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Global Perspectives: Libraries and Natural Disasters

Anne Prestamo

Florida International University, anpresta@fiu.edu

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Column Title: Global Perspectives

Column Editor: Anne M. Prestamo, Dean of Libraries, Florida International University,
anpresta@fiu.edu

Column Editor's Note. As the Column Title indicates, this column brings Global Perspectives to the Journal of Library Administration. Library administrators in different types of libraries share case studies, research, reports, or articles from a wide variety of geographic locations outside of North America. Prospective authors are invited to discuss possible future contributions with the column editor at anpresta@fiu.edu

Column Title: Libraries and Natural Disasters

Column Author: Anne M. Prestamo, Dean of Libraries, Florida International University,
anpresta@fiu.edu

ABSTRACT. The backdrop for this column was a spate of natural disasters around the world. The column examines the impact of disasters on libraries through multiple lenses: preparedness, recovery, and lessons learned. While the immediate and obvious emphasis may be on facilities and collections, libraries often face additional demands and take on additional roles in aiding their communities, employees, and partner institutions.

Keywords: libraries, disaster preparedness and recovery, administration, services, facilities,

Disaster Preparedness and Recovery in Libraries

INTRODUCTION

As the deadline for this column approached the world was experiencing a spate of natural disasters. During August 2017 Bangladesh, Nepal, and India experienced devastating monsoon rains and flooding; flooding and landslides displaced thousands in Sierra Leone; and Hurricane Harvey was the most powerful hurricane to hit Texas in over 50 years. September brought Hurricanes Irma and Maria, resulting in widespread devastation to many islands in the Caribbean. While less catastrophic, Irma also caused significant disruption in Florida. Concurrent with Irma, Mexico experienced a catastrophic earthquake (Telegraph Education, 2017).

The guest author scheduled for “Global Perspectives” in this issue had to postpone his submission as a result of the hurricanes in the Caribbean. While his island was not directly impacted, he and his organization were drafted into service to assist colleagues from libraries, museums, and archives in areas that were severely damaged. In place of the scheduled topic, this column will present a modest survey of resources related to disaster preparedness and recovery for libraries, museums, and archives. As the Column Editor, I ask leave of readers to exercise personal privilege in sharing these resources in the context of my own activities and observations in the months preceding Irma, and then in the response and recovery phases of Irma and Maria.

DISASTER MANAGEMENT PHASES

The Global Alliance for Disaster Reduction describes four phases of disaster management: 1) Mitigation, focusing on steps to minimize the effects of a future disaster; 2) Preparedness, including detailed plans of how your organization will respond; 3) Response,

including the immediate efforts to minimize hazards and loss in the immediate aftermath of a disaster; and 4) Recovery activities to return the organization or community to normal (Global Alliance for Disaster Reduction, 2017).

Mitigation and Preparedness

Thinking about your own organization, have steps been taken to mitigate potential damage to your facilities and collections? Do you have a detailed response plan to follow in the immediate aftermath of a disaster? If your institution is starting from scratch, or if you are seeking guidance in strengthening your efforts in all phases of disaster management, you may wish to consult *dPlan*, an online planning tool to help your organization “prevent or mitigate disasters, prepare for the most likely emergencies, respond quickly to minimize damage if disaster strikes, and recover effectively from disaster while continuing to provide services to your community” (NEDCC, 2017). In addition, the American Library Association’s *Library Disaster Preparedness & Response* LibGuide provides a comprehensive annotated bibliography of freely available online resources to assist libraries. In the introduction, the guide cites this statistic: “The 2005 Heritage Health Index reported that 78% of libraries do not have a disaster plan and staff trained to carry it out” (American Library Association, 2017).

Another comprehensive and valuable resource is *Librarians and Libraries Respond to Disasters: Bibliography on Library Roles in Disaster Preparedness, Response, and Recovery*, created and maintained by the National Library of Medicine (NLM, 2017). The bibliography provides over 200 citations to published literature, as well as reports from conferences and symposia.

Libraries share many risks and needs in the recovery phase with other cultural institutions. Further, we are often dependent on emergency response and assistance from our

governing organization, i.e. our university, our municipality, or other governing body. The Alliance for Response (AFR) is an effort in the United States to bring together cultural institutions and emergency management professionals in local communities. AFR is coordinated by the Foundation of the American Institute for Conservation, with support from the National Endowment for the Humanities. AFR networks are active in 26 metropolitan areas across the United States. Local networks are comprised of librarians, archivists, curators, conservators, and volunteers from cultural organizations, linked with professionals from the emergency management and first responder agencies in their respective communities. AFR has developed a blueprint for communities to establish these connections. The *Forum Planning Handbook: Guide to Bringing Together Emergency Responders and Cultural Institutions in Your Community* is freely available online, and may be adapted to local needs for communities outside the United States. AFR has also created a *Tool Kit* to support collaborative efforts. The Tool Kit includes resources to guide forum planning, build relationships with emergency responders, develop a local mutual assistance network, and ideas to engage your local network with educational and training activities (AFR, 2017).

Managing Disaster Risks for World Heritage from UNESCO provides guidance to identify, assess, and mitigate disaster risks and to develop a Disaster Risk Management plan. It emphasizes that having a comprehensive assessment and plan can be key to obtaining resources to support mitigation and conservation.

Response and Recovery

Despite best efforts in the mitigation and preparedness phases, the unpredictability and magnitude of natural disasters require response and recovery during and after an event. During the initial response phase, first responders will always be focused on life safety. Given this

imperative, those of us in libraries, museums, and archives may find that there is a time lag following an event until emergency officials clear us to re-enter our facilities. Communication in this phase is critical, and lines of communication should be clearly delineated in the disaster plan. Redundancy and alternative contacts are very important because communications systems may be affected.

Once cleared to inspect the facilities, having a plan to conduct inspection and evaluation of facilities and collections will enable staff to identify and prioritize needed actions and next steps. Attention to the structure to halt further damage to our collections and equipment should be a top priority. The resources described in the following paragraphs focus on attention and remediation for the various types of materials we have in our libraries, museums, and archives.

The American Institute for the Conservation of Historic and Artistic Works and the National Center for Preservation Technology and Training have developed the *Emergency Response and Salvage Mobile App*. The app is a technology-enhanced version of the Emergency Response and Salvage Wheel, long recognized as the authoritative source for salvaging and remediating materials in libraries, museums, and archives. The app outlines critical stages of disaster response and provides practical salvage tips for nine types of collections. This information can help librarians, archivists, and curators protect precious collections and significant records, access reliable information instantly, and save damaged objects.

In the following sections more detailed resources on particular types of materials will be presented.

Books, Paper, Photograph, and Electronic Media Salvage.

The Conservation Center for Art and Historic Artifacts provides a series of Technical Bulletins including *Salvaging Art on Paper*, *Salvaging Photographs*, and *Salvaging Books*. The bulletins are available in English and Spanish (Conservation Center for Art and Historic Artifacts, 2017).

The Northeast Document Conservation Center (NEDCC) has created online guides covering *Emergency Salvage of Wet Books and Records*, *Emergency Salvage of Wet Photographs*, and *Emergency Salvage of Moldy Books and Paper*. NEDCC also provides guidance and support via phone. They can provide basic information on basic conservation methods and contact information for preservation suppliers. Their emergency hotline number is (855) 245-8303 (NEDCC, 2017).

What To Do If Collections Get Wet is a useful guide from the Library of Congress. It covers remediation techniques for books, flat paper, photographs, negatives, and other materials. Information is provided on air drying and freezing. Additionally, it addresses appropriate methods for treating mold and soot (Library of Congress, 2017).

The *MoMA Immediate Response Guidelines* (Museum of Modern Art, 2012) include sections on maps, photographic material, magnetic tape (reel-to-reel, cassette, videotape), microforms, and compact discs.

Painting Salvage.

Two useful guides for salvage and treatment of paintings and other art objects are *Wet Recovery of Paintings and Their Frames* (West Lake Conservators, Ltd., 2017) and *MoMA Immediate Response Guidelines* (Museum of Modern Art, 2012). The guides address specifics of

treatment for different types of paint media, and issues with framing, matting, and backing boards.

Outside Recovery Assistance

Despite an organization's best efforts at planning and preparedness, large scale disasters may exceed its capacity to accomplish the work necessary to save its collections. The Florida Division of Library and Information Services maintains a comprehensive list of disaster recovery vendors in many categories including cold storage, vacuum freeze-drying, data, magnetic media, audio/visual recovery, conservators, and conservation advice. Although most of the companies listed are based in the US, many do work internationally (Florida Division of Library and Information Services, 2017).

Advance planning for disasters may involve establishing contractual relationships with outside vendors prior to a disaster to better insure that appropriate experts have been identified and are on-call when the need arises. The Library of Congress has drafted a model *Collections Emergency Response Contract*. The contract describes available services and institutional requirements if specified disaster outcomes should occur (Library of Congress, 2011).

CASE STUDY: HURRICANE IRMA AND THE FIU LIBRARIES

Until Hurricane Irma, these activities were abstract and academic concepts to me. I moved to Miami and Florida International University (FIU) in 2013, and Irma was the first full-scale hurricane preparation event I have experienced. In the end, Florida was extremely fortunate in terms of the force of the storm and the damage done. In comparison to our neighbors in the Caribbean who were devastated by category four and five strikes from Irma and Maria, and the force of Harvey in Texas, we were spared the worst outcomes.

Each year we conduct a review of the FIU Libraries' Emergency Management and Continuity of Operations Plans, in consultation with the University's Office of Emergency Management. Beginning in May 2017, the FIU Libraries participated in a six month series of in-person and online workshops with our Miami Alliance for Response network partners. Along with presentations from emergency management professionals and conservators, we participated in table-top and live action disaster simulation scenarios. When we began in May, little did we know that Irma would bring a real life scenario to us as we neared the end of our training series.

As Irma moved through the Caribbean, the forecast models indicated a strong likelihood of a category 5 landfall over Miami. Given that information, the University and local and state governments activated full-scale emergency preparations. Large areas were placed under evacuation orders, including FIU's north campus. Classes were canceled four days in advance of the projected landfall, with non-essential university employees working one additional day to make necessary preparations. The Emergency Operations Center (EOC) went to full activation and commenced twice daily briefing meetings for all designated EOC personnel.

Irma made landfall in the Florida Keys as a category 4 storm in the wee hours of Sunday morning, September 10. The eye veered west and made landfall again that afternoon on the west coast of Florida. Although Miami was spared the direct landfall, it was battered with tropical storm force winds, with periodic gusts to 100 miles per hour, for about 30 hours (Rabin, 2017). Power was out to the majority of households and businesses in Miami-Dade County. Cellular phone and data service was spotty at best. Many streets were impassable due to flooding, downed power lines, and trees. Gasoline was in very short supply, as had been the case for 3 days prior to Irma's arrival. For the most part, flood waters receded by Monday evening.

On Monday, September 11, I received notification from FIU authorities that our library building on the main campus was cleared for entry of essential personnel. Further, we were asked to open the library for limited hours on the following day. As a result of the Library's reopening, I attended the twice daily campus EOC briefing meetings. Approximately 700 students had sheltered in place in campus housing. Reaching other essential library staff to alert those needed for opening was a challenge. Voicemail and text messaging were helpful, as connections faded in and out. In post-event debriefs, several staff reported that What'sApp proved more reliable than cellular service text messaging.

We opened at 10am on Tuesday, September 12, with three access services staff members, and one security officer. Campus police provided security on the ground floor to limit entry to FIU affiliated individuals. Library systems staff had come in late Monday and early Tuesday morning to bring all public computers back online. Our campus and library servers remained online throughout the event, although some services had been rolled over to off-site servers as a precaution.

Prior to our opening, campus facilities engineers carried out a structural inspection of the building. Throughout the day, additional teams from facilities conducted sweeps of the building, looking more granularly at building systems. Accompanied by a library staff member, I did a floor by floor walk-through, looking at known problem areas, and with a particular eye for any impact on collections.

Our building is an eight story tower, with a broader three story base. The building is substantially clad in impact glass. We had water intrusion around window frames on three floors. None of those areas resulted in impact to our collections. On another floor we had water intrusion around an access door to the base building roof. Carpet in the area was soaked and

HVAC was out on that floor. Campus Facilities personnel were able to address the situation with water extraction equipment and fans until the HVAC was restored.

On the first day of reopening, we had 306 patrons in the building. On Wednesday, Thursday, and Friday our counts grew to approximately 1100, even though the University did not reopen until the following Monday. The relative calm and normalcy in the library was contrasted with the chaos that remained throughout the city. Power was being restored very slowly; food and gasoline were still in short supply. Driving was a challenge due to lack of traffic lights and downed trees. Campus ground crews were working nearly round the clock to clear debris to allow the campus to reopen.

MAJOR TAKEWAYS

Even in a situation of minimal damage communication proved to be a significant challenge. Utilizing multiple means of communication, and having back-up personnel for all essential roles is extremely important.

As a library within a large university, we are extremely fortunate to have a strong emergency planning and recovery system, and have made substantial investments in mitigation measures. On the homefront, we are fortunate to live in a home with robust mitigation so we experienced only minimal structural damage. Our landscaping was another story, with the loss of most fencing and 25 trees. Disasters shine a bright light on economic disparities. It becomes painfully clear that those of less means are less able to prepare, and therefore often suffer greater loss.

Through our Digital Library of the Caribbean partners we are working with the American Library Association to identify libraries in the Caribbean that are in need of assistance from

ALA's Disaster Relief Fund. FIU, along with the other public universities in Florida, is offering free tuition to students displaced from Caribbean universities for the duration of this academic year.

I also learned that we need to be mindful of the stress that results from a hurricane event for our staff. Days of preparation when the forecast threatens a direct category five hit is exhausting. Asking staff to return to work before the university is officially open, knowing that they have their own home situations to cope with, is a big ask. I can attest to the fact that this can create significant stress on the homefront.

In conclusion, I leave you with one final resource that was not on my radar screen prior to this event. *Psychological First Aid: Field Operations Guide* is an evidence-based modular approach used by first responders and disaster relief personnel in the aftermath of a disaster, and offers valuable tools for those faced with a disaster. There is also a downloadable app version.

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