Keep Calm and Carry On: A Training Model for Integrated Disaster Response for Cultural Collections

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CAS Project

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Abstract

Disaster planning in cultural institutions is an important area of collections management that is often overlooked, but vital to the continued operations of an institution when an emergency strikes. Current planning literature emphasizes the need for establishing cooperative networks between cultural institutions and emergency personnel, and standardized response structures for dealing with large scale disasters, such as tornados, floods, and hurricanes. Large institutions, such as the Smithsonian Institution (SI) and the University of Illinois at Urbana-Champaign (UIUC), are evaluating their current collection response plans and training methods to develop a comprehensively integrated response strategy. This strategy will ensure the long-term preservation of their library, archives, and museum collections in the event of a large-scale disaster. A significant first step for the development of integrated disaster response strategies is training all stakeholders in the use of the Federal Emergency Management Agency’s (FEMA) Incident Command System (ICS). The Incident Command System is a flexible, all hazards response structure that is utilized by first responders, government agencies, and private organizations like the Salvation Army and Red Cross. As part of the efforts to develop an integrated disaster response at the University of Illinois at Urbana-Champaign, I created and implemented three workshops for local public library employees, university students studying library, museum, and archives courses, and the general public. The workshops included an introduction to the Incident Command System, salvage techniques for collections, and vital records protection. These workshops explore the different strategic ways collections repositories should respond to large-scale disasters. They can serve as a training model for other large and small institutions seeking to create new disaster response strategies.
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Introduction: “Keep Calm and Carry On”

The phrase “Keep Calm and Carry On” was introduced on a propaganda poster produced by the British Ministry of Information at the start of WWII. It was meant to boost morale in a time of chaos and uncertainty. Whether it provided British citizens with a sense of security or not, the poster begs the question: “How exactly does one carry on during a time of emergency, when hidden dangers lurk everywhere and normal operations are turned upside down?” For professionals in libraries, museums, and archives who must protect human life and collections during an emergency, this question is addressed with thoughtful preparedness, mitigation, and response to different types of disasters, natural and man-made.

The 2005 publication, A Public Trust at Risk: The Heritage Health Index Report on the State of America’s Collections was the first survey of its kind to extensively evaluate all aspects of preservation, including conservation, budgeting, security and disaster planning for a variety of cultural institutions throughout the United States. The survey concluded that 80% of the collecting institutions evaluated either lack a disaster plan or had a plan, but did not train their staff to implement it in the event of a disaster.\(^1\) The authors of the survey indicated that smaller and non-profit organizations were more likely to lack a response plan and fail to train their staff. Because the task of planning and conducting staff training is more likely to fall on the shoulders of a single individual in smaller institutions, it was more likely be put off indefinitely or until a disaster occurred. However, larger collecting institutions also suffer from the similar constraints –

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i.e. lack of funding, knowledgeable staff and expertise, and administrative investment. It is easy to understand why many institutions may choose not to plan for disasters, because expending time and resources planning for an event one hopes will never occur is a hard sell both to administrators and overworked staff. However, if one looks at the impact large scale disasters have had on cultural institutions throughout the United States over the past decade, such strategic planning becomes increasingly relevant to cultural institutions.

Natural disasters, such as Hurricane Katrina (2005), have brought renewed attention to the need for disaster response planning and training for both small and large scale emergencies. A water pipe leak in a library, museum, or archives could cause extensive damage to collections if staff are unprepared. For that same unprepared institution, the damage caused by a tornado or earthquake could prove insurmountable. Even well prepared institutions can be faced with significant response challenges. In 2004 a category 5 hurricane hit the Cayman Islands. The Cayman Island National Archives (CINA) had hurricane response protocols in place, and had trained its staff for such events on a regular basis. However, the ensuing tidal wave nearly destroyed the entire island, and CINA encountered issues that it could not handle at an institutional level. Roger Craig of CINA wrote, “It was impossible to get simple supplies like timber to make drying racks due to the island wide destruction, and there was no likelihood of fresh supplies as cargo was restricted to essential supplies. For example, CINA had organized with the UK Hydrographic Office for a vacuum packer to be flown out during the first week after the storm, but unfortunately it took many weeks to arrive
on island and only then via a very large diplomatic bag." Cultural institutions trying to navigate a similarly catastrophic event on their own would quickly be overwhelmed, like CINA.

The challenge facing cultural institutions is not simply the need to create plans and train staff to respond to small, localized emergencies such as building-wide events, but also to prepare to work collaboratively with emergency first responders should a wide-spread disaster occur. Very simply put, during a large disaster cultural collections will not be the top concern of first responders. Using the Federal Emergency Management Agency’s (FEMA) Incident Command System (ICS), a standardized response system utilized by police, firefighters, government agencies, and the military, increases the likelihood of a safe and effective response: “Your highest priority – to salvage your collections – will not be their highest priority, but your chances of getting their assistance at the appropriate time is greatly increased if you understand their priorities, speak their language, and know how to work within their standardized system. In other words: if you know the Incident Command System.” This project evaluates and applies the Federal Emergency Management Agency’s Incident Command System to develop integrated disaster response planning and training for both large and small cultural repositories. The resulting workshops produced for this project can serve as a training model for other cultural institutions looking to prepare for area-wide emergencies.

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Literature Review: A New Focus on Integrated Disaster Response for Collections

Recent disaster planning literature for archives, libraries, and museums examines the way collaborative emergency planning and response should be used to prepare for large scale disasters. A collaborative or integrated approach to disaster response builds upon the foundation of traditional disaster preparedness in cultural institutions, and the key to an efficient response is good communication. Within an institution, this means keeping all staff aware of plans and training. Communication with suppliers, patrons, the media, and the general public is also necessary. In short, the “The foundation of successful disaster preparedness is built upon efficient communications between all actors, which is especially critical in the event of a cataclysmic natural disaster that overwhelms intra-institutional response and recovery infrastructure.”

Good communication requires the distribution of timely, accurate, and appropriate information, to all relevant responders, as well as to the general public. For example, the public does not need to know the monetary value of destruction to your collections, but they should be advised that donations of time, money, and supplies may be welcome. Good communication also utilizes common terminology, so that all responders can understand and participant in the discussion. This means eliminating jargon. One of the most important effects of good communication in an emergency is stress reduction. Poor communication will only increase the pressure on all responders.

to work together effectively, while efficient communication systems can alleviate such pressure.\(^5\)

Collaborative arrangements and organizational response structures facilitate good communication between institutions and emergency responders, and ensure a safe and effective disaster response for both people and collections. The goals of any support network are to manage strategic, collaborative, and cooperative activities, and to implement resource development and dissemination. Support networks also provide advice, support, information, networking and training, as well as service in the event of a disaster. Such networks can only be useful if formed well in advance of any disaster.\(^6\) Also, all member institutions of these networks must have completed their own disaster plan and trained their staff at the institutional level.

Examples of collaborative arrangements between museums, archives, and libraries can be found in the United States and abroad, and range from the well-established to the experimental. In the UK, the East Midlands Museums Service’s (EmmS) Regional Emergencies and Disaster Squad (REDS) was created to assist museums, libraries, and archives during times of emergencies. In the United States, notable examples of cooperative networks and tools include the Alliance for Response forums sponsored by Heritage Preservation, and COSTEP, managed by the Northeast Document Conservation Center and funded by the Institute of Museum and Library Services. The American Institute for Conservation (AIC) has also developed a training program for conservation professionals in emergency response. Those who complete

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the training become part of the AIC Collections Emergency Response Team (AIC-CERT), which can be deployed all over the country to assist cultural institutions in the event of large emergencies. AIC-CERT has already assisted museums and historic sites affected by the 2008 flooding in Iowa, as well as cultural institutions impacted by Hurricane Ike in Texas that same year.⁷

A significant aspect of the AIC training program is that conservators are introduced to FEMA’s Incident Command System. The Incident Command System is “a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to enable effective and efficient domestic incident management.”⁸ This is the response structure used by first responders, the military, and private organizations, like the Red Cross, and it was designed to be used by a variety of institutions, for all types and sizes of emergencies.

The Incident Command System utilizes several principles that ensure a smoother, coordinated response. These principles include: chain of command and unity of command; the utilization of common terminology; unified command; span of control; and modular command. Chain of command and unity of command denotes that responders have only one supervisor, to whom he or she reports to and from whom he or she receives instructions. The use of common terminology refers to the elimination of jargon that can confuse communications between agencies that typically use their own

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distinct terminology. Unified command means that all incident commanders from responding agencies will work together to define common goals and priorities. It also “allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability.” Manageable span of control means that no supervisor will have more than 7 or less than 3 resources under their control, and the modular organization of ICS means that the response structure can expand or contract depending on incident complexity and scale. The Incident Commander delegates duties to other ICS sections as needed.

The structure of the ICS is organized to support the needs and goals of the Incident Commander. The Command Staff consists of the Public Information Officer, who deals with media relations, the Safety Officer, who addresses the safety needs of responders, and the Liaison Officer, the officer that serves as a representative to other responding agencies. The Sections are the organizational levels having functional responsibility for the primary segments of incident management (Operations, Planning, Logistics, and Finance/Administration). The Operations Section carries out the Incident Commander’s plan, while Logistics provides supplies and transportation. The Planning section collects, evaluates, and disseminates information, and Finance/Administration manages the financial aspects of the response. Each Section has various resources, such as strike teams, available to them to assist in the management of the incident (see Figure 1.) The principles and structure of ICS ensure that during a large scale disaster,

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9 FEMA Incident Command System Training: http://training.fema.gov/IS/NIMS.asp
response is coordinated, integrated, and standardized among all responding agencies, departments, and institutions.

Figure 1. Incident Command System organizational chart.

In her article “Developing Statewide Emergency and Disaster Preparedness Expertise,” author Stephanie Watkins advocates for utilizing FEMA’s training courses for emergency response in cultural institutions. This training would not only involve institution staff, but bring in local emergency workers. Watkins states that “While emergency personnel are familiar with the language and concepts of preparedness and recovery, they are unfamiliar with conservation and preservation procedures developed
to safeguard valuable materials before and during recovery efforts."

Therefore archives, libraries, and museums must create open communication with local emergency response teams to make sure that everyone involved in a disaster response understands the unique preservation recovery needs for the effective disaster management for collections. ICS is a standardized structure used in various types of agencies and departments throughout the country, which makes it a logical choice for organizing collections response teams. Adapting already existing collections response team organizations into the ICS framework is well worth the time, as it ensures that every institution’s response team is easily recognizable to other cultural institutions, as well as to police and fire departments. Using a standardized response organization makes integrated response smoother, safer, and more efficient.

David W. Carmicheal has dedicated an entire book to the adoption of the Incident Command System in cultural institutions. In *Implementing the Incident Command System at the Institutional Level: A Handbook for Libraries, Archives, Museums, and other Cultural Institutions*, Carmicheal encourages readers to take the three hour ICS training course available at [http://emilms.fema.gov/IS100b/index.html](http://emilms.fema.gov/IS100b/index.html), in addition to using the book to apply ICS to collections response teams. Though ICS terminology and structure may at first be alien to professionals working in cultural institutions, Carmicheal emphasizes that the energy it takes to learn the system is a worthwhile endeavor. Carmicheal advises that institutions utilize the ICS when conducting training, such as drills and table top exercises, whenever a minor in-house emergency occurs.

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and when planning for large scale events, such as conferences and exhibit openings. Practicing with ICS is the best way to ensure that all staff are familiar with the system and can successfully implement it in the event of a wide-spread emergency.¹¹

Utilizing the ICS organization for emergency response in cultural institutions includes forming strike teams under the Operations Section to carry out the physical salvage, packing, and drying of collections affected by the disaster. For example, two strike teams may be created: Team 1, Identification and Retrieval Team; Team 2, Packing and Drying Team. The Identification and Retrieval Team identifies and records affected material and transports it to the drying area. The Packing and Drying Team makes decisions about drying and freezing, and then implements these decisions. These teams carry out techniques used by all cultural institutions to salvage collections that have gotten wet, but they are doing so within the ICS structure, making their response organization immediately recognizable to other responders utilizing the Incident Command System.

In addition to communicating with police and firefighting agencies, cultural institutions must create strategies for good communication with the general public. Keeping the public and staff informed about the organization’s disaster recovery by someone with media training will prevent rumors and panic from spreading during an emergency. In many wide spread emergencies, the public may also seek from these same institutions information on salvaging their personal collections. In 1993, the Midwestern United States experienced extensive flooding. People affected by the

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¹¹ I recommend that disaster planning and response exercises take place in table top form once month, with larger scenario and salvage exercises one to two times a year.
flooding were in need of information on how to preserve their important family papers and heirlooms. Although some institutions, like the American Institute for Conservation, tried to provide accurate information to the public, one library told citizens to put cornstarch in their wet books.\textsuperscript{12} Cultural institutions also provide the public access to important Federal Emergency Management Agency forms, which people need to access in order to receive emergency funding.\textsuperscript{13}

Recent disaster management literature for cultural institutions suggests several ways to implement good communication during an emergency response. During a large disaster, traditional means of communication (landlines, cellphones, etc…) may be out of service. This means that there must be a degree of flexibility in methods of communication: “While a well-designed disaster plan serves as a framework, it often requires communication and collaboration between responders to adapt to the situation at hand. Displacement of library staff adds to the chaotic nature of post-disaster communications, increasing the need for collaborative Web spaces to adapt to changing situation.”\textsuperscript{14} The use of such web 2.0 applications as Google Documents and Google Talk creates redundant communication channels that can be accessed from remote locations. Auburn University Libraries have already adopted free Web 2.0 technologies in support of library disaster planning and response. However, these technologies have yet to be tested in a real disaster, and it remains to be seen if Web 2.0 applications will be useful tools for disaster preparedness and response in the future.

\textsuperscript{12} Watkins, 166. The cornstarch and water created a thick, gluey substance that consequently cemented books together.


\textsuperscript{14} Schmidt, 413.
The protection of vital records is also essential to ensuring that accurate and timely information needed for response and recovery are available to disaster responders. Vital records are “…the recorded information that is essential for the continuation or reconstruction of an agency. These records are important in establishing the legal and financial position of the agency and/or those important in preserving the rights of an agency, its employees or clients.” Vital records for cultural institutions would include catalogs, finding aids, shelf lists, and disaster planning documents. Disaster planning documents contain critical information, such as phone trees, response team duties, supply locations, and salvage priorities lists. These records are essential for the response and recovery of an institution after an emergency and provide the accurate information needed to restore an institution to normal operations. Vital records protection requires the duplication and dispersal of copies to off-site storage to ensure the survival of essential information contained within the documents.

In response to Hurricanes Katrina and Rita (2005), and the flooding in Washington, DC in the summer of 2006, the National Archives and Records Administration (NARA) developed strategies for assisting in the protection of vital records in government, private, and cultural institutions in the United States. According to Allen Weinstein (Archivist of the United States, 2005-2008) NARA should act as “First Preserver”, providing advice to government agencies and public institutions about disaster planning before a disaster strikes, as well as assisting with vital records

16 The same Heritage Health Index that brought to light the lack of disaster plans and training revealed that only 26% of collecting institutions are sufficiently prepared with copies of all vital records store off-site.
protection during and after emergencies. Examples of this assistance include NARA’s Records Emergency portal, located at http://www.archives.gov/preservation/records-emergency/, and numerous training opportunities in records management, including “Asset and Risk Management”, and “Emergency Planning and Response for Vital Records and Essential Information.”

Preparing for Integrated Disaster Response in Urbana-Champaign: Developing Training for Stakeholders

In the summer of 2011, I interned at the Smithsonian Institution Archives. My internship initiated the start of my Certificate of Advanced Study project, with a focus on integrated disaster response for institutions like the SI and the UIUC. These two institutions are similar in that they preserve a wide variety of collections of enduring value, ranging from biological specimens to artifacts and paper archives. A large disaster, such as a tornado or earthquake in Washington, DC or in Urbana-Champaign would affect the entire institution, and require multiple emergency agencies to respond. Both the SI and the UIUC have made initial steps in preparing for integrated disaster response – the Smithsonian with the development of a working group on pan-institutional disaster planning, and the UIUC with training exercises to be carried out with campus safety in the fall of 2012. However, neither institution currently has a comprehensive integrated emergency response plan that addresses the needs of both people and collections during a wide-spread disaster.

While at the SI I analyzed the Smithsonian Institution Archives’ disaster plan, which addresses the needs of both people and collections, as well as the master disaster plan for the entire Smithsonian Institution, which only addresses life safety issues. The Smithsonian Office of Protective Services organizes its emergency response teams using FEMA’s Incident Command System (ICS). It was clear that basic knowledge of ICS would benefit employees responsible for the emergency planning for their museums or units within the SI. Collections Care Manager, Sarah Stauderman, Paper Conservator, Nora Lockshin, and I completed FEMA’s online Incident Command System training in order to gain a full understanding of the ICS structure and principles.

Research into disaster management literature conducted at the SI also revealed the importance of continued training for staff in disaster response because, “Disaster responders for cultural property typically become involved in recoveries on an ad hoc basis without previously receiving formal technical training.” Training is the cornerstone of good disaster management in all sectors of business and government, not just in cultural institutions. Many institutions may feel that the time and resources needed to train in house are too great a cost, but training in disaster response reduces stress and increases efficiency. For institutions responding to disasters affecting collections, training responders in proper salvage techniques and safety procedures will improve the chances of successfully salvaging library, museum, and archives materials.

The Smithsonian Institution was an excellent testing ground for conducting a workshop for collections care professionals in both traditional salvage methods and in


19 Paton, 261.
FEMA’s Incident Command System. Training in salvage methods ensures that institution response teams conduct appropriate drying and freezing techniques on collections. Training the same responders to organize themselves using the ICS standardized structure means that they can collaborate with other responding agencies, including police, firefighters, and other cultural institutions. Therefore, as the capstone project of my internship, I decided to combine salvage training with the Incident Command System to produce a workshop that would be useful for immediate response needs of cultural institutions. This workshop would contribute to the Smithsonian Institution’s long-term goal of integrated disaster response by familiarizing collections professionals with the ICS.

The workshop I developed under the supervision of Sarah Stauderman was titled “Don’t Panic! An Archivist’s Guide to Emergency Response,” and took place on July 26 from 9:00am- 4:00pm. The workshop included a lecture section, a table top discussion, and a hands-on exercise with wet material. The workshop included archivists, conservators, and interns. The training began with a brief introduction to four main aspects of emergency management: preparedness, mitigation, response, and recovery. Then, guest speaker Lisa Young, conservator from the National Air and Space Museum (NASM), spoke about the 2010 emergency response to the collapse of a building that housed NASM collections. The dramatic images of their response set the tone for the workshop and emphasized the reality that disasters do strike the SI.

I continued the lecture section of the workshop with a discussion of the Incident Command System and how to apply its structure to collections response teams. For example, a collections response team would work under the operations section of the
ICS. This team would be in charge of the salvage and packing of wet materials. I finished the lecture with an overview of specific salvage techniques for wet books, documents, photographs, and other types of media.

The second half of the workshop began with a table top exercise – having the participants talk out an action plan for the response. I found attendees reluctant to participate in the discussion; so, in future workshops I developed extra questions and comments that I could utilize to keep participants on the task of developing response strategies. Attendees then moved into the Smithsonian Institution Archives’ conservation lab to conduct salvage of actual wet materials. I had previously set up different types of materials in a sink, and wet them to various degrees. Participants were organized using the ICS and were required to adhere to ICS principles, such as chain of command. Their salvage techniques were not perfect, but the purpose of the exercise was to give a sense of how to work in a team and to practice working with wet materials.

Figure 2. Participants at the Smithsonian Institution Archives workshop, “Don’t Panic! An Archivist’s Guide to Emergency Response,” discussing air drying techniques.
As part of the workshop I included 6 handouts: Disaster Response Supplies/Equipment; ICS Organization chart; Salvage Priorities by Material (from SIA Disaster Plan); Salvage Techniques; Salvage at a Glance (adapted from “Salvage at a Glance” by Betty Walsh; Drying Options, and a bibliography. Each handout was listed at the beginning of the workshop packet. The workshop participants went home with these supplementary materials and copies of the PowerPoint slides. A workshop evaluation form was given to all participants at the conclusion of the workshop, and all participants indicated that they had learned skills that would be useful to them in the event of an emergency. FEMA’s Incident Command System still proved difficult for some participants to understand and I used the comments on the forms to refine the workshops I developed at UIUC in the spring of 2012.

Upon my return to the University of Illinois at Urbana-Champaign in the fall of 2011, I began to work with the various preservation professionals on campus and in the community to identify possible ways my CAS project could help the campus move forward with the introduction of integrated disaster preparedness. The UIUC established a centralized library preservation program in 2001 and since has made great progress in the development of preservation policies for brittle books, reformatting and digitization, environmental control, and disaster planning and training. At the University, almost each library unit and museum has a disaster plan for collections, and preservation and conservation staff are periodically trained in disaster response and recovery techniques. In this regard, the UIUC campus is well ahead of most institutions in terms of disaster preparedness for cultural heritage collections.
The university is also home to the Preservation Working Group, a committee formed of preservation professionals and administrative staff who are interested in promoting preservation awareness for collections on campus. Since the fall of 2011, I have been attending Preservation Working Group meetings to attempt to identify any gaps in disaster preparedness and training on campus and in the local community. I also discussed the idea of identifying groups with collections in need of response training with Ellen D. Swain, Archivist for Student Life and Culture, and Anke Voss, Archivist for the Champaign County Historical Archives.

Although the University has done an excellent job of promoting disaster preparedness for collections, there were four specific groups on campus and in the community that I identified as lacking in disaster preparedness and response training. These original groups were identified with the help of the Preservation Working Group, Ellen Swain, and Anke Voss. The groups were the Graduate School of Library and Information Science (GSLIS) and museum studies students, Greek houses, local public library employees, and members of the general public with personal collections and heirlooms. Using the workshop and research I had conducted at the SI, I planned to develop four distinct workshops for these groups, and implement these workshops in March and April of 2012. These workshops included an overview of the Incident Command System, salvage techniques, protecting vital records, and the use of Web 2.0 technology to help organize emergency response. In addition to these workshops, I also gave a lecture on using the Incident Command System at the April 18 disaster workshop in Tuscola, IL, conducted as part of the Connecting to Collections statewide
implementation grant, which was attended by library and museum staff from central Illinois.

The first group identified with the need for in disaster response training was GSLIS students and museum studies students on the UIUC campus. Though students may be given a brief introduction to the importance of disaster preparedness in some of their classes, such as LIS582, Preserving Information Resources, these students do not receive any hands on training that is so vital for developing a thorough understanding of effective response and recovery. As these students graduate, there will be an expectation from employers that they be capable of being leaders and exacting change in the organizations they join. Being trained in the most up to date disaster response techniques is one way students can become positive additions to cultural institutions that hire them. When developing my workshops for UIUC, I took Stephanie Watkins advice on response training: “To develop a preparedness plan or training program, first define the needs and expectations of the group. Next, identify the resources within the community. Use published accounts and guides available through the library, internet, or World Wide Web as references.”

Through discussions with the Student Chapter of the Society of American Archivists, I determined that students required a general introduction to writing a disaster plan, as well as how to utilize ICS and salvage techniques for an effective response team. A table top exercise to get the students discussing possible response tactics was also included. The Student Chapter sponsored the workshop, and marketing was done through library school and library listservs, as well as through networking with museum employees at the Spurlock

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20 Watkins, 171.
Museum on campus. Flyers were also posted in the Library School building. Christa Deacy-Quinn, Collections Manager at the Spurlock Museum, served as a guest speaker to discuss her own experiences responding to emergencies on the UIUC campus.

The second group that I identified as needing training in emergency response and recovery was local public library employees and volunteers. For example, Urbana Free Library has an emergency plan, but has never trained its staff to implement the plan. Anke Voss, Archivist for the Champaign County Historical Archives, agreed to host a workshop for local public library employees from central Illinois at the Urbana Free Library. The three hour workshop focused on the Incident Command System and basic salvage techniques for typical library materials that can be used in a water emergency response. The workshop ended with a table top exercise that provided a disaster scenario and required participants to discuss their response strategies. The workshop was held twice in order to give libraries the ability to ensure all employees could participate. Marketing for this workshop was done with the help of Urbana Free Library and was advertised on the Illinois Heartland Library System (IHLS) calendar and listserv. Individual emails were also sent out to local libraries and included a flyer with all relevant workshop information. As a result of marketing done through IHLS, I received an invitation to present my workshop at the Danville Public Library in Danville, IL.

Another group that was originally targeted for a workshop was the UIUC Greek houses. In the event of an emergency, the collections housed in these organizations would not be covered under the campus’s contract with BMS Cat, a disaster recovery service. Therefore, these objects are at risk from disasters, as well as poor storage due to the lack of preservation knowledge of the students that care for them. My plan was to
create a seminar in conjunction with Ellen Swain, Archivist for Student Life and Culture at UIUC, on general collections care and emergency preparedness for Greek houses that hold collections. This seminar would be tailored to the needs of this audience, focusing on easy tips for general care, ways to mitigate disasters, and how to organize a team to recover items if an emergency occurs. Networking and marketing would be done with the help of Ashley Dye (the Assistant Dean of Students for Fraternity and Sorority) and also Greek alumni who are the ones that own the Greek houses. Unfortunately, this workshop could not be scheduled because of the conflicting schedules with several workshop partners.

The last group I identified as being in need of assistance in the area of disaster management for collections was the general public, especially people who may not be able to afford the expensive archival supplies to preserve and salvage their family heirlooms and personal collections. A two hour workshop was held at the Champaign Public Library, which addressed the basic preservation needs of personal collections, using simple tips, and no or low cost solutions. Topics for this workshop included where and how to store heirlooms to avoid water damage, how to salvage items with water damage, scanning and digitizing, and what resources to contact if something happens to their important family items. I advertised the event with flyers at the Urbana Free Library, Champaign Public Library, and Douglass branch library, and with posts to online community calendars. Marketing was also done with the help of eBlackCU director Noah Lenstra, who has working relationships with black churches throughout Urbana-Champaign. Noah Lenstra also was the guest speaker for the scanning and
protecting digital files portion of the workshop. Flyers were also hung in the local life-
long learning center, hoping to target older people with family heirlooms.

Preparing for Integrated Disaster Response in Urbana-Champaign: Training
Outcomes and Practical Suggestions

Final Workshops:

- “Don’t Panic! Responding to Disasters in a Public Library” Urbana Free
  Library, Urbana IL, March 23 and 28, 2012, 1-4pm. Repeat event for entire
  staff of Danville Public Library, Danville, IL, April 2, 2012 9-12pm.
  Presented to local public library employees.

- “Disaster Response in Cultural Institutions: A workshop for library,
  archives, and museum students” Graduate School of Library and
  Information Science at Urbana-Champaign, March 30, 2012, 1-4pm.
  Presented to UIUC students.

- “Learning to Care for Your Family’s Collection” Champaign Public Library,
  Champaign, IL, April 11, 2012, 6-8pm. Presented to the general public.

- “When Water Emergencies Strike Your Collections: Response Training
  And Workshop”, An Illinois Collections Preservation Network (Icpn)
  Workshop, Douglas County Museum, Tuscola, Wednesday, April 18,
  2012: Incident Command System Speaker

When planning each workshop, it was essential to tap into existing preservation
and collections networks, and to collaborate with archives, library, and museum
professionals. Marketing was done with the help of these networks and professionals,
such as Noah Lenstra and Anke Voss, as they were more familiar with the needs of
their constituents, and had the existing communication tools to advertise the workshops.
Most of the workshops proceeded as originally planned, with the exception of the workshop for Greek houses. In that case, the partnering professional was dedicated to other projects that eventually made developing a workshop impossible within the time constraints of the CAS project.

One of the most difficult aspects of developing and implementing these workshops was the marketing of the training to the targeted audience. The marketing for the workshop for students was highly successful, with 25 participants attending, including some staff members who asked if they could attend. The workshops for public library employees held at the Urbana Free Library had only five participants for each of the March 23 and March 28 workshops, but advertising through the Illinois Heartland Library System brought an invitation from the director of the Danville Public Library to give the workshop at their employee development day. As a result, this workshop was presented to the entire library staff on April 2, a totally unexpected, but welcome outcome of the marketing process. The least successful marketing program occurred for the workshop for the general public, which resulted in only three attendees. Flyers at the Osher Lifelong Learning Institute resulted in two of the three participants. However, the marketing to the black community through church contacts and eBlackCU connections was not successful. The biggest problem with marketing failures is that one often doesn’t know why the marketing didn’t work. In this way, advertising for workshops is often done by trial and error. One must use their best judgment to tap into already existing networks one thinks are most likely to attract participants.

Conducting these workshops was as much of a learning experience for me as for the attendees. Having participants fill out workshop surveys was an effective way to get
feedback about the workshop material and how it was presented. Throughout the workshops, I constantly changed slides, adjusted the amount of time spent on certain topics, and even modified my own presentation skills, in response to participant survey answers. For example, at the UIUC student workshop presented on March 31, some survey respondents indicated that they would have preferred to have air drying techniques demonstrated to them, rather than presented in lecture style. They also thought a hands-on wet salvage exercise would have been helpful. While a salvage exercise was out of my budget, I did note the request that salvage instruction be more visual. Consequently, at the general public workshop on April 11, I brought a “home salvage kit” I had collected from supplies around my house. I then demonstrated how to use these common household supplies to salvage wet family heirlooms (see Figure 3).

Many participants in the workshop “Disaster Response in Cultural Institutions: A workshop for library, archives, and museum students” indicated that the table top exercise was a useful component of their training. One attendee said that “talking through an emergency was more complicated than talking about one.” This may reflect the fact that the attendees’ previous exposure to disaster response in cultural institutions was limited to lecture and readings, with little opportunity for discussion and hands-on exercises. Two participants in the March 28 workshop, “Don’t Panic! Responding to Disasters in a Public Library,” responded on the evaluation form that they would have preferred to be given more handouts, such as a breakdown
of the salvage teams and their responsibilities within the ICS organization. As a result, I offered to email attendees my slides, which included this information. There are hundreds of resources for disaster management in cultural institutions available on the internet. However, few library, archives, and museum professionals have time to review all of these resources. Therefore, offering a few succinct handouts, as well as copies of workshop slides, makes the task of identifying information relevant to an institution’s needs easier for collections care professionals.

Another recommendation when developing and implementing disaster response workshops is to include guest speakers. At the UIUC student workshop I invited Collections Manager for the Spurlock Museum, Christa Deacy-Quinn to speak. There
were several reasons for my choosing this speaker. As my target audience was library, archives, and museum students, I thought including a museum professional would emphasize to attendees that disaster response is important in all types of cultural institutions. Also, Christa Deacy-Quinn is a dynamic speaker and has many experiences responding to different types of emergencies, including sewage backups and pest swarms. Including local emergencies made the discussion about the need to train for disaster response more relevant to the attendees. Choosing guest speakers that have expertise in areas that you do not can also be helpful. For the general public workshop, GSLIS PhD student Noah Lenstra spoke about ways to preserve family heritage using digital technology. Having someone who is an expert in the field speak about a particular aspect of disaster response helps lend credibility to the workshop.

Figure 4. Speaker Christa Deacy-Quinn at “Disaster Response in Cultural Institutions: A workshop for library, archives, and museum students” Graduate School of Library and Information Science at Urbana-Champaign, March 30, 2012.
One of the main lessons learned in producing these workshops is that despite the current literature, and recent large scale disasters that have affected cultural institutions, FEMA’s Incident Command System is still a hard sell to some library, archives, and museums personnel, perhaps because learning the structure does take time and dedication. When conducting a workshop for collections care professionals on the Incident Command System, it is very important to stress why ICS is relevant to disaster response for collections. Stephanie Watkins puts it best when she says, “‘‘Using an established training model from a profession versed in emergency response provides a standardized language and approach. The interaction that training can provide fosters communication among professionals to achieve common goals such as reducing damage and providing safe, fast recovery of endangered life and property.’’”

At the Tuscola workshop on April 18, I asked participants to look at the handout of a typical emergency collections response team, and then pointed out how each role fit into a position in the Incident Command System model.

Even with such a logical argument in support of adapting the ICS model for collections response teams, at least one participant who attended the April 18 Tuscola workshop indicated on the post workshop survey that the Incident Command System was the least useful part of the workshop. However, one participant responded that the ICS portion was the most useful, indicating that the differing needs of attendees significantly affected their perception of the usefulness of the ICS. When planning workshops focusing on using ICS to organize collections response, it may be helpful to invite a first responder to speak about their utilization of the Incident Command System

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21 Watkins, 171
during a disaster, and how the job of coordinating their work with cultural institutions is made simpler if all responders are organized via ICS. I plan to utilize this technique in future workshops, to see if including someone, like a firefighter, who uses ICS on a regular basis will encourage collections care professionals to adopt the Incident Command System as the organizational structure for their institution’s disaster response. The bottom line is that when training collections staff to use the Incident Command System, lectures must be made as accessible, fun, and relevant to the needs of collecting institutions as possible.

Figure 5. Jessica Lapinsky giving an introduction to the Incident Command System at “When Water Emergencies Strike Your Collections: Response Training and Workshop”, An Illinois Collections Preservation Network (Icpn) Workshop, Douglas County Museum, Tuscola, Wednesday, April 18.

Even though the ICS is a logical and effective response structure, it still takes time and energy to learn its principles and terminology. At this point in time, a few professionals may feel that such a task is too overwhelming given the budgeting and
time constraints that today’s libraries, archives, and museums frequently face. However: “Disseminating preparedness information can be more cost-effective and can better utilize available resources than a cleanup and recovery program. Pre-emergency and disaster awareness and training help safe guard and protect important documents for the future by identifying correctable but potentially damaging situations and providing the knowledge for safe recovery of materials.” Including ICS training in traditional disaster response workshops for cultural institutions will gradually introduce collections professionals to the world of ICS, and underline the need for integrated response when wide-spread emergencies strike.

Conclusion

In-house training need not take a large amount of money, or require an outside expert to conduct the training. However, training should be systematic and take place on a regular basis. For example, short table top exercises can be conducted at the end of each staff meeting. These exercises should cover a wide variety of topics, such as theft, water emergencies, shelter in place alerts, etc… to keep staff interested and to provide a thorough overview of the types of emergencies staff may be required to respond to in cultural institutions. Longer table top scenarios, workshops, or salvage exercises that require staff to organize into response teams based on the Incident Command System should take place at least once a year. Also, larger day long exercises that include local first responders need to be done every two to three years.

22 Watkins, 170.
To help ensure that training is not ignored, professionals in charge of disaster management in cultural institutions should create a disaster preparedness maintenance plan and stick to it.

Failing to plan and train for disasters could result in the loss of an institution’s entire collection, should a large scale disaster occur. Training for integrated disaster response may feel like a daunting task. However, there is a wealth of literature and resources, largely available on the internet, which can help one find a starting point. Workshop materials on the web, while growing in availability, are still scarce in comparison to other types of disaster planning material. It is hoped that the resources created and utilized for this CAS project can be helpful to both large and small cultural institutions looking to train their own employees in integrated disaster response. This project is available to the public at the UIUC’s digital repository IDEALS, which provides stable and reliable access to its scholarly content. My final recommendations to those in charge of disaster planning and response in cultural institution is to be proactive, start small, and use free resources like these workshops as guidelines. Utilize the Incident Command System to develop response teams and begin thinking now about integrated disaster response before “the big one” hits.
Bibliography


http://www.heritagepreservation.org/hhi/


http://www.documents.dgs.ca.gov/osp/calrim/DisasterHndbk12-03.pdf


WEBSITES

California Preservation Program: http://calpreservation.org/index.html

Conservation Center for Art and Historic Artifacts: www.ccaha.org

Conservation OnLine: cool.conservation-us.org/

Council of State Archivist, Pocket Response Plan:
http://www.statearchivists.org/prepare/framework/prep.htm

FEMA Incident Command System Training: http://training.fema.gov/IS/NIMS.asp

Heritage Preservation/ Heritage Emergency National Task Force:
www.heritagepreservation.org/


Northeast Document Conservation Center: www.nedcc.org
Don’t Panic! Responding to Disasters in a Public Library

**Date:** Choice of Friday, March 23, 1:00-4:00pm or Wednesday, March 28, 1:00-4:00pm

**Location:** Urbana Free Library, the Lewis Auditorium (Ground Floor),
http://www.urbanafreelibrary.org/

**Description:** Rehearsing for disasters is an important and fun way to be better prepared for the unexpected when it strikes your institution. “Don’t Panic! Responding to Disasters in a Public Library” is a free disaster response workshop based on a workshop created by GSLIS student Jessica Lapinsky for the Smithsonian Institution. This three-hour workshop covers the basics of how to respond to emergencies affecting public library collections, with an emphasis on using FEMA's Incident Command System to organize a safe and efficient response team. Topics covered include: the most common disasters affecting public libraries, some simple salvage techniques for library material, vital records, and the importance of team work. The workshop ends with a mock disaster table top exercise.

**Who Should Attend:** Open to all local library employees, no prior knowledge of disaster management required. Participants have two dates to choose from.

**Workshop Instructor:** Jessica Lapinsky is a student at the Graduate School of Library and Information Studies at the University of Illinois. She holds an M.S.I.S from the University at SUNY Albany, and is currently pursuing a Certificate of Advanced Studies in Preservation Administration in Archives and Special Collections. This workshop is based in part on research and a workshop created and implemented by Ms. Lapinsky at the Smithsonian Institution Archives, where she was an intern this past summer.

**Registration:** Registration required. Email instructor Jessica Lapinsky at jessicalapinsky@gmail.com to register and for additional information about this workshop.

**Sponsored by**

Preservation Working Group at the University of Illinois

Graduate School of Library and Information Science
The iSchool at Illinois

University of Illinois at Urbana-Champaign
Disaster Response in Cultural Institutions: A workshop for library, archives, and museums

Add a new and attractive skill to your resume by learning how to develop a collections disaster plan and form a response team!

Be the new employee that can start disaster preparedness at your institution, whether it is a library, archives, or museum.

This three-hour workshop covers some common emergencies that affect cultural institutions, what you need know to create a disaster plan, and how to form a disaster response team based on FEMA’s Incident Command System model.

With guest speaker Christa Deacy-Quinn, Collections Manager at Spurlock Museum.

Date: Saturday, March 31, 1:00pm-4:00pm

Location: LIS building, Room 126

Instructor: GSLIS CAS student Jessica Lapinsky

Registration: Please email Jessica Lapinsky at jessicalapinsky@gmail.com to register or for more information

Sponsored by the UIUC SAA Student Chapter
Disaster Response in Cultural Institutions:
A workshop for library, archives, and museum students

**Date:** Saturday, March 31, 1:00pm-4:00pm

**Location:** LIS building, Room 126

**Description:** Disasters and emergencies affect cultural institutions every day, yet according to the Heritage Health Index, 80% of U.S. collecting institutions do not have a written disaster plan that includes collections with staff trained to carry it out. Add a new and attractive skill to your resume by learning how to develop a collections disaster plan and form a response team! Be the new employee that can start disaster preparedness at your institution, whether it is a library, archives, or museum. This three-hour workshop covers some common emergencies that affect cultural institutions, what you need know to create a disaster plan, and how to form a disaster response team based on FEMA’s Incident Command System model. With guest speaker Christa Deacy-Quinn, Collections Manager at Spurlock Museum.

**Who Should Attend:** Open to all students

**Workshop Instructor:** Jessica Lapinsky is a student at GSLIS. She holds an M.S.I.S from the University at SUNY Albany, and is currently pursuing a Certificate of Advanced Studies in Preservation Administration in Archives and Special Collections. This workshop is based in part on research and a workshop created and implemented by Ms. Lapinsky at the Smithsonian Institution Archives, where she was an intern this past summer.

**Registration:** Email instructor Jessica Lapinsky at jessicalapinsky@gmail.com to register and for additional information about this workshop.

**Sponsored by the UIUC Student Chapter of the Society of American Archivists**
LEARNING TO CARE FOR YOUR FAMILY’S COLLECTIONS

Your personal collections and family heirlooms are important parts of your life and community. Preserving these collections doesn’t have to be expensive or complicated. This workshop will go over the basics of collections storage, and what to do if your family heirlooms are affected by a water emergency. Also includes a discussion of how scanning family documents can help the originals survive longer, while allowing you to share your memories with family, friends, and the community.

Date: Wednesday, April 11
6:00pm-8:00pm

Location: Champaign Public Library,
Robeson Pavilion Room A & B

FREE and open to all!

Sponsored by the Preservation Working Group
and the Graduate School of Library and
Information Science at the University of Illinois
at Urbana-Champaign
DON’T PANIC! RESPONDING TO DISASTERS IN A PUBLIC LIBRARY
Agenda
Marc 2012

- 1:00 - 1:15  Introduction
- 1:15 - 2:00  Elements of Emergency Response
- 2:00 - 2:15  Vital Records Protection
- 2:15 - 2:30  Break
- 2:30 - 3:00  Water Salvage Techniques
- 3:00 - 3:45  Table Top Exercise
- 3:45 - 4:00  Debriefing and Questions
What is emergency management?

- The planning and actions to prevent and be prepared for emergencies and to deal with them effectively
How do you define an emergency/disaster?

“Any incident which threatens human safety and/or damages or threatens to damage or destroy, an archive’s/library’s/museum’s building, collections, contents, facilities or services”  Graham Matthews
Large or small...
Florence Flood of 1966

Santa Croce

Photograph by David Lees
Florence Flood of 1966

Photograph by David Lees
What Emergencies Might Your Library Encounter?

- Water, water, everywhere
- Fire
- Vandalism/Theft
- Storms, all sorts
- Earthquake
DON’T PANIC! RESPONDING TO DISASTERS IN A PUBLIC LIBRARY

Part 1: Elements of Emergency Response
Elements of Emergency Management

Don’t forget to rinse and repeat!
Mitigation

- The process of preventing or minimizing the losses and damages that emergencies can cause
Preparedness

- Planning to effectively respond to emergencies and disasters and successfully recover affected materials.

- Getting organized to respond to an emergency, should one occur.
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

1. Prepare a disaster/emergency plan that covers people and collections
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

2. Survey your building for risks – “risk assessment”
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

3. Have a communication plan
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

4. Prepare a first response action list that includes your emergency response team
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

5. Organize emergency contact information for all staff (including volunteers and interns)
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

6. Establish salvage priorities
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

7. Create collections disaster supply kits
The Top Ten Things to Do Before a Disaster Strikes
adapted from a list by Julie Page

8. Understand your insurance coverage and funding options
The Top Ten Things to Do
Before a Disaster Strikes
adapted from a list by Julie Page

9. Establish collaborative relationships
The Top Ten Things to Do Before a Disaster Strikes
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10. Train staff in response and recovery
Emergency Management

Mitigation

Preparedness

Recovery

Response
Response

1. Life Safety
2. Incident Stabilization
3. Property Preservation (i.e. collections salvage)
Recovery

- Returning facilities and services to normal
ICS: Incident Command System

http://emilms.fema.gov/IS100b/index.htm
1970 Laguna Wild Fire

Why should you know about ICS?

- ICS is flexible and can be used for incidents of any type, scope, and complexity (even a non-emergency event)

- Learning about ICS will help you understand how first responders operate
ICS Principles

- Chain of Command
  - Refers to the orderly line of authority within the ranks of the incident management organization

- Unity of Command
  - Means that every individual has a designated supervisor to whom he or she reports at the scene of the incident

There can be only one!
ICS Principles

- Uses Common Terminology
  - Helps to define organizational functions, incident facilities, resource descriptions, and position titles

- Unified Command
  - Allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability
ICS Principles

- Span of Control
  - Only 3-7 Subordinates or Resources per Supervisor

- Modular Command
  - Incident Commander will appoint other positions as needed
ICS Organization
ICS Organization

- **Strike Teams**
  - A set number of resources of the same kind and type with common communications operating under the direct supervision of a Strike Team Leader.

- **Task Forces**
  - A combination of mixed resources with common communications operating under the direct supervision of a Task Force Leader.
ICS Organization

Sample Strike Teams and Task Forces

- Operations Section Chief
  - Search & Rescue Strike Team
  - Medical Aid Strike Team
  - Perimeter Security Strike Team
    - Damage Assessment Task Force
    - Shelter and Feeding Task Force
    - Public Works Task Force
ICS Organization: Collections Response

![Command Staff Diagram]

- Incident Commander
- Safety
- Information
- Liaison
- Operations
- Planning
- Logistics
- Finance and Administration

Identification and Retrieval Team
Packaging and Drying Team
ICS Organization: Collections Response

- Incident Commander
- Operations Section
  - Identification and Retrieval Team
  - Packaging and Drying Team
Identification and Retrieval Team

- Searches for and identifies damaged materials
- Sort material according to damage and treatment needed
- Transport materials to recovery area
- Records what is being removed from site and where it is being sent
Identification and Retrieval Team

Team Leader
Record Keeper
Sorter
Transporter
Priorities Identifier
Packaging and Drying Team

- Make more detailed decisions about treatment techniques
- Air dry wet materials
- Pack wet materials for freezing
- Rinse soiled materials
- Label materials in air drying areas and in boxes
Packaging and Drying Team

- Team Leader
- Air Dying
- Record Keeper
- Rinsing
- Packer
Planning Ahead

- The Collections Response Team may not immediately be allowed into the emergency site

*Use this time to get the team together and create an Incident Action Plan!*
Conducting an Assessment/Re-entry Guidelines

1. Has everyone known/believed to be inside the building accounted for?

2. Has permission been given by civil authorities to re-enter?
Conducting an Assessment/Re-entry Guidelines

3. Are utilities safe for use?

4. Do you have a buddy?

3. Are you equipped with the appropriate personal protective equipment?
Conducting an Assessment/Re-entry Guidelines

6. Do you have means of communication?

7. Do you have means for quick initial documentation?
Stabilizing the Environment

- Stop water at source
- Lower temperature and humidity
- Mop up or pump out standing water
- Maintain security
The Emotional Response

- Be kind
- Take breaks
- Be aware of changes in behavior
- Talk it out – debrief after an event

http://www.citizencorps.gov/cert/videos/DisasterPsychology/index.shtm
DON’T PANIC! RESPONDING TO DISASTERS IN A PUBLIC LIBRARY

Part 2: Vital Records Protection
What about Our Vital Records?

- A “vital record” is the recorded information that is essential for the continuation or reconstruction of an agency.
- Public Libraries: Catalogs, computer software, employee records, insurance, emergency plans, any other information essential to restoring operations.
Identifying Vital Records

- Be **selective** and protect only that information that is absolutely necessary to conduct emergency operations, normal agency functions, or protect the rights and interests of the library and individuals.
Identifying Vital Records

- Conduct an inventory
Methods of Protection

- Duplication
- Dispersal
Methods of Protection

- On-Site Storage
- Off-Site Storage
Vital Records in an Emergency

- Vitals records are always a top salvage priority
- Duplicates increase likelihood of vital records surviving
- If vital records are damaged, salvage using techniques already mentioned
Break!

- An important part of emergency response!
DON’T PANIC! RESPONDING TO DISASTERS IN A PUBLIC LIBRARY

Part 3: Water Salvage Techniques
Prioritizing the Salvage

- Always have a salvage priorities list prior to an emergency.
Prioritizing the Salvage

- Any material threatened with imminent damage or destruction
- Wet material lying on floor or on the top shelves
- Wet or damp material on lower shelves
- Wet or damp material on upper shelves
Salvage Techniques for Books: Air Dry
Salvage Techniques for Books: Air Dry
Salvage Techniques for Books: Freeze
Salvage Techniques for Books: What to Expect

- Books will be heavy
- Books will swell
- Mold growth is possible
- Cockling, bleeding, staining
Salvage Techniques for Paper: Air Drying
Salvage Techniques for Paper: Freezing

Walk-In Freezer for emergencies, pest management, and collections storage, April 2011, Photo courtesy Nora Lockshin.
Salvage Techniques for Paper: What to Expect

- Old mends may release
- Cockling, bleeding, staining
- Wet paper will be fragile – use supports
Salvage Techniques for Photographs: Freeze and/or Air Dry
Salvage Techniques for Audio and Video Tapes, Magnetic Media, and Computer Discs
Salvage Techniques for Wild Cards

- Games
- Puzzles
- Artwork on walls
- Historic furnishings
- Cards
- Other ephemera...

*Smokey Bear says, “Surprise!”*
Salvage Tips to Remember

- Be Safe
- If you can, freeze to buy time
- Ask for help – have a contact list of conservators
- Objects will never look the same

Vacuum Freeze Dried folders and photographs, April 2011, Photo courtesy Sarah Stauderman.
Table Top Exercise Time!

- A fun and simple way to think about how you would respond in an emergency
DISASTER RESPONSE IN CULTURAL INSTITUTIONS: A WORKSHOP FOR LIBRARY, ARCHIVES, AND MUSEUM STUDENTS
Agenda
March 31, 2012

- 1:00 - 1:15 INTRODUCTION
- 1:15 - 1:45 GUEST SPEAKER CHRISTA DEACY-QUINN
- 1:45 - 2:15 BEFORE THE DISASTER: MITIGATION AND PREPAREDNESS
- 2:15 - 2:30 BREAK
- 2:30 - 3:00 DURING THE DISASTER: ELEMENTS OF EMERGENCY RESPONSE
- 3:00 - 3:45 TABLE TOP EXERCISE
- 3:45 - 4:00 DEBRIEFING AND FINAL QUESTIONS
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- Fire
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- Storms, all sorts
- Earthquake
BEFORE THE DISASTER: MITIGATION AND PREPAREDNESS

Getting Organized
Before a Disaster Strikes
Elements of Emergency Management

Don’t forget to rinse and repeat!
Mitigation

- The process of preventing or minimizing the losses and damages that emergencies can cause

- Disaster Prevention and Protection Checklist at www.lyrasis.org
Preparedness

- Planning to effectively respond to emergencies and disasters and successfully recover affected materials.

- Getting organized to respond to an emergency, should one occur.
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9. Establish collaborative relationships
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10. Train staff in response and recovery
The All Important Plan...

- Emergency/disaster plans contain guidelines and procedures for responding to a variety of events.
The All Important Plan...

- Should be in different formats, and keep in multiple locations
- Good news: You don’t have to reinvent the wheel!
  - http://www.library.cornell.edu/preservation/emergencies/index.html
  - http://www.dplan.org
What about Our Vital Records?

- A “vital record” is the recorded information that is essential for the continuation or reconstruction of an agency.
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- Dispersal
Methods of Protection

- On-Site Storage
- Off-Site Storage
Vital Records in an Emergency

- Vitals records are always a top salvage priority
- Duplicates increase likelihood of vital records surviving
- If vital records are damaged, salvage using techniques covered in next section!
An important part of emergency response!
DURING THE DISASTER: ELEMENTS OF EMERGENCY RESPONSE

Getting Organized During an Emergency
Emergency Management Cycle:

1. Mitigation
2. Preparedness
3. Response
4. Recovery

Emphasizing the cyclical nature of emergency management.
Response

1. Life Safety
2. Incident Stabilization
3. Property Preservation (i.e. collections salvage)
Recovery

- Returning facilities and services to normal
ICS:
Incident Command System

http://emilms.fema.gov/IS100b/index.htm
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  - Means that every individual has a designated supervisor to whom he or she reports at the scene of the incident

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Packaging and Drying Team
Identification and Retrieval Team

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- Sort material according to damage and treatment needed
- Transport materials to recovery area
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Identification and Retrieval Team

- Team Leader
- Record Keeper
- Sorter
- Transporter
- Priorities Identifier
Packaging and Drying Team

- Make more detailed decisions about treatment techniques
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- Pack wet materials for freezing
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- Team Leader
- Air Dying
- Record Keeper
- Rinsing
- Packer
Planning Ahead

- The Collections Response Team may not immediately be allowed into the emergency site

*Use this time to get the team together and create an Incident Action Plan!*
Conducting an Assessment/Re-entry Guidelines

1. Has everyone known/believed to be inside the building accounted for?

2. Has permission been given by civil authorities to re-enter?
Conducting an Assessment/Re-entry Guidelines

3. Are utilities safe for use?

4. Do you have a buddy?

3. Are you equipped with the appropriate personal protective equipment?
Conducting an Assessment/Re-entry Guidelines

6. Do you have means of communication?

7. Do you have means for quick initial documentation?
Stabilizing the Environment

- Stop water at source
- Lower temperature and humidity
- Mop up or pump out standing water
- Maintain security
Stabilizing the Environment

Molded saddle, Old Spanish Fort Museum, Pascagoula, Mississippi: 26 September 2005, © AASLH Mississippi Team 1
The Emotional Response

- Be kind
- Take breaks
- Be aware of changes in behavior
- Talk it out – debrief after an event

http://www.citizencorps.gov/cert/videos/DisasterPsychology/index.shtm
Prioritizing the Salvage

- Always have a salvage priorities list prior to an emergency.
Prioritizing the Salvage

- Any material threatened with imminent damage or destruction
- Wet material lying on floor or on the top shelves
- Wet or damp material on lower shelves
- Wet or damp material on upper shelves
Salvage Techniques for Paper:
Air Drying
Salvage Techniques for Paper: Freezing

Walk-In Freezer for emergencies, pest management, and collections storage, April 2011, Photo courtesy Nora Lockshin.
Salvage Techniques for Paper: What to Expect

- Mold growth is possible
- Cockling, bleeding, staining
- Wet paper will be fragile – use supports
Salvage Techniques for Photographs: Freeze and/or Air Dry
Salvage Techniques for Microfilm, Magnetic Media, and Computer Discs
Salvage Tips to Remember

- Be Safe
- If you can, freeze to buy time
- Ask for help – have a contact list of conservators
- Objects will never look the same

Vacuum Freeze Dried folders and photographs, April 2011, Photo courtesy Sarah Stauderman.
Table Top Exercise Time!

- A fun and simple way to think about how you would respond in an emergency
Learning to Care for Your Family’s Collections

Wednesday, April 11

Sponsored by the Preservation Working Group and the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign
Agenda

- 6:00-6:20: Preventing disaster: Where and where not to store your family heirlooms
- 6:20-6:45: What to do if your collection gets wet
- 6:45-7:00: Break
- 7:00-7:30: Noah Lenstra: Protecting your digital family materials
- 7:30-7:45: Online resources and help
- 7:45-8:00: Final questions
Variety is the spice of life!

- All kinds of items are important to families and individuals
- Not all types of materials play well with others!
- Create a little “disaster plan” for you collections
Your house is not a museum

- Family heirlooms are meant to be used and loved
- Your house was not built to store items for hundreds of years
- Balance “good preservation practice” with sharing your treasures
Where to store your collections

- Family heirlooms are like people – they don’t like extreme temperature and humidity

- Collections like predictability – fluctuations in temperature and humidity stress them out
Where to store your collections: Things to avoid

- Temperature Extremes
- Low or High humidity
- Dusty or dirty places

*This means attics, basements, and garages are not good places to keep valued objects!*

[https://www.imagepermanenceinstitute.org/resources/stored-alive](https://www.imagepermanenceinstitute.org/resources/stored-alive)
Where to store your collections: Things to avoid

- Exposure to direct sunlight
- Areas under or next to pipes and plumbing
Where to store your collections

- A place with relatively stable temperature and humidity
- The cooler and drier the better
- Keep area tidy
- Use air conditioners or dehumidifiers
- Keep an eye on plumbing issues
How to store collections

- Books
How to store collections

- Papers (letters, birth certificates, wills, etc...)
How to store collections

- Photographs and scrapbooks
How to store collections

- Textiles (quilts, wedding dresses, baby clothes, etc...)
How to store collections

- 3 dimensional objects (baskets, ceramics, trophies, etc...)
Video and Sound recordings

- LPs, cassette tapes, CDs and DVDs, old home movies on reels
Water, water, everywhere...

- Accidents can still happen

- Know how to treat your most valued treasures if they get wet

- Create a “stable environment” where you will treat your collection

- Realize the water may be “yucky”
Tools of the trade...

- Fans
- Towels
- Paper towels
- Rust free window screens or sweater drying racks
- Dehumidifiers
- Clean running water
- Mops and sponges
- Clean, lint free rags
- Clothes line and clothes pins
Books

Wheaton College Fine Arts Library
‘Freeze’ In the name of preservation...
Books: What to Expect

- Books will be heavy
- Books will swell
- Mold growth is possible
- Cockling, bleeding, staining
Paper
Old mends may release
Cockling, bleeding, staining
Wet paper will be fragile – use supports
Photographs
Audio and Video Tapes, Film, and LPs
Textiles
3 dimensional objects
Magnetic Media, Computer Discs, and Hard drives

Workers try to salvage computers from the Bang Pa industrial zone, Thailand
Preserving your digital material
Supplies

Ask for help – it is out there!

- Preservation Working Group at the University of Illinois [http://will.illinois.edu/pwg/](http://will.illinois.edu/pwg/)


Questions, Comments?
1970 Laguna Wild Fire

Why should you know about ICS?

• ICS is flexible and can be used for incidents of any type, scope, and complexity (even a non-emergency event)

• Learning about ICS will help you understand how first responders operate
ICS Principles

• Chain of Command
  o Refers to the orderly line of authority within the ranks of the incident management organization

• Unity of Command
  o Means that every individual has a designated supervisor to whom he or she reports at the scene of the incident

  *There can be only one!*
There can be only one!
ICS Principles

• Uses Common Terminology
  
  o Helps to define organizational functions, incident facilities, resource descriptions, and position titles

• Unified Command
  
  o Allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability
What does EMT stand for?
ICS Principles

• Span of Control
  o Only 3-7 Subordinates or Resources per Supervisor

• Modular Command
  o Incident Commander will appoint other positions as needed
YOU HAVE TO DELEGATE SOME AUTHORITY!
ICS Organization
ICS Organization

• Strike Teams
  o A set number of resources of the same kind and type with common communications operating under the direct supervision of a Strike Team Leader.

• Task Forces
  o A combination of mixed resources with common communications operating under the direct supervision of a Task Force Leader.
ICS Organization

Sample Strike Teams and Task Forces

- Operations Section Chief
  - Search & Rescue Strike Team
  - Medical Aid Strike Team
  - Perimeter Security Strike Team
  - Damage Assessment Task Force
  - Shelter and Feeding Task Force
  - Public Works Task Force

Visual 5.12
General Staff Functions

FEMA
ICS Organization: Collections Response

COMMAND STAFF

- Incident Commander
- Safety
- Information
- Liaison
- Operations
- Planning
- Logistics
- Finance and Administration

Identification and Retrieval Team

Packaging and Drying Team
ICS Organization: Collections Response

- Incident Commander
  - Operations Section
    - Identification and Retrieval Team
    - Packaging and Drying Team
Identification and Retrieval Team

• Searches for and identifies damaged materials
• Sort material according to damage and treatment needed
• Transport materials to recovery area
• Records what is being removed from site and where it is being sent
Identification and Retrieval Team

- Team Leader
- Record Keeper
- Sorter
- Transporter
- Priorities Identifier
Packaging and Drying Team

• Make more detailed decisions about treatment techniques
• Air dry wet materials
• Pack wet materials for freezing
• Rinse soiled materials
• Label materials in air drying areas and in boxes
If Sesame Street is down with FEMA, you can be, too!

- http://www.sesamestreet.org/parents/topicsandactivities/toolkits/ready
Table Top Exercise

You are employees at a medium sized cultural heritage center in central Illinois. The center houses library, archives, and museum material, and various meeting rooms used by the community. The building you are in was built in the 1950’s and has two floors and a basement, which is primarily storage (you think). For the purposes of this exercise, just accept the facts as stated in the scenario, remember everyone has a right to speak, and Murphy’s Law rules.

Stage 1: Sunday morning at 3:00am

In the second floor mechanical room, the temperature pressure relief valve on a hot water heater malfunctioned, causing a dangerous increase in steam pressure that led to a rupture of the hot water tank. The resulting explosion damaged floor drains and water is flooding nearby areas, seeping down the walls to the first floor directly below, and weakening acoustical tile ceilings there. A neighbor heard the explosion and called the fire department. They, in turn, called you.

Stage 2: Sunday morning at 4:00am

Staff begin trickling in to the scene to help. There is standing water on both floors of the building. It is unclear yet whether electrical wiring has been compromised.

Stage 3: Sunday morning at 5:00am

The deluge is still seeping down walls to the first floor, and acoustical ceiling tiles are becoming soaked to the point of crumbling apart. Several exhibition spaces, collections storage, and related work areas are at imminent risk.

Stage 4: Sunday afternoon at 2pm

With the HVAC off and water everywhere, temperature and humidity levels throughout the building begin fluctuating out of acceptable ranges even for collections housed outside of the water damaged areas. Due to computer twittering, rumors of a disaster at your organization quickly begin circulating and inquiries start pouring in (just like the water!) via cellphones and e-mail, including local media outlets looking for a news story. Volunteers also begin phoning in to offer help. The library usually opens at noon on Sundays, so the patrons who are unaware of the event show up expecting to see business as usual. Some are visibly upset.

Stage 5: Monday afternoon at 3pm

The water has been cleaned up and press releases have been sent out to the media. Power, but not water service, is back on. Rapid response assessment of collections damage was nearly complete Sunday evening, and many tired workers were sent home to rest. Water was still seeping down to its lowest ground level during the night, however, and the hard work in the aftermath of a disaster has just begun...

Adapted from Kentucky’s Cultural Heritage: A Statewide Plan for Collections Assessment and Care Materials, part of a Connecting to Collections Grant
The institution where I work has an emergency/disaster plan involving collections.
Yes   No   I don’t know

I have participated in disaster response training before.
Yes   No
If yes, please list the type of training (include fire extinguisher training, table top exercises, etc...)
___________________________________________________________________________________

I feel that disaster preparedness is a priority at my workplace.
Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

I feel I have the knowledge to respond safely and effectively to a disaster involving library collections.
Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

What do you hope to get out of this workshop?
Post Workshop Questionnaire
Don’t Panic! Responding to Disasters in a Public Library
April 2, 2012

I feel I have the knowledge to respond safely and effectively to a disaster involving library collections.
Strongly Disagree  Disagree  Neutral  Agree  Strongly Agree

I acquired knowledge and skills that I can use at my library.
Strongly Disagree  Disagree  Neutral  Agree  Strongly Agree

Instructor was knowledgeable.
Strongly Disagree  Disagree  Neutral  Agree  Strongly Agree

Instructor was well prepared.
Strongly Disagree  Disagree  Neutral  Agree  Strongly Agree

Workshop was well organized.
Strongly Disagree  Disagree  Neutral  Agree  Strongly Agree

What aspect of this workshop was most useful for you?

How could this workshop be improved?

Other comments?
“Don’t Panic! Responding to Disasters in a Public Library” Online Resources for Disaster Response

Response Plans and Teams

Council of State Archivist, Pocket Response Plan:
http://www.statearchivists.org/prepare/framework/prep.htm

FEMA Incident Command System Training:
http://training.fema.gov/IS/NIMS.asp

Salvage Techniques

Salvage at a Glance: by Betty Walsh
http://cool.conservation-us.org/waac/wn/wn19/wn19-2/wn19-207.html

Salvage At A Glance, Part I: Paper Based Collections: Conserve O Gram, January 2002, Number 21/4
Includes Books and Paper material

Salvage At A Glance, Part II: Non-Paper Based Archival Collections: Conserve O Gram, January 2002, Number 21/5. Includes photographic materials, computer media, and audio/visual recordings

Drying Techniques in Depth

Lyrasis Leaflet on Drying Wet Books and Records

Salvage Procedures for Wet Items
Minnesota Historical Society
http://www.mnhs.org/preserve/conservation/emergency.html

Vital Records

Vital Records Management: Delaware Public Archives

Vital Records Protection and Disaster Recovery Handbook:
California Records and Information Management. The intention of this handbook is to provide a set of guidelines, relative to how and what to do before, during and after an emergency. The specific procedures and identification of vital records will vary with each agency.
http://www.documents.dgs.ca.gov/osp/calrim/DisasterHndbk12-03.pdf
General Resources

California Preservation Program: http://calpreservation.org/index.html
Conservation OnLine: cool.conservation-us.org/
Northeast Document Conservation Center: www.nedcc.org
Heritage Preservation/ Heritage Emergency National Task Force: www.heritagepreservation.org/
Conservation Center for Art and Historic Artifacts: www.ccaha.org
“Disaster Response in Cultural Institutions: A workshop for library, archives, and museum students”

Online Resources for Disaster Response

Disaster Preparedness and Sample Plans


dPlan: The Online Disaster-Planning Tool for Cultural and Civic Institutions
http://www.dplan.org/

Harvard University Library Preservation
http://preserve.harvard.edu/emergencies/plan.html

Response Plans and Teams

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Salvage At A Glance, Part II: Non-Paper Based Archival Collections: Conserve O Gram, January 2002, Number 21/5. Includes photographic materials, computer media, and audio/visual recordings

Salvage At A Glance Part III: Object Collections: Conserve O Gram, September 2002, Number 21/6

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Salvage Procedures for Wet Items
Minnesota Historical Society
http://www.mnhs.org/preserve/conservation/emergency.html

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General Resources

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Conservation OnLine: cool.conservation-us.org/
Northeast Document Conservation Center: www.nedcc.org
Heritage Preservation/ Heritage Emergency National Task Force: www.heritagepreservation.org/
Conservation Center for Art and Historic Artifacts: www.ccaha.org
The American Institute for Conservation of Historic and Artistic Works (AIC):
http://www.conservation-us.org
“Learning to Care for Your Family’s Collection”

ONLINE RESOURCES FOR PRESERVING FAMILY COLLECTIONS

Supplies


Locating a Conservator

Preservation Working Group at the University of Illinois http://will.illinois.edu/pwg/

American Institute for Conservation for Arts and Historic Artifacts http://www.conservation-us.org/

Water Salvage Resources and Advice


Heirlooms, Artifacts, & Family Treasures: The 2012 Preservation Emporium

Saturday, April 21, noon-4pm
Free admission and free parking (lot D22, east of the museum)
Spurlock Museum (600 S Gregory St, Urbana)
Bring your preservation questions along with small, hand-held items or images of larger items for examination by preservation specialists whose expertise ranges from antiquities to textiles and artwork to modern digital media.
Salvage Techniques – adapted from NEDCC Preservation Leaflets

How to Air Dry Wet Books

Air drying is most appropriate for books that are only damp or slightly wet. Books that are wet — and especially books that are saturated — should be frozen to minimize cockling of the pages and distortion of the text block and binding. Remember that books containing coated paper should be frozen while still wet, and that books with running or blurred inks or colorant must be frozen immediately to preserve the contents.

1. Identify a clean, dry, secure space where the temperature and humidity can be controlled. Reduce the relative humidity as low as you can to prevent mold and improve drying capabilities.

2. Keep the air moving at all times using fans in the drying area. This will accelerate the drying process and discourage mold growth. Aim fans to direct the airflow parallel to the drying volumes. DO NOT point the fans directly at the books!

3. If the book is damp or the edges of the book are only slightly wet, the book may be stood on end and fanned open slightly in a space with good air circulation, but again, do not aim fans directly at the books. To minimize distortion of the edges of the text block, place volumes in a press or press under a board with a weight just before drying is complete. Paper- or cloth-covered bricks work well for weights.

4. If the book is slightly wet, interleave approximately every 16 pages, starting from the back of the book, turning pages carefully. For interleaving, use paper towels or clean, unprinted newsprint. Do not interleave too much or the spine will become concave and the volume distorted. A good rule of thumb is to insert no more than one-third of the number of text pages. Complete the interleaving by placing clean blotter paper inside the front and back covers. Close the book gently and place it flat on several sheets of absorbent paper. Change the interleaving and absorbent paper frequently. Turn the book from front to back each time it is interleaved. When the book is damp, proceed as in step 3.

   *Alternately, place e-flute corrugated board for support inside the front and back covers. Place books upright between book ends. Separate books with blotter paper.

5. Dampness will persist for some time inside the book in the gutter, along the spine, and in the boards. Due to their thickness, the boards retain moisture much longer; mold is often found between the boards and flyleaves if the book is not allowed to dry completely. Check for mold growth frequently while books are drying.

6. When books are dry but still cool to the touch, they should be closed, laid flat on a table or other horizontal surface, gently formed into their original shape, and placed in a press or held in place with a board and weight. Press overnight and set up to dry during the day and repeat until books are dry. In no case should books be returned to the shelves until thoroughly dry; otherwise mold may develop, particularly along the gutter margin.

7. If you can establish an air-conditioned room capable of maintaining a constant relative humidity of 25% – 35% and temperature between 50° and 65°F, books with only wet edges can be dried successfully in approximately two weeks without interleaving.

How to Freeze Wet Books

Freeze wet books to buy time and if you are limited in drying space. Freeze books with coated paper before the item begins to dry. Separate with freezer paper, pack spine down in milk crates, cardboard boxes lined with plastic, or rescube. Pack boxes ¾ full. Boxes may then be sent to a vendor for vacuum freeze-drying. Alternately, boxes may be placed in a self defrosting freezer and left for a long period of time. Water will eventually sublimate.
How to Air Dry Wet Records

Air drying is most suitable for small numbers of records that are damp or slightly wet. If there are hundreds of single pages, or if the records are wet, professional dehumidification, freezing, or vacuum freeze-drying will be cost effective and result in a better end product. As explained above, stacks of documents on coated, or shiny, paper must be frozen immediately. If they cannot be frozen, separate the sheets immediately to prevent adhesion. Again, care must be taken with water-soluble inks as well. Records with running or blurred inks should be frozen immediately to prevent further loss. After the items are frozen, contact a conservator for advice and assistance.

If air drying is selected as the preferred salvage method, use the following steps. Note that wet paper is extremely fragile and easily torn or damaged, so handle these materials gently.

1. Identify a clean, dry, secure space where the temperature and humidity can be controlled. Reduce the relative humidity as low as you can to prevent mold and improve drying capabilities.

2. Keep the air moving at all times using fans in the drying area. This will accelerate the drying process and discourage mold growth. Aim fans to direct the airflow parallel to the drying records. DO NOT point the fans directly at the records!

3. Single leaves can be laid out on tables, floors, and other flat surfaces protected by paper towels or clean, unprinted newsprint.

4. Or air dry records between book ends with corrugated board or blotter for support. Maintain order of folder, and label where each folder beings and ends.

5. A press may be used to dry records that are wetter. Interleave records with non-woven polyester and folder board, blotter, or Zorbix. Place in press. Aim a fan at the press to increase air flow.

6. If records are printed on coated paper and there is no means to freeze them, they must be separated from one another to prevent them from sticking. This is a tedious process that requires skill and patience. Place a piece of polyester film on the stack of records. Rub it down gently on the top sheet, then slowly lift the film while peeling off the top sheet at a low angle. Hang the polyester film up to dry on a clothesline. As the document dries, it will separate from the surface of the film, so it must be monitored carefully. Before it falls, remove it and allow it to finish drying on a flat surface as described in step 3.

7. Once dry, records may be re-housed in clean folders and boxes, or they may be photocopied or reformatted in other ways. Dried records will always occupy more space than ones that have never been water damaged.

How to Freeze Wet Records

Interleave every few inches with wax paper or freezer wraps. If archival boxes are wet or damp, remove contents and repack into new boxes or milk crates. Record box identification, contents, and location.

Rinsing Items

Rinse dirty books and records if time, staff, and resources allow. Otherwise, items may be cleaned after drying or freezing. Never scrub at or rub away mud or dirt.
How to Air Dry Photographs

1. If personnel, space, and time are available, photographs can be air dried.
2. Separate photographs from their enclosures, frames, and from each other. If they are stuck together or adhered to glass, set them aside for freezing and consultation with a conservator.
3. Allow excess water to drain off the photographs.
4. Spread the photographs out to dry, face up, laying them flat on an absorbent material such as blotters, unprinted newsprint, paper towels, or a clean cloth.
5. Photographs can also be dried on a line.
6. Keep the air around the drying materials moving at all times. Fans will speed up the drying process and minimize the risk of mold growth.
7. Negatives should be dried vertically. They can be hung on a line with plastic clips placed at the edges.
8. Photographs may curl during drying. They can be flattened later.

How to Freeze Photographs

1. If immediate air drying of photographs is not possible or if photographs are stuck together, freeze them.
2. Wrap or interleave photographs with waxed paper before freezing.
3. Interleave or wrap individual photographs or groups of photographs before freezing with a non-woven polyester material or waxed paper. This will make them easier to separate when they are eventually treated.

Drying Frozen Photographs

1. Frozen photographs are best dried by thawing, followed by air drying. As a stack of photographs thaws, individual photographs can be carefully peeled from the group and placed face up on a clean, absorbent surface to air dry.
2. Photographs can be vacuum freeze dried; in this process no thawing occurs. Gelatin photographs may mottle during the procedure, but they will not stick together.
3. Wet collodion glass plates must never be freeze dried; they will not survive. This is also true for all similar collodion processes such as ambrotypes, collodion lantern slides, and tintypes.

Salvaging Slides

1. Slides can be rinsed and dipped in a water/Photo-flo mixture, slide cleaner, or a similar commercial product and air dried; preferably they should be hung on a line or propped on edge.
2. Ideally, slides should be removed from their frames for drying and then remounted.
3. Slides mounted between glass must be removed from the glass or they will not dry.
## Salvage Priorities by Material

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>IMMEDIATE</th>
<th>LATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAPER: Manuscripts, documents, &amp; small drawings</td>
<td></td>
<td>Freeze or dry within 48 hours</td>
</tr>
<tr>
<td>Watercolors and other soluble media</td>
<td>Immediately freeze or dry</td>
<td></td>
</tr>
<tr>
<td>Maps, oversize prints and manuscripts</td>
<td></td>
<td>Freeze or dry within 48 hours</td>
</tr>
<tr>
<td>Coated papers</td>
<td>Immediately pack</td>
<td>Freeze or dry within 48 hours</td>
</tr>
<tr>
<td>Framed prints and drawings</td>
<td></td>
<td>Freeze or dry within 48 hours</td>
</tr>
<tr>
<td>BOOKS: Books &amp; pamphlets</td>
<td></td>
<td>Freeze or dry within 48 hours</td>
</tr>
<tr>
<td>Leather and vellum bindings</td>
<td>Immediately freeze</td>
<td></td>
</tr>
<tr>
<td>Books and periodicals with coated papers</td>
<td>Immediately pack</td>
<td>Freeze or dry within 48 hours</td>
</tr>
<tr>
<td>PAINTINGS</td>
<td>Immediately dry</td>
<td></td>
</tr>
<tr>
<td>COMPUTER DISCS</td>
<td>Immediately pack</td>
<td></td>
</tr>
<tr>
<td>SOUND AND VISUAL RECORDS: Discs</td>
<td></td>
<td>Dry within 48 hours</td>
</tr>
<tr>
<td>Audio and Video Tapes</td>
<td>Immediately dry</td>
<td>(consult experts)</td>
</tr>
<tr>
<td>PHOTOGRAPHS: Wet Collodion photographs (ambrotypes, tintypes, pannotypes, wet collodion negatives)</td>
<td>Immediately dry (Recovery rate is low)</td>
<td></td>
</tr>
<tr>
<td>Daguerreotypes</td>
<td>Immediately dry</td>
<td></td>
</tr>
<tr>
<td>Nitrate film negatives with soluble emulsions</td>
<td>Immediately freeze</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Storage Method</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td>Prints, negatives and transparencies</td>
<td>Freeze or dry within 72 hours</td>
<td></td>
</tr>
<tr>
<td>Motion pictures</td>
<td>Rewash and dry within 72 hours</td>
<td></td>
</tr>
<tr>
<td>Microfilm rolls</td>
<td>Rewash and dry within 72 hours</td>
<td></td>
</tr>
<tr>
<td>Aperture cards</td>
<td>Freeze or dry within 48 hours</td>
<td></td>
</tr>
<tr>
<td>Jacketed microfilm</td>
<td>Freeze or dry within 72 hours</td>
<td></td>
</tr>
<tr>
<td>Diazo fiche</td>
<td>Recover last</td>
<td></td>
</tr>
</tbody>
</table>

Taken from SIA Disaster Manual
**Lyrasis: Drying Techniques for Recovery of Wet Books and Paper**

**Air Drying**

Air drying refers to drying materials under normal indoor environmental conditions, generally 70-75 degrees F, 40-55% relative humidity. It is the most frequently used method of drying wet books and records, although not always the most appropriate. Air drying can be employed for one item or many, but is most suitable for small quantities of damp or slightly wet books, documents, and photographs. Because it requires no special equipment, it is often seen as an inexpensive method. However, air drying is extremely labor-intensive (if carried out properly), can occupy a great deal of space, and usually results in badly distorted bindings and text blocks if the damage is more than superficial. While drying, the materials must be carefully monitored for mold growth. Air drying is seldom if ever successful for drying bound, coated paper.

Correct procedures for air drying books and records should be understood before beginning. The materials to be air dried should be spread out onto tables to facilitate drying. The pages of damp books can be interleaved with an absorbent paper such as unprinted newsprint or paper towels. The interleaving material absorbs water that has soaked into the text block and speeds up the drying process. The interleaves must be changed often. When books are almost dry, but still cool to the touch, remove the interleaving, close book gently, and continue drying under a light weight to minimize distortion. Documents can be spread out in small stacks on absorbent paper. Air drying is the method of choice for small quantities of moderately wet books and documents, and especially for photographic materials. Large quantities of wet materials can be frozen for stabilization and then thawed and air dried in batches.

**Dehumidification/Desiccant Air Drying**

This is the newest method to gain credibility in the library and archival world, although it has been used for many years to dry out buildings and the holds of ships. Large, commercial dehumidifiers are brought into the facility with all collections, equipment, and furnishings left in place. Temperature, humidity and air velocity are controlled to user specifications and to facilitate drying. In desiccant air drying the dehumidifier uses a desiccant chemical which can lower the relative humidity to below 20%, thus speeding up the drying process. Refrigerant dehumidifiers are unable to reach humidity levels as low as desiccant dehumidifiers, resulting in a longer drying time.

Dehumidification/desiccant air drying is successful for drying damp to moderately wet books and records, equipment, and furnishings. It must be initiated before swelling becomes a problem or mold appears, i.e., within 24 hours of the emergency. It is not successful for drying bound, coated paper. The size of the facility is limited only by the amount of equipment available and the expertise of the equipment operators. If circumstances do not allow for drying onsite, materials can be packed out and dried offsite in another building, temporary drying chamber, or at a disaster recovery firm. This is the method of choice for large quantities of damp books and records, with the advantage of leaving the materials in place on the shelves and in storage boxes, eliminating the costly step of removal to a freezer or vacuum chamber. In addition, the materials remain accessible while drying.

**Freeze Drying**

Books and records that are only damp or moderately wet may be dried successfully in a self-defrosting, blast freezer, if left there long enough. For this method, also known as freezer drying, materials should be placed in the freezer as soon as possible after water damage. Books will dry best if their bindings are supported firmly to inhibit initial swelling. The equipment should have the capacity to freeze very quickly, and the temperatures must be -10 to -40 degrees F to reduce distortion and facilitate drying. Documents may be placed in the freezer in stacks or may be spread out for faster drying. In very large commercial freezers they may be left in their storage boxes, although this will slow drying. Expect this drying method to take several months, depending upon the temperature of the freezer and the extent of water damage. Coated paper may adhere with this technique depending on degree of wetness and length of time before freezing. An ordinary blast freezer is adequate, but there are specially engineered self defrosting freezers designed specifically for books and documents that have precise controls, timers, and instruments to monitor the moisture content of the items being frozen. Freeze drying can be carried out at a low cost per item presuming that the necessary equipment is available. However, it can only be employed for a limited batch of items at a time, and the drying cycle is quite long (average of 4-18 months). This service is not typically provided by disaster recovery firms; it is up to the library or archive to purchase or secure use of a freezer.
**Vacuum Drying**

This method is also referred to as vacuum thermal drying. Books and records are dried in a vacuum thermal-drying chamber into which they are placed either wet or frozen. The vacuum is drawn, heat is introduced, and the materials are dried, either in cycles of freezing and thawing, or slightly above 32 degrees F. This means the materials stay wet, not frozen, while they dry. It is a very acceptable manner of drying wet records if cockling is not a problem, but it often produces extreme distortion in books, and causes adhesion of coated paper and photographic materials. Water-soluble inks or pigments will also be affected. For large numbers of materials it is easier than air drying, and almost always more cost-effective. This method is not a good choice for saturated books; expect extensive rebinding or recasing of bound materials. This method can be a good solution for moderate quantities of general records, unbound materials, and documents that have suffered extensive water damage.

**Vacuum Freeze-Drying**

Small batches of frozen or wet books and documents are dried in a low pressure vacuum chamber. The vacuum is pulled, a source of low heat is introduced, and the collections, dried at temperatures below 32 degrees F, remain frozen until dry. The physical process known as sublimation takes place, i.e., ice crystals vaporize without melting. This means there is no additional swelling or distortion beyond that incurred before the materials were placed into the chamber. Coated paper will dry without the pages blocking, or becoming fused together, if it has been frozen or placed into the chamber within the first 6-8 hours. The process calls for sophisticated equipment and is especially suitable for large numbers of very wet books and records, as well as for coated paper. Rare and unique materials can be dried successfully this way, but leather, vellum, and photographic materials may not survive. Water soluble inks and pigments will not be damaged further. Although this method may initially appear to be more expensive due to the equipment required, the results are often so satisfactory that additional funds for rebinding are not necessary, and mud, dirt, and soot are lifted to the surface, making cleaning less time-consuming.

This process is available through disaster recovery firms only and, therefore, cannot be done on-site. The materials will be transported in a refrigerated truck to the recovery firm's nearest plant with a vacuum freeze drying chamber. Vacuum freeze drying is suitable for a wide range of materials and is very effective for saturated books and coated paper. It takes quite a while to dry a large volume of materials since the chambers are limited in size and each batch requires an average 6-10 weeks to dry, and the collections are inaccessible while drying.

An added benefit to vacuum drying is that the vacuum draws dirt and particles to the surface, which can be brushed off after drying. Also, it has found to be effective in non-chemical fumigation and smoke-odor removal. The vacuum draws out some of the air and moisture from the materials, some of the odor causing particles are removed.

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Original by Sally Buchanan, 1992
**Command Staff:** The Command Staff consists of the Public Information Officer, Safety Officer, and Liaison Officer. They report directly to the Incident Commander.

**Section:** The organization level having functional responsibility for primary segments of incident management (Operations, Planning, Logistics, Finance/Administration). The Section level is organizationally between Branch and Incident Commander.

**Branch:** That organizational level having functional, geographical, or jurisdictional responsibility for major parts of the incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section. Branches are identified by the use of Roman Numerals, by function, or by jurisdictional name.

**Division:** That organizational level having responsibility for operations within a defined geographic area. The Division level is organizationally between the Strike Team and the Branch.

**Group:** Groups are established to divide the incident into functional areas of operation. Groups are located between Branches (when activated) and Resources in the Operations Section.

**Unit:** That organization element having functional responsibility for a specific incident planning, logistics, or finance/administration activity.

**Task Force:** A group of resources with common communications and a leader that may be pre-established and sent to an incident, or formed at an incident.

**Strike Team:** Specified combinations of the same kind and type of resources, with common communications and a leader.

**Single Resource:** An individual piece of equipment and its personnel complement, or an established crew or team of individuals with an identified work supervisor that can be used on an incident.
## DISASTER RESPONSE SUPPLIES / EQUIPMENT

### IMMEDIATE RESPONSE

<table>
<thead>
<tr>
<th>In-house source of immediate supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>33 gal. plastic trash can with wheels and lid</td>
</tr>
<tr>
<td>1 roll 10' x 100' 2 mil plastic sheeting</td>
</tr>
<tr>
<td>1 roll masking/duct tape (tape sheeting)</td>
</tr>
<tr>
<td>1 spool packing string (hang sheeting)</td>
</tr>
<tr>
<td>10 large plastic trash bags (to fit can)</td>
</tr>
<tr>
<td>2 large sponges</td>
</tr>
<tr>
<td>1 - 5 gal. bucket</td>
</tr>
<tr>
<td>1 box disposable nitrile gloves</td>
</tr>
<tr>
<td>1 roll &quot;Do not enter&quot; barricade tape</td>
</tr>
<tr>
<td>2 rolls paper towels</td>
</tr>
<tr>
<td>1 pair scissors</td>
</tr>
<tr>
<td>1 dozen pencils, sharpened</td>
</tr>
<tr>
<td>2 black permanent marking pens</td>
</tr>
<tr>
<td>lined paper pad</td>
</tr>
<tr>
<td>flashlight (self standing, extra batteries)</td>
</tr>
<tr>
<td>10 dust masks</td>
</tr>
</tbody>
</table>

### PERSONAL PROTECTIVE SUPPLIES

| Aprons (plastic, disposable) | X | X | X | X |
| Gloves (disposable nitrile, work) | X | X | X | X |
| Hard hats | X | X | X | X |
| Masks and respirators | X | X | X | X |
| Rubber boots (non-skid) | X | X | X | X |
| Vest with pockets | X | X | X | X |
| Goggles | X | X | X | X |

### DISASTER RESPONSE SUPPLIES / EQUIPMENT

<p>| Air conditioners (portable) | X |
| Baricade tape (&quot;Do Not Enter&quot;) | X | X |
| Blotting paper (white) | X |
| Boxes (sturdy cardboard) | X |
| Brooms and dustpans | X | X |
| Brushes (soft, natural bristle) | X |
| Bubble pack | X | X | X |
| Buckets | X | X | X | X |
| Camera (digital) | X | X | X | X |
| Cellular phone (w/ emergency numbers) | X |
| Clothesline or heavy packing string | X |
| Clothespins (rust proof) | X |
| Dehumidifiers | X |
| Dish drying racks (plastic covered) | X |
| Dry ice | X |
| Extension cords (50 ft., heavy duty, grounded) | X | X |
| Fans (floor, window) | X | X |
| First aid kit | X | X | X | X |
| Flashlights (self standing, extra batteries) | X | X | X | X |
| Freezer or waxed paper | X |</p>
<table>
<thead>
<tr>
<th>DISASTER RESPONSE SUPPLIES / EQUIPMENT</th>
<th>IMMEDIATE RESPONSE</th>
<th>RINSING</th>
<th>AIR DRYING</th>
<th>FREEZING FOR STABILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garbage bags (large plastic)</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Generator (portable, fuel supply)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hose (garden-type with adjustable nozzle)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Monitors (temperature and humidity)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Ladders and kick stands</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Mat board</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Metal book trucks</td>
<td>X</td>
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<tr>
<td>Microspacula</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Moisture meter</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mops</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Newsgprint (un-inked, blank)</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Office supplies (paper pads, pencils, waterproof pens/markers, flipcharts, large self-adhesive labels)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Pallets</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Paper towels</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Photo Flo, wetting agent (KODAK)</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Plastic bags (e.g., Ziplock, quart and gallon)</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Plastic sheeting (polyethylene) rolls</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Plastic trays (photo trays or shallow dish pans)</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Plexiglas sheets</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Plywood or masonite board</td>
<td>X</td>
<td></td>
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<tr>
<td>Polyester film (e.g., Mylar)</td>
<td>X</td>
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<tr>
<td>Polyester, spunbond (Reemay, Hollytex)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Pump (portable)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolling carts, book trucks</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>String (packing string on spool)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td>Scissors</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Screen (nylon)</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Shrinkwrap</td>
<td></td>
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<tr>
<td>Silicone release paper</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sponges (regular, soot)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Tables (portable, folding)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Tags (waterproof, Tyvek)</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Tape (masking, packing, duct)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tool kit (crowbar, hammer, pliers, screwdriver, wire cutter)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Towels, rags (absorbant, cotton)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Utility knives (extra blades)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Vacuum cleaner (HEPA for soot or mold)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wet vacuum (10 gallon industrial)</td>
<td>X</td>
<td></td>
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</tbody>
</table>