This study collected disaster plans from a systematic sample of twenty-seven libraries at small, liberal arts colleges chosen from the Carnegie Classification of Institutions of Higher Education. Ten of the twenty-seven college libraries that were contacted provided written disaster plans. A list of seventeen requisite criteria constituting a well-designed disaster plan was formed, and the contents in each of the plans were analyzed to see if they included or excluded each of the criterion. It was found that two of the seventeen criteria were met in all of the plans, while another two of the criteria were mentioned in fifty-percent of the plans. The remaining results all fall somewhere in between those two percentages. Previous studies had indicated that 20% of academic libraries have written disaster plans in place. Thirty-seven percentage of the libraries contacted in this study had written disaster plans, and their plans were very likely to include some of the most important elements of a library disaster plan.

Headings:

Disaster planning

Academic libraries -- United States

Academic libraries -- Administration

Emergency management
DISASTER PLANNING FOR SMALL LIBERAL ARTS COLLEGE LIBRARIES

by
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Approved by

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Introduction

The twenty-first century academic library faces an unprecedented set of challenges in planning for disasters that threaten to debilitate its collections. Historically, disaster planning and recovery have revolved around protecting a library’s physical collections, staff members, and facilities (not necessarily in that order). Developments and trends in librarianship over the past decade, however, have heaped on working professionals the additional burdens of protecting a library’s digital assets and electronic resources. Recent changes have ushered in the accompanying stresses of service continuity in the immediate aftermath of a disaster, which is an oft-emphasized professional goal in many high-functioning libraries. In academic settings, service continuity almost always involves reliable access to electronic resources, although with good doses of ingenuity and resourcefulness, it can be done using physical resources that may still be intact.

Moreover, two major occurrences over the past two decades have been particularly instrumental in catapulting disaster planning onto center stage for librarians in the U.S. The first was the events of September 11, 2001, and the second are Hurricanes Katrina and Rita, which afflicted the Gulf Coast in 2005. These may have been rude awakenings for the institutions affected, but the lessons were missed by none. For libraries housing strong academic collections as well as unique materials (e.g., specific area studies collections, archives, or regional history), a comprehensive disaster plan is the bare minimum that should be in place. Those who publish accounts of their
disaster management experiences unanimously agree that if a major catastrophe were to strike (e.g., hurricane, earthquake, terrorist attack), sadly, no disaster plan is remotely adequate to combat the havoc it can wreak.

That said, a detailed disaster plan is still necessary because it can do wonders to absorb the shocks of lesser disruptions. Disaster plans are not written and developed by libraries to prevent disasters from occurring; indeed such a claim would be absurd. Rather, they are seen as blueprints for strategies to mitigate the harmful effects that libraries are bound to experience in the wake of a deadly disaster.

Even though a plethora of literature exists on library disaster planning, there are no authoritative best practices published to advise academic libraries. Instead a good number of practitioners have attempted to promulgate their good practice suggestions into journal articles and editorial pieces. Thus articles and books on this topic are easily found. Librarians who are most likely to publish articles on good practices are those who have experienced severe disasters in their libraries. Additionally conservation and preservation experts, as well as individuals who are seasoned in negotiating with contractors to handle their disaster needs are likely to contribute too.

The focus of this study is on disaster planning in libraries at four-year liberal arts colleges in the U.S. For the sake of consistency, the study was focused on facets of disaster management in libraries of comparable sizes and at similar institutions. There are several overarching research questions that this study is interested in answering.
1) *How likely are small, liberal arts college libraries to have disaster plans for their libraries?*

2) *How do the plans protect their physical collections?*

3) *How do the plans protect their digital collections?*

The study looked at libraries at four-year liberal arts colleges. These libraries typically collect materials to meet students’ needs, thus operating in tandem with the institution’s overarching goal of serving its undergraduate students, typically its only student body. In rare cases, such colleges may host graduate departments, but they are generally limited in size, and are few and far in between. The vast majority of these college libraries also maintain archives and special collections, in addition to their regular library collections. Their status as guardians of their institutions’ history goes without questioning. Gifts and donations contribute to these collections, and these libraries continuously serve as repositories for archival materials that are relevant to scholarly research.

“Disaster planning” in the library world is an umbrella term that can refer to any set of protocols used for protecting library collections if and when a so-called “disaster” occurs. Disasters can be naturally-occurring or human-caused. Examples of natural disasters would be earthquakes, floods, hurricanes, or tsunamis. Human-caused disasters can include violent attacks inflicted with malicious intent, but can also include innocuous ones such as water pipes leaking, ceilings toppling, walls breaking, all of which are absent of malicious intentions. This study acknowledges the possibility of all the above scenarios.
Why must a disaster plan be necessary at all for an academic library, or any library for that matter? Intellectual assets, like any other assets, are prone to damages. When it comes to planning for the uncontrollable, it is said that an offensive strategy is always preferable to a defensive strategy alone. What a serious disaster plan does is provide a preventative strategy for coping with disaster, even if it does not explicitly call its plan “prevention.”
Literature Review

The literature that exists on library disaster planning consists of a mixture of case studies, journalistic pieces, and good practice methods. Books published on this topic are especially useful – unlike most of the articles, they offer comprehensive overviews of library disaster planning, and are written using non-academic language. Library practitioners creating viable disaster plans may wish to consult Comprehensive Guide to Emergency Preparedness and Disaster Recovery (Wilkinson, 2010), Library Disaster Planning and Recovery Handbook (Alire, 2000), and Protecting Your Library’s Digital Sources: The Essential Guide to Planning and Preservation (Kahn, 2004). Either one of the first two titles is an excellent source to have on hand for planning; they are both written with the practitioner as the intended audience. Kahn’s work is one of the few books devoted exclusively to helping librarians protect their digital resources, and can fill in the gaps that exist in the first two works.

There is also growing availability of ready-made tools and templates online and in print to help individuals with planning for their libraries. The American Library Association (ALA) and the Federal Emergency Management Agency (FEMA) sites are two of the first places that librarians visit for information. Generally speaking, the literature on this topic is best read after first observing a few well-written, comprehensive disaster plans from academic libraries. Many of the suggestions and methods touched upon will make more sense after seeing what some libraries chose to include in their plans.
A significant body of literature, which is updated regularly, centers on good practices for library disaster planning. This has been particularly true over the last seven years, in light of Hurricane Katrina’s irreparable damages to libraries and institutions. Wilkinson’s book on disaster planning cites a 2005 study that 80% of libraries do not a plan in place, which if still true in 2012, makes such literature even more relevant. While a best practice method has yet to be perfected, the literature has established benchmarks for which proper planning should aim to meet. In his 2006 article “Disaster recovery and continuity planning for digital library systems,” H. Frank Cervone cites a staggering statistic: “Two out of five organizations that experience a disaster are out of business within five years.” He proposes modeling library disaster recovery planning after business continuity planning, borrowing upon the best practice methods that have been put forth in that arena. Andy Corrigan of Tulane University believes that the need to “separate recovery work from normal work” is the way to keep libraries functioning after a disaster (Topper, 2011, p. 50). The general consensus amongst libraries with steady funding is that librarians should continue to do what they were hired to do since the demand for their services will be high after a disaster. Furthermore Wilkinson suggests that “negotiating a contract with local and national disaster recovery services before a disaster strikes saves time and cost later” (2010, p. 17).

To date, there is no standardized method of creating a disaster plan, but a good portion of the literature advises prioritizing items in the collections. This seems to be an unspoken consensus amongst libraries that archives, specialized collections, or rarities take precedence over other items, under the reasoning that they cannot be replaced with time or money. There is also frequent mention of saving nineteenth and twentieth
century leather-bound volumes for the same reasons listed above. Afterwards the library’s regular physical collections are generally listed in level of importance. The monetary values of these materials are not the sole determinants of where they rank in order of importance, but rather if and how they can be replaced at all. Having some sense of what is more important than others and why results in a more direction-focused disaster plan. In the case of an actual catastrophe, it would presumably eliminate indecisiveness over which items deserve to be repaired professionally.

The biggest difference between the books and the articles are that books typically state explicit steps that should be taken to write a cohesive plan. Articles, on the other hand, are more likely to describe steps that are specific to certain situations. Fleischer & Heppner (2008) attempt to bridge the gap between theory and practice in “Disaster Planning for Libraries and Archives: What You Need to Know and How to Do It.” Their recommendations are based on dividing the planning process into clusters of information gathering, creation, and training. This last phase is often seen as the dividing line between libraries which succeed in coping, and those which do not. Other articles are in agreement that actually training staff members to carry out their assigned duties will make the disaster plans come alive. Indeed Pearce-Moses and Yakel (2007) worked to promote the MayDay project, an awareness project encouraging libraries everywhere to devote the first day of May each year to take specific steps towards disaster planning. For libraries that already have written plans, they suggest devoting the day to training staff members. Oftentimes heightened confusion and unfamiliarity in emergency situations are facts that staff members do not anticipate, and may impede them from acting promptly and decisively when an emergency arrives, even if the library has a
A strong plan in place (p. 18). Staff training can also act as a way to “test components of the plan” to gauge how practical they are when implemented (Yeh et al., 2010, p. 260). By involving more people in the process, libraries automatically increase their pool of people who can contribute ideas and assist in modifying the plan regularly.

Another recurring theme of disaster planning is making good use of outside consultants, although most advise having a knowledgeable library staff member negotiate with these consultants. They are almost always profit-driven, and do not always have the library’s best interests at heart. The key is to use these sources of help, but on one’s own terms. In order to negotiate the best prices and contracts, it is crucial to seek them out ahead of time. In “The Seven Deadly Sins of Disaster Recovery,” Silverman contends that “pre-selecting a reputable professional disaster recovery firm and authorizing several people within the institution to contact it if its services are ever required is a proactive and responsible step” (2006a, p. 44). Since librarians are not necessarily skilled in grappling with disasters or in repairing severely damaged items, these outside sources may include commercial disaster recovery firms (“capable of marshaling large amounts of labor quickly”) or commercial recovery firms (2006a, p. 34). As Andy Corrigan explains, “disaster management is its profession with its own quickly evolving technologies and standard practices…much of the response itself is better left to the experts” (2006).

When a library’s budget does not allow for contracting with expert help, good practice suggestions still abound for those who shoulder these responsibilities. Using web portals to unify the best information available (Mandel, McClure, Brobst, & Lanz, 2010) and collaborating with neighboring institutions to co-plan for disasters (Matthews,
2005) are strong methods of coping. Almost all of the literature on good practices emphasizes safety of people over that of objects.

Aside from publications on good practices, another prevalent source of information on disaster planning is contained in the numerous case studies available. Post-Katrina literature is filled with such examples, and there are becoming more commonplace in academic journals in the library and information science fields. Elisa Topper’s post-disaster piece recalls how Tulane University’s Howard-Tilton Memorial Library recovered from the damages it experienced. Much knowledge can be gleaned from such sources – while this information is not based on academic research, these narratives offer real-life examples of what can go wrong when disasters strike. The salvaging techniques and decisions that were made are specific to the institutions at which the disasters took place, but they can be of tremendous use to institutions that have similar collections, facilities, and obstacles.

Another body of literature on this topic pertains to service continuity in the face of disasters, occasionally using ideas borrowed from business continuity. While most articles focus on disaster planning within libraries, particularly in saving and recovering collections, another aspect of disaster planning that must be addressed is how to carry on and continue to serve patrons. In articles such as “Selected Resources for Emergency and Disaster Preparedness and Response from the United States National Library of Medicine,” practitioners discuss the roles of health sciences libraries in providing reference services during times of disasters, given the health-threatening nature of such events. Service continuity is part of the operations recovery side of disaster management, but is very much a demanding reality when a disaster occurs. Knowing if and how to
continue services in spite of the setbacks is within the purview of library managers, and
the literature addresses in depth how some of the most prestigious health science libraries
have planned for these situations.

Overall there is no dearth of literature on library disaster planning. There is an
upward trend for publishing on this topic, and more literature is to be expected. The
destruction caused just recently by Hurricane Sandy will likely result in more literature
on the topic of disaster planning.
Methodology

In order to answer the research questions posed in this study, a group of liberal arts college libraries were sampled. Academic libraries vary in sizes and types, but this study was interested in sampling libraries of one type so that it would be able to generalize about their disaster plans. Rather than selecting academic libraries at random, a specific type of academic library was targeted in order to ensure validity and consistency. The results are not intended to be an accurate description of all academic libraries, but rather of only four-year liberal arts college libraries. With smaller collections and staff sizes, it was presumed that their disaster plans would be smaller in scale, and thus more suitable for the scope of this study.

Schools were selected at random from one of the lists assembled by The Carnegie Classification of Institutions of Higher Education (http://classifications.carnegiefoundation.org/), which includes all accredited, degree-granting institutions. According to the Carnegie Foundation for the Advancement of Teaching, its classification system is the “leading framework for recognizing and describing institutional diversity in U.S. higher education for the past four decades” (Carnegie Classification, 2012).

Most recently updated in 2010, it provides a timely classification of all types of institutions, including the liberal arts colleges that this study needed. The Carnegie Classification has “been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of
research studies to ensure adequate representation of sampled institutions, students, or faculty.” (Carnegie Classification, 2012)

The following classification and category was chosen as the pool from which the colleges were selected: “Bac/A&S: Baccalaureate Colleges--Arts & Sciences.” The Carnegie website defines Baccalaureate Colleges in the following manner: “Institutions where baccalaureate degrees represent at least 10 percent of all undergraduate degrees and where fewer than 50 master's degrees or 20 doctoral degrees were awarded during the update year.” (Carnegie Classification, 2012) The “Bac/A&S: Baccalaureate Colleges—Arts & Sciences” classification currently includes 270 institutions, the vast majority of which are private and not-for-profit. It should be noted here that this lists the names of institutions, not libraries. The libraries housed at these institutions, however, were the ones that were contacted, and not the institutions themselves.

A systematic sample with a random starting number was drawn from the list of 270 institutions. Sampling each tenth school resulted in a sample of exactly 27 colleges. Beginning on September 28, 2012, all 27 college libraries were contacted, and followed up with over the next month.

Twenty-seven college libraries were approached to find out if each had a written disaster plan in place. The websites of the libraries at these institutions were consulted, and a staff member at each of the libraries was contacted. Using their websites, email addresses and telephone numbers of persons were identified. The selected staff member was contacted via email, telephone, or over their chat reference service. Two additional attempts at contacting a knowledgeable staff member were made for libraries that did not respond after the first attempt.
After studying the literature and the disaster plans that were collected, it was determined that certain criteria were necessary to constitute an exceptionally adequate disaster plan. These individual criterion points were assembled into a master list of 17 criteria, each of which was used as a unit of analysis. Some of these units were suggested by the literature, and others were taken from the plans themselves. Each plan was then examined and evaluated for its inclusion of the units of analysis, and a chart was created to keep track of which units were covered by each plan. This constituted the content analysis portion of this study, and resulted in a clear, numerical depiction of what these plans contained.

The 17 units of analysis those were determined to be important parts of a library disaster plan are described in detail in the chart below (Figure 1). Brief descriptions of the units are given to explain what they are, and why they are relevant for the plan.

<table>
<thead>
<tr>
<th>Unit of Analysis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction or Statement of Purpose</strong></td>
<td>An introduction to the disaster plan. It can, but doesn’t have to state a grander purpose that the plan hopes to satisfy. Usually it offers an overview of how the plan is organized, a brief description of the library’s collections, staff members, or anything it believes is important to state up front.</td>
</tr>
<tr>
<td><strong>Date of Last Update</strong></td>
<td>A note of when the plan was last updated or edited.</td>
</tr>
<tr>
<td><strong>Staff Training</strong></td>
<td>Any mention of how and when library staff will receive training on how to execute the disaster plan. Some will be only a sentence, and others will be very detailed.</td>
</tr>
<tr>
<td><strong>Contact Numbers</strong></td>
<td>A listing of telephone numbers, directory, or telephone tree of important people to reach.</td>
</tr>
<tr>
<td><strong>Directions on Evacuating People</strong></td>
<td>A good disaster plan will always put the safety of people before saving its</td>
</tr>
</tbody>
</table>
collections. This section can be a brief mention of the important of putting first, or it can include details directions for how to safely evacuate the building in the case of an emergency.

**Collection Priorities**

A plan must prioritize the items in its collections. Ideally everything will remain intact. In the case where some items are more valuable than others, some sort of prioritization must be stated ahead of time. A good plan will have this. The more detailed, the better.

**Lists of Supplies**

Very few things can be accomplished without supplies. A mention of which supplies are necessary and where they are located is a must.

**Procedures for Handling Harmful Materials**

Instructions on how to proceed with harmful or dangerous materials. Ideally this would include diagrams, but is not a must.

**Procedures for Salvaging Damaged Materials**

Instructions on how to repair, preserve, or immediately handle damaged collection items. Ideally this would include diagrams, but is not a must.

**Diagrams/Illustrations/Maps**

Disaster recovery is both broad and complex. An excellent disaster plan will make full use of diagrams, illustrations, and maps to communicate the contents visually.

**Furniture/Equipment**

An explanation of how furniture and equipment in the library should be handled during a disaster.

**Technical threats**

Technical threats are inconvenient circumstances where the library’s operations are compromised because of a technical failure. With libraries’ increasing dependence on internet access, this type of failure needs to be planned for. A good plan will mention how to cope with these types of threats.

- **Power failure**
- **Internet failure**

Examples of technical threats.

**Natural threats**

Natural threats are those that arise from nature. The content analysis will focus on the plans having them, rather than on specific disasters. Since these have the ability to effect large-scale damage, it is
| **Water**  | **Examples of natural threats.** |
| **Natural Disasters** | |
| **Biological problems** | |
| **Fire** | |

**Human-caused threats**

| **Bomb** | **Examples of human threats.** |
| **Vandalism/theft** | |
| **Arson** | |
| **Armed Violence** | |

**Outside Contractors**

‘Outside Contractors’ is a generic term that encompasses people and organizations outside of the library that have the tools, skills, and money to help the library cope with disasters. Almost every library will have some sort of outside contact(s) to help it grapple with such issues.

| **Conservationists** | **Examples of outside sources.** |
| **Preservationists** | |
| **Freezing Facilities** | |
| **Storage Facilities** | |
| **Disaster Management** | |

**Preventative Measures**

Outlines specific steps that the library is taking to prevent damages.

**Recommended Literature/Bibliography**

Disaster plans that have consulted the literature are likely to be stronger than those that were not. It also helps other libraries to know which references were used.

| **Figure 1** |

A chart was created to identify which plans had which of the 17 units of analysis described in Figure 1. During the content analysis, the names of the colleges to which the plans belonged were included so that the information could be organized. In the Results section, however, the names are omitted. The disaster plans are referred to by number. A
check mark was used to denote if a plan met a criterion. If it did not, the space was left blank.
Results

As described in the Methodology section, a systematic sample of 27 liberal arts colleges was drawn from the list of 270 institutions provided by the Carnegie Classification of Institutions of Higher Education. Beginning on September 28, 2012, staff members at the 27 college libraries in the sample were contacted and asked about their disaster plans. For those that did not respond after the first attempt, two additional attempts were made. At the end of one month, individuals from 22 of the 27 college libraries contacted had responded, yielding an approximately 81% response rate. Only 5 of these 27 libraries failed to respond. (19%).

Of the 22 libraries that responded, 10 (37%) provided written disaster management plans that were used for the content analysis portion of this study. Another 3 of the 22 libraries claimed to have plans, but were not willing to provide them to the public. The remaining 9 reported that they did not have written plans in place. The response patterns of these 27 college libraries are displayed in Figure 1 below.

<table>
<thead>
<tr>
<th>Response Results</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Libraries that responded</td>
<td>22 / 27</td>
</tr>
<tr>
<td>Libraries that did not respond</td>
<td>5 / 27</td>
</tr>
<tr>
<td>Of the libraries that responded, the ones that provided copies of their plans</td>
<td>10 / 27</td>
</tr>
<tr>
<td>Of the libraries that responded, the ones that had plans but did not provide them</td>
<td>3 / 27</td>
</tr>
<tr>
<td>Of the libraries that responded, the ones that didn’t have plans</td>
<td>9 / 27</td>
</tr>
</tbody>
</table>

*All percentages are rounded to two significant figures.

Figure 2
The 10 libraries that provided disaster management plans for this study submitted them electronically to the researcher via the staff member(s) who responded. Of these ten libraries, three also published their plans online, making them freely available to the public. However, it should be noted that many libraries have multiple variations of their disaster plans, and the documents provided online to the public are not always the same documents that libraries consider their “master copies” (Wilkinson, 2010). An institution may wish to maintain the privacy of personal contact numbers, information pertaining to the storage of sensitive materials, and other public safety information. All of the plans analyzed in this study were released with full permission of their respective libraries. If there was confidential information in these documents, such as private contact numbers or addresses, they were all removed before being sent to the researcher.

Information in the 10 plans was analyzed using content analysis techniques. As was explained in the Methodology section, the literature related to best practices in disaster planning was studied, and a list of 17 attributes of good effective disaster plans was drawn up. Each plan was coded according to 17 units of analyses. Each plan was read and studied to determine which of the 17 criteria it satisfied.

In doing the content analysis, the units “Technical Threats,” “Natural Threats,” “Human-caused Threats” and “Outside Contracts” were further broken down into subcategories. Each library’s disaster plan is tailored to the library’s specific needs and anticipations. Rather, the plans were checked for inclusion of the broader categories to which they belong. For example, “floods” and “arson” were not documented, but “Natural Threats” and “Human-caused Threats” were.
The names of the libraries to which these plans belong were also omitted and replaced with numbers instead to protect the confidentiality of the libraries participating in the study. The results of the content analysis are displayed in Appendix A. While some plans meet certain criteria points more completely than others do, these plans were coded only to show the presence of each criterion. Although some plans merely touch upon certain points, they are given credit for having included those areas.

A higher proportion of libraries in this sample have a written disaster plan in place than was expected. According to Randy Silverman (2006a), “only 20% of all U.S. collecting institutions have a written disaster plan.” Frances Wilkinson (2010) corroborates this claim: according to a 2005 study cited in her book *Comprehensive guide to emergency preparedness and disaster recovery*, 80% of academic libraries do not have plans. Thirty-seven percent of the small, liberal arts college libraries in this study have a written, comprehensive plan in place. Unfortunately, there have been no prior examinations focusing strictly on the small liberal arts college libraries that were the foci of this paper, so it is not possible to say at this time if the sample studied here was similar to other studies. However, the content analysis uncovered many interesting finds.

The most frequently-covered criteria in the 10 disaster plans studied were “Date of Last Update” and “Outside Contractors.” These were all mentioned in 100% of the plans. The fact that all the plans mentioned outside contractors is consistent with the literature on good practices; libraries are making use of expert help in disaster management and recovery, and not relying solely on in-house expertise. “Negotiating a contract with local and national disaster recovery services before a disaster strikes saves time and cost later” (Wilkinson, 2010, p. 17). Without fail, these plans list up-to-date
names and contact information for companies that specialize in helping libraries recover from disasters. It is also a good sign that libraries are mentioning their dates of updates. Oftentimes a disaster plan is revised by many different people, and it is good to know the timeliness of this information.

The following areas were included with near-completion at 90%: “Contact Numbers,” “Collection Priorities,” “Lists of Supplies,” “Procedures for Handling Harmful Materials,” “Natural Threats,” and “Human-caused Threats.” These are all extremely important categories, as they deal directly with the safety of people and collection items. Any plan that is missing any one of these categories should consider including it. While the literature recommends having a telephone tree, the content analysis here did not code for that category (Fleischer & Heppner, 2009). Libraries vary in sizes and staff, so the researcher considered having a clear listing of people to contact was sufficient.

The following areas were covered a little less frequently with 80% completion: “Introduction or Statement of Purpose,” “Procedures for Salvaging Damaged Materials,” and “Technical Threats.” Having an introduction is always helpful, but lacking one does not weaken a plan in any critical way. Having procedures for salvaging damaged materials, however, is more important. Even without the occurrence of a disaster, materials in a library are bound to be damaged at one point or another. It is important to have directions on how to repair them during normal operations. Technical threats also occur on a regular basis (often unexpectedly), with or without being precipitated by a major disaster. It would behoove any library to have directions on how to cope with technical problems during non-emergency times.
Somewhat less-frequently mentioned at 70% were the following criteria: “Staff Training,” “Directions on Evacuating People,” and “Furniture/Equipment.” While furniture and equipment are typically lower on the totem pole in terms of collection priorities, some libraries may house expensive equipment, such as overhead scanners and servers. If that is the case, it would make sense to still have plans for protecting those assets. “Diagrams/Illustrations/Maps” was included in 60% of the plans studied. The lack of diagrams, illustrations, and maps in 40% of the plans may not necessarily be a hindrance to their effectiveness. But because the diagrams in the plans that do include them are so clear and helpful to understanding the text, it was determined that they are an essential component of a well-constructed disaster plan. In one plan, for example, illustrations demonstrate the correct and incorrect ways of packing books. This conveyed more information than the accompanying chunks of small-sized text describing the proper ways to pack books. In another plan, floor plans and maps of the entire library were included, marked with arrows indicating exit paths.

For staff members and patrons attempting to understand how to proceed in the case of an emergency, diagrams are indispensable documents. Substituting diagrams and illustrations in lieu of text, wherever appropriate, can cut down on the amount of time it takes reader to understand the location(s) of items and the procedures to follow. According to Fleischer and Heppner, “this portion of the plan may also include floor plans that highlight the location of exits, fire suppression systems, and firefighting equipment such as hoses and extinguishers” (2009, p. 136).

Lastly, the least frequently-covered areas were “Preventative Measures” and “Recommended Literature/Bibliography,” both of which were covered in only 50% of the
plans. While prevention is not a criterion that typically constitutes the meat of a plan, the literature states that prevention is an extremely crucial part of disaster planning that is sometimes neglected. Even amongst the plans that did include sections on prevention, not all of them did so in-depth. A few just merely wrote that prevention measures should be developed with more sophistication at some future point in time. Including a bibliography is helpful to other libraries; it shows where the research for the plan came from, and serves as an invaluable reference for librarians just beginning to gather research for their plans.

It would appear from the results that most of the criteria that go into an exceptionally adequate disaster plan were covered by the plans here. Nonetheless it would be remiss not to make distinctions between the depths and lengths at which these are covered from plan to plan. While Appendix A may indicate that the plans of most libraries include information about these topics, some of them did so at a superficial level since if any of these areas were mentioned in the plan, that plan was coded to include them. Further insight into how these areas of the plans are fleshed-out is not reflected in the chart.
Discussion

The results of the content analysis in this study provide many useful insights for libraries thinking about writing disaster plans. A library that is creating a disaster plan from scratch can glean a great deal of valuable information from these results about what should be included in a strong, comprehensive plan. While no two libraries face the exact same set of challenges, there are many commonalities in the types of difficulties that every library can be expected to face. Gaining a firm understanding of what other libraries have in their disaster plans is not only time-efficient and smart, but is also consistently recommended by the literature.

Research finds that having even an exceptional disaster plan in place is no guarantee of preparedness. A well-written plan that is not ingrained into the minds of the people who are in charge of implementing it is futile. Only one of the plans seriously emphasizes the importance of training staff members periodically during normal work hours, while the remaining 60% merely touch upon it. Training people to partake in meticulously-designed procedures is the spark that ignites a plan to full effect. While 70% of the plans mention training to some extent, the only one plan explains why training is important, sets aside a timetable for ensuring that everyone becomes trained, and requires that every staff member receives a physical copy of the disaster plan. Training, as specified in this plan and elsewhere, can take the form of staff meetings, role-playing, or practice drills. Pearce-Moses & Yakel (2007) believe strongly in the significance of the “MayDay” project. By setting aside something as minimal as one day
a year to uniquely address disaster preparedness can result in big differences in how staff members react to disasters.

An issue that was not addressed in the content analysis is the use of teams in the process of creating a disaster plan for a library. The literature recommends it, but it is not always immediately evident from the plans themselves if teams were used or not, so this was excluded from the content analysis. According to Wilkinson (2010), most libraries will assign a team of individuals to deal with disasters. Furthermore, in order to become a success, a good plan “needs to have buy-in and support from employees in every area of the library.” Unlike traditional library operations, disaster planning’s expansive scope necessarily involves the input of everyone in the library as well as the institution at large. Issues pertaining to electricity, power, or internet security are usually handled by other departments of the college. Fleischer and Heppner caution that “having a single individual working on the plan can miss significant components; thus, a team is advisable since it provides access to more opinions and input” (p. 128). It is recommended that disaster planning teams have at least one person who can comment on the institution’s security protocol. It “helps to have a range of experience and expertise so that plan does not have particular purpose” (Wilkinson, 2010, p. 19).

One plan that was included as part of this study does a particularly good job of outlining the roles of team members. What it included was not seen in any of the other plans. It clearly lays out the role of each person on its disaster planning team, beginning with the Library Director. In addition to their roles within the library, individuals responsible for contacting consultants and outside assistance have their roles outlined as well. Most plans will mention names of library staff members who should be contacted
in cases of specific emergencies, but this plan explains who is in charge of specific areas of the disaster management and why this person is most suitable for the role.

A crucial aspect of recovery that is covered extremely well by only a few of the plans is in handling harmful and/or toxic materials. Most plans offer basic, but inadequate, instructions for properly handling materials that may be wet, moldy, tainted with chemicals, or otherwise damaged. The plans that had the most fleshed-out procedures were naturally the most helpful. One can learn a lot about safely handling such materials just by reading what is outlined in these plans. Good examples include sections like “Options for Drying Wet Books and Documents,” in which various methods are covered. The best plans describe when a method is most appropriate for salvaging a book, at what temperatures they should be dried, what types of equipment are needed, and who should be contacted for help.

Moldy books are susceptible to further damage when they are not placed in the “right” temperature zone, and thus an adequate plan dictates the temperature ranges at which such books should be stored, and what kinds of protective gear staff members should be wearing when approaching them. Adequate instructions are typically written in a simple, easy-to-understand way, and are easy to carry out by staff members who do not have previous specialized expertise. In one such plan, their instructions for controlling mold are as follows: “Keep temperature monitored…Change the environment by increasing air circulation and decreasing humidity…Separate the affected materials to prevent spreading…Keep air circulating in the room.” While these elementary steps alone may not be enough to fully recover the books (this would need professional expertise), they are written in plain language that anyone can read quickly and take action
right away. One plan came up with an exceptionally effective way of communicating its recovery of damaged materials. It displays a “Disaster Recovery Flow Chart” that tells the reader the exact process through which damaged materials travel when they are first discovered to be damaged. Almost all of the plans that involve detailed instructions keep their sentences short, plain, and in the active voice. Eighty percent of the plans succeeded in attempting to describe how to salvage damaged materials, although a few fall short of giving truly detailed instructions.

A disaster plan is perhaps most crucial during unanticipated and uncontrollable natural and human-caused threats. These are also the types of extremities that grab people’s attention and prompt immediate action. Almost all of the plans (90%) cover the basics of what to do during natural threats, while 100% of the plans cover what to do during human-caused threats. One plan, in particular, accomplishes this very well. It lists specific questions that a library staff member should be asking if she receives notice of a violent threat over the telephone. It also lists six broad categories of natural and human-caused disasters, replete with specific instructions on how to deal with these disasters when they strike.

Collection priorities are also thoroughly covered in 90% of the plans. Almost all these libraries recognize the need to specify which collections deserve to be saved and/or salvaged over others. The plans that are most helpful in this area are the ones that break down the collection priorities by specific collections into a hierarchy. The most specific plan in this study numbers the collections in order to importance, while the vaguest one simply states the library’s preference for salvaging nineteenth-century leather-bound collections over modern-day equipment. Fleischer and Heppner recommend taking an
inventory of the collections’ value (unique, monetary, core), location (building, room, level, and shelving range), and identifier (p. 131). While none of the plans in this study reveals inventories of its collections, a few describe where their high-priority collection items are located in the libraries.

The content analysis included a category for “Prevention Measures,” and only 50% of the plans mentioned what their libraries are doing to actively prevent predictable disasters from occurring. While events such as hurricanes and earthquakes are not preventable, surprisingly the majority of disasters that occur in libraries are. Technical threats that are not actively prevented are more likely to pose more ongoing, frequent upsets in a library’s operations than the bigger, deadlier threats do. Mishaps such as poor plumbing, when left unaddressed, can cause significant damages over time. Fortunately, they are also highly preventable. Therefore, it is in libraries’ best interests to invest in preventative measures, be it purchasing adequate insurance, maintaining regular buildings and infrastructure inspections, or keeping storage facilities clean and dry.
Conclusions and Suggestions for Future Research

A basic truism of working in any type of library is that “the librarian whose career will not include a disaster of some kind is very rare and very lucky” (Wilkinson, 2010, p. 14). Moreover, Julie Todaro (2009) reports that natural disasters are occurring at a greater rate and in greater numbers. Climate change is a contributing factor, but changing population patterns is purportedly to blame for this shift in environmental disaster. In light of these ominous-sounding trends, libraries can expect to encounter only more of the unexpected, not less. If they are to successfully cope with an increased volume of disasters, the profession as a whole has to encourage the presumed 80% of libraries that do not yet have written formal disaster plans to make an earnest effort to do so.

It would appear that libraries with written disaster plans that have met the criteria specified in this study are as prepared as they can be. In the event of a devastating disaster, of course, there is always the element of surprise. But the literature seems to suggest that having a plan drafted to the best of one’s ability has direct consequences for how ably a library responds to a disaster. One of the best ways to improve one’s offensive strategy is to share ideas and suggestions with as many other institutions as time would permit. Library disaster planning is increasingly discussed at conferences and seminars, which is a positive sign that more is being done to grapple with the dangers of unpreparedness.

Miriam Kahn (2004) admonishes libraries that “born digital” files are “most vulnerable to time and technological improvements.” Unlike digitized files, whose
originals are backed up in hard copy formats, “born digital” materials do not exist in any other format. While none of the plans explicitly mentioned protecting these assets, it is not an indication that these libraries do not have measures in place to do so. It may be the case that this is not under the purview of the disaster recovery team. However, it would strengthen libraries’ disaster plans to include this information. The growing prevalence of born-digital files in library preservation underscores the importance of long-term preservation. The best defense against threats is to keep them stored in multiple, yet distinct places.

An example of a successful ongoing project is LOCKSS, acronym for ‘Lots of Copies Keep Stuff Safe,’ which offers open source digital preservation tools that libraries can use. Another example is the HathiTrust Digital Library, which is comprised of major research institutions that work together to ensure their collections are preserved for posterity. There is also a financial component that libraries need to consider should they choose not to use open source or low-cost programs.

Digitization is more prevalent in libraries with steady research funding, as well as in those that have acquired adequate digitization equipment. For the libraries sampled in this study, going to great lengths to protect their digital collections may or may not be a pressing concern at the moment. If current trends in librarianship are to continue the way they are, however, the types of libraries that this study focused on will have to pay more attention to the vulnerabilities of their “born digital” collections.
References


# Appendix A

## Content Analysis Results

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