined holdings.” These include books, conference proceedings, technical reports, journal articles, theses, and more. Begin your search at http://www.bcin.ca/English/home_english.html.

❖ The **Canadian Conservation Institute** lists several publications and includes a conservation information database on its Web site at http://www.cci-icc.gc.ca/main_e.aspx.

❖ The **American Association of Museums** includes hurricane recovery information on its Web site at <http://www.aam-us.org/aamlatest/news/HurricaneRecoveryInfo.cfm>. The AAM bookstore includes several titles on facilities and risk management.

❖ The **Heritage Emergency National Task Force** is co-sponsored by Heritage Preservation and the Federal Emergency Management Agency. Its Web site, www.heritagepreservation.org/PROGRAMS/TFresources.html, includes preparedness and recovery information and links to other resources.

❖ The **Smithsonian Institution** has listed resources on its Web site at www.si.edu/scmre/takingcare/disaster.htm.

BOOKS, ARTICLES, AND OTHER PUBLICATIONS

Abstract descriptions are taken from the **Bibliographic database of the Conservation Information Network** at http://www.bcin.ca/English/home_english.html.

Preparedness, General

❖ Alire, Camila, ed. Library Disaster Planning and Recovery Handbook. New York: Neal-Schuman Publishers, 2000.

❖ ASEAN Committee on Culture and Information. Guidelines on the Principles of Emergency Planning and Disaster Management for Museums, Libraries and Archives. ASEAN Committee on Culture and Information, 1999.

❖ Becker, Alyssa, Elizabeth Richards, Shirley Ellis, and Shawna Lemiski. "The University of Alberta Clothing and Textiles Collection Disaster Contingency Plan." Edmonton: University of Alberta, Department of Human Ecology, University of Alberta Clothing and Textiles Collection, 2001.

❖ Brooks, Connie. "Cooperative and Regional Disaster Preparedness." The Book and Paper Group Annual 5 (1986): 139-145.

Abstract:
Regional disaster preparedness differs from cooperative disaster preparedness because a systematic attempt is made to involve all institutions of a certain type (not just libraries) in cooperative disaster preparedness. The article cites benefits including the increased feasibility of setting up joint training sessions in salvage procedures.

❖ Cato, Paisley S. and Stephen L. Williams. "Guidelines for Developing Policies for the Management and Care of Natural History Collections." Collection Forum 9, no.2 (1993): 84-107.

Abstract:
Puts forward a set of guidelines which address the major issues in the management of natural history collections, including ethics, documentation acquisition, preventive conservation, access, loans, sampling, treatment, pest control, health and safety, emergency preparedness, and deaccessioning.

❖ Center for Occupational Hazards. "Emergency Plans for Museum Conservation Laboratories." COH: Conservation Hazard Data Sheets. New York: Center for Occupational Hazards, 1986.

Abstract:

This data sheet discusses procedures for writing an emergency plan to prevent or reduce damage in the event of a natural or mechanical disaster. Topics include: types of emergencies, elements of an emergency plan, planning, hazard evaluation, role of museum staff, communications, evacuation, chemical spills, fumigation emergencies, shutdown procedures, training, drills and evaluation, references, and sources of assistance. This is a reference for emergency and disaster planning and preparedness, and also for occupational safety and health in cultural institutions.

❖ "Cultural Resource Protection and Emergency Preparedness." Cultural Resources Management 24, no. 8 (2001): 3-36.

❖ Dorge, Valerie, and Sharon L. Jones. Building an Emergency Plan: A Guide for Museums and Other Cultural Institutions. Los Angeles, CA: Getty Conservation Institute, 1999.

❖ Dorge, Valerie, Wilbur Faulk, and Juan Manuel Martinez. "Emergency Planning for Cultural Institutions: the Process and Some of Its Challenges." ICOM Committee for Conservation, ICOM-CC: 13th Triennial Meeting, Rio de Janeiro, 22-27 September 2002, London: ICOM-CC; James & James, 2002: 27-33.

Abstract:
Every cultural institution should have an emergency plan based on the vulnerability of its staff, visitors, collections, and buildings to potential natural and human-caused emergency situations or disasters. Developing a plan is the most important preventive conservation step an institution's director and staff can take. This paper reviews the basics of the emergency preparedness and response process that results in an emergency plan. Some of the challenges the institution can face are addressed and specific examples given of the ongoing process at a small museum in Santiago, Chile. Also, words of advice are offered by some who have developed a plan, had it tested in a real emergency, and revised it accordingly.

❖ Drabek, Thomas E. "The Events of an Emergency." Perspectives on Natural Disaster Mitigation: papers presented at 1991 AIC Workshop. Ed. Jane K. Hutchins and Barbara O. Roberts. Washington, D.C.: Foundation of the American Institute for Conservation of Historic and Artistic Works, 1991: 31-36.

Disaster Planning, Preparedness, and Recovery

Abstract:

The author interviewed executives who manage tourist businesses to identify tourist locations where local governments have implemented disaster evacuation planning initiatives. Most of the businesses were hotels, motels, restaurants, or entertainment complexes; a few were museums. The author discovered that in 91% of these 65 firms, some type of disaster planning had been done, but serious voids emerged when he began to probe. The report introduces seven topics: vulnerability assessment, some unique features of disasters, comprehensive emergency management, the mitigation function, the preparedness function, the response function, and the recovery function.

❖ Heritage Collections Council. *Be Prepared: Guidelines for Small Museums for Writing a Disaster Preparedness Plan*. Canberra: Heritage Collections Council, 2000.

❖ Hughes, Janet. "A Strategy to Increase Cooperation for Disaster Preparedness: Some Australian Examples for Saving Resources and Raising Awareness." *Prevention 2000: Prevention of Disasters in Cultural Storage Areas*, November 2000, 7-10.

Abstract:

A 1998 report by the Australian National Audit Office found many deficiencies in disaster preparedness at four major national cultural institutions in Canberra, Australia. While it was recognized that many deficiencies were due to lack of resources, it was nevertheless necessary to urgently address these problems. As a result, cooperation strategies were developed by representatives from all cultural and scientific institutions in the city to improve preparedness. This has included the development of a Memorandum of Understanding providing for mutual emergency assistance; sharing of information and equipment; and joint training to reduce costs and improve efficiency. Training strategies stress the importance of ensuring disaster awareness at all levels of responsibility, including senior executives. Several different models for disaster preparedness cooperation used in Australia and elsewhere are briefly compared. The Canberra model could be modified to suit many different situations where museum professionals must achieve results with limited staffing and restricted funding.

❖ Preservation Services Department. "LEAP Disaster Response Manual Draft." Smithsonian Institution Library: 7.

Abstract:

The Library Emergency Action Program (LEAP) Disaster Response Manual is a guide to help in the recovery of library materials AFTER a disaster has

passed. It's purpose is to help increase the safety and efficiency of a recovery effort.

❖ Look, David W. and Dirk H.R. Spennemann. "Disaster Preparedness, Planning, and Mitigation." *Cultural Resource Management* 24, no.8 (2001): 3-4.

❖ Lord, Allyn; Carolyn Reno; and Marie Demeroukas. *Steal This Handbook: a Template for Creating a Museum's Emergency Preparedness Plan*. Columbia, S.C.: Southeastern Registrars Association, 1994.

Abstract:

Covers all aspects of emergency preparedness, response, and recovery, and includes both major disasters and everyday, potentially dangerous situations.

❖ Mattingly, Shirley. "Urban Emergency Planning and Preparedness." *Perspectives on Natural Disaster Mitigation: Papers Presented at 1991 AIC Workshop*. Ed. Jane K. Hutchins and Barbara O. Roberts. Washington, D.C.: Foundation of the American Institute for Conservation of Historic and Artistic Works, 1991: 9-16.

Abstract:

Focuses on local government's role in regard to disasters which threaten the community; describes preparedness programs and actual response of a local government; and provides practical suggestions for protecting collections and personnel.

❖ McClure, Frances D. "Emergency Preparedness—Chapter 3." *Managing Preservation: A Guidebook*, January 1995: 21-51.

Abstract:

Every year most libraries encounter some type of emergency, usually the result of water from sprinkler systems, leaking pipes, fire hoses, or heavy rain. The severity of these emergencies and recovery from them depend on prevention strategies and emergency preparedness plans that have been developed and implemented by the library staff. In this chapter, basic information is provided to help any library establish strategies to avoid preventable damage and develop emergency preparedness plans to cope with the unpreventable in the worst-case scenario; it is also applicable on a smaller basis for minor emergencies.

❖ Nelson, Carl L. *Protecting the Past from Natural Disasters*. Washington: Preservation Press, National Trust for Historic Preservation, 1991.

Abstract:

In this practical guide, the National Trust shows how everyone who cares for our past can prepare for, respond to, and recover from the next natural disaster. Also provides insights into the human stories behind



Artifact recovery at Beauvoir, the Home of Jefferson Davis, Biloxi, MS.

the recoveries of Charleston and the Virgin Islands from Hurricane Hugo and San Francisco from the Loma Prieta earthquake of 1989.

❖ Podany, Jerry C. "Emergency Preparedness Plan: Developing One and Practicing It." Perspectives on Natural Disaster Mitigation: papers presented at 1991 AIC Workshop. Ed. Jane K. Hutchins and Barbara O. Roberts. Foundation of the American Institute for Conservation of Historic and Artistic Works, 1991: 69-82.

Abstract:

Provides a scheme for developing an emergency response plan covering the issues to be addressed by the plan, the composition of the planning committee, the documents to be produced by the committee, and testing of the completed plan in various kinds of drills. The author appends excerpts from the J. Paul Getty Emergency Planning Handbook.

❖ Preiss, Lydia. "Learning from Disasters: a Decade of Experience at the National Library of Australia." International Preservation News no. 20 (1999): 19-26.

❖ Roberts, Barbara O. "Emergency Preparedness." A Preventive Conservation Approach, Volume 1, Storage of Natural History Collections. Ed. Carolyn L. Rose, Catharine A. Hawks, and Hugh H. Genoways. Society for the Preservation of Natural History Collections, 1995: 81-99.
Abstract:

Emergency preparedness is a way to minimize risk to personnel, collections, and facilities. The effects of unexpected events can be minimized and normal institutional operations can resume quickly if all staff members are trained to deal with emergency incidents. Effective emergency preparedness involves planning and an understanding of appropriate actions for response and recovery.

❖ Roy, Charity. "Disaster Recovery: Developing a Plan." Cultural Resource Management 24, no. 8 (2001): 13-15.

❖ Saito, Hidetoshi, ed. "Risk Preparedness for Cultural Properties: Development of Guidelines for Emergency Response." 1997 Kobe/Tokyo International Symposium. Tokyo: Chuo-Koron Bijutsu Shuppan, 1999.

❖ Scott, Catherine D., Caroline Shugars, and Susan Vanhaften-Mackler. "Selected References on Disasters and Disaster Planning: Earthquakes, Fires, Floods, and Other Disasters in Cultural Institutions." Washington, D.C.: Smithsonian Institution Libraries, Museum Reference Center, April 1983.

Abstract:
This bibliography, compiled by the Museum Reference Center of the Smithsonian Institution Libraries, contains references relating to the following topics: security, fire (detection, extinguishing), floods, natural disasters, earthquakes, bomb threats,

vibration, building codes, insurance, planning, cleanup, theft, risk management, acid rain, emergency treatments, vandalism, disorder, environment (temperature, relative humidity, light, pollution, dust, mold, insect infestations), and handling. This bibliography is a reference for emergency and disaster preparedness for museums, libraries, art galleries, archives, and related cultural institutions. References are dated from 1975 to 1983.

❖ Toronto Area Archivists Group Education Foundation. *An Ounce of Prevention: a Handbook on Disaster Contingency Planning for Archives, Libraries and Record Centers*. Ed. John P. Barton and Johanna G. Wellheiser. Toronto: Toronto Area Archivists Group Education Foundation, 1985.

Abstract:

Published in conjunction with a symposium on disaster preparedness for information managers, this handbook is intended to heighten awareness about and to assist archives, libraries, and record centers in disaster contingency planning. It discusses methods of preventing disasters and, should one occur, ways of containing and minimizing it through advance planning. It outlines action to be taken when disaster strikes, salvage operations, the rehabilitation of salvaged materials, fumigation and sterilization, and the completion of the recovery operation. Extensive appendices list human resources, suppliers of emergency facilities, services, and materials, etc.

❖ Tremain, David. "Charred Documents." *Help! a Survivor's Guide to Emergency Preparedness*. Ed. Cynthia Ball and Audrey Yardley-Jones. Edmonton: Museums Alberta, 2001: 149-150.

❖ Wright, Gordon H. "Disaster Management for Libraries: A Management Perspective on Disaster Planning." *Emergency Preparedness Digest* 16, no. 1 (January 1989): 14-18.

Abstract:

A review of the factors that come into play when managing disaster recovery; emphasis on communications. An excerpt from *Disaster Management for Libraries*, by Claire England and Karen Evans, (Ottawa: Canadian Library Association, 1988).

Earthquake

❖ Cornu, Elisabeth and Lesley Bone. "Seismic Disaster Planning: Preventive Measures Make a Difference." *Newsletter (Western Association for Art Conservation)* 13, no.3 (September 1991): 13-19.

Abstract:

Following the October 1989 earthquake, objects conservators from the M.H. de Young Memorial

Museum in San Francisco report what they learned about effective earthquake preparedness measures. The systematic approach to preparedness that is presented includes details about how to assess the museum building, how to prepare and train staff for a seismic disaster and its aftermath, and how to successfully anchor objects to provide better seismic security. Detailed instructions and sketches about how to mount and store various kinds of museum objects are provided. Appendices include supplies for emergencies and sample damage report.

❖ Feilden, Bernard Melchior. *Between Two Earthquakes: Cultural Property in Seismic Zones*. Rome; Marina del Rey: ICCROM; The Getty Conservation Institute, 1987.

Abstract:

A handbook providing information on conserving historic buildings, monuments and archaeological sites in earthquake-prone areas. Focuses on three areas of concern: what to do before the earthquake, what to do immediately after, and what long-term actions remain to be taken. Thirteen appendices include fire protection of historic buildings, computerized listing of data on historic buildings, photogrammetry and earthquakes, planning to protect an institution and its collections, modified mercalli intensity scale, from restoration to maintenance of historic buildings, damage recording sheets, structural interventions in historic buildings, the resolution on cultural property in seismic zones. Bibliographic references.

❖ MacIntosh, Heather. "Responding to Nisqually: Historic Seattle's Role After the Earthquake." *Cultural Resource Management* 24, no. 8 (2001): 8-10.

❖ Sullivan, Michael Sean. "The Nisqually Earthquake." *Cultural Resource Management* 24, no. 8 (2001): 10-12.

Fire

❖ Babin, Angela. *Fire Prevention*. New York: Center for Safety in the Arts, 1989.

Abstract:

This data sheet describes how fires start, and methods to prevent and extinguish them. Topics include the fire triangle (fuels, oxidizers, ignition source, plus fire propagation); definitions (flammable range, flash point, flammability, combustible, vapour pressure, auto-ignition temperature); storage conditions and containers; handling (dispensing, spills and leaks); types of fires (class A-common solids, class B-flammable liquids, class C-electrical equipment, class D-burning metals); fire extinguishers (class A types, class ABC multipurpose dry chemical, class ABC Halon

211, class BC Carbon dioxide); automatic sprinkler systems (water, halon); and fire fighting procedures. References. This is a reference for occupational safety and health, and for emergency and disaster planning and preparedness.

Flood/Hurricane

❖ Kiseljev, Dubravka Turkovic. "Rescuing Water Damaged Textiles During L.A.'s Urban Riots." American Institute for Conservation of Historic and Artistic Works, Textile Specialty Group 3 (1993): 39-45.

Abstract:

During the April 1992 urban riots in Los Angeles, a number of costumes and textiles in the study collection at the Los Angeles County Museum of Art were damaged in an off-site storage area. Water damage in the storage area resulted in the need for emergency treatment on a number of artifacts. This article details the course of action and the rescue effort. It also offers advice for those developing disaster preparedness plans.

❖ Klempn, Barbara. Emergency Treatment of Water-Damaged Paintings on Canvas. Ottawa: Canada. Department of Canadian Heritage. Canadian Conservation Institute, 1986.

Abstract:

Water damage is one of the most serious types of damage that can occur to a collection of paintings on canvas. This document discusses the effects of water damage, how to remove excess water, recommended materials, and how to dry water-damaged paintings. A list of suppliers and a supplementary bibliography are included. The information in this note could be useful for disaster planning and emergency preparedness, as well as for mitigating the immediate effects of water damage.

❖ Mathieson, David F. "Establishing Workable Policies for Dealing with Storm Threats." Technology & Conservation 8, no. 2 (1983): 28-29.

Abstract:

Museums, libraries, and similar facilities that are located in hurricane-prone regions, should develop written emergency preparedness procedures to minimize damage from both high winds and water inundations.

❖ Noble, Bruce J., Jr. "Lord Willing n' the Creek Don't Rise: Flood Sustainability at Harpers Ferry National Historical Park." Cultural Resource Management 24, no. 8 (2001): 16-18.

❖ Tsai, Fei-Wen; and Dianne van der Reyden. "Disaster Preparedness—Prevention, Response and



Main Building, Los Islenos Museum, St. Bernard Parish, LA.

Recovery Procedures for Water-Based Emergencies: Paper-Based and Magnetic Media Materials." The Symposium on the Conservation and Preservation of the Cultural Properties: On Preservation and Disaster Planning, 1996: 462-498.

Pests

❖ Olkowski, William, Sheila Daar, and Helga Olkowski. "Checklist for Detecting Structural Decay in Wood Buildings." Common-Sense Pest Control: Least-Toxic Solutions for Your Home, Garden, Pets, and Community, 1991.

Volcano

❖ Schoonover, Larry. "Mount St. Helens: Cleaning Tips and Conservation Concerns." Inland Empire Museum Association Newsletter 3, no. 1: 3.

Abstract:

This newsletter article reports on the effects of volcanic ash from the 1980 eruption of Mount St. Helens, Washington state, USA, on cultural institutions and their collections, and describes methods to reduce damage. Some recommendations include shutting down air intake systems, sealing up museum facilities (doors, windows), frequent filter changes of HVAC systems, covering objects and storage cabinets, and controlling (stabilizing) the environment. Chemical analysis of the abrasive ash revealed at least 50 per thousand silica dioxide, which forms damaging sulphuric fumes when exposed to moisture. Removal of the fumes and careful cleaning to remove ash are advised. This newsletter is a reference for emergency and disaster preparedness and planning and salvage (retrieval) operations.

Photos provided by AASLH HEART volunteers.

DISASTER PLANNING, PREPAREDNESS, AND RECOVERY RESOURCES FROM AASLH

❖ *History News* Vol. 54, No. 3. Are You Prepared for Disaster? (Summer 1999)

Summary: Articles in this issue include "Partnerships in Disaster Planning Response: A National Perspective," by Jane S. Long; "Focus on Recovery: The Hermitage, The Home of President Andrew Jackson and Its Tornado," by James M. Vaughan; and "Building Museums That Last," by Rick Beard.

❖ *History News* Vol. 48, No. 1. Emergency Preparedness (January/February 1993)

Summary: Articles in this issue include: "Are You Ready When Disaster Strikes?" by Wilbur Faulk; "A Test of Strength," by Nancy Bernard Felix; "Sharing the Risk," by Gail McGiffen and Scott E. Smith; "Points of View," by Pamela J. Bennett; and "Preserving A Legacy," by John Fleming. Date Published

❖ Technical Leaflet #50: Insuring Against Loss, published: 1969.

❖ Technical Leaflet #114: Emergency Preparedness for Museums, Historic Sites & Archives: An Annotated Bibliography, published: 1979.

❖ Technical Leaflet #147: An Insurance Primer for the Local Historical Organization, published: 1983.

❖ Technical Leaflet #171: A Holistic Approach to Museum Pest Management, published 1990.

❖ Technical Leaflet #183: Disaster Planning for Cultural Institutions, published 1993.

❖ Technical Leaflet #206: Protecting Cultural Heritage Properties from Fire, published 1999.

❖ Technical Leaflet #220: Closing the Barn Door: Dealing with Security Issues, published 2002.

Note: Technical Leaflet Bundle #BNDL004: Risk Management includes technical leaflets #147, #171, #183, #206, and #220.

These resources can be purchased through the AASLH Bookstore at http://www.aaslhnet.org/aaslhssa/cessashop.shopping_page or by calling 1-615-320-3203.



Doll showing mold growth after Hurricane Katrina damage, Old Spanish Fort, Pascagoula, MS.