Crisis Information Management Communication and technologies

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Public libraries and crisis management: roles of public libraries in hurricane/disaster preparedness and response

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Abstract: The hurricane damage that the United States Gulf Coast has sustained over the past decade was a catalyst for this study of the service roles public libraries provide in hurricane/disaster preparedness and response. Libraries have taken major steps to better meet community needs arising from these emergency situations. This chapter identifies new public library service roles, and discusses successful technology solutions and communications programs that public libraries can employ to assist local communities prepare for, and recover from, hurricanes and other disasters.

Key words: public library, disaster planning and response, hurricane, service role, emergency.

Introduction

The past decade has seen heightened hurricane activity in the United States, with more than $150 billion in damage in 2004 and 2005 (Petke, 2008). Florida has experienced 53 hurricanes or other severe storms since 2000, resulting in over $64 billion in damage and 149 related fatalities (List of Florida Hurricanes, 2010). In 2007, reacting to this history of hurricane damage, the State of Florida created the Florida Catastrophic...
Storm Risk Management Center (www.stormrisk.org) at Florida State University. This center supports the state’s need to prepare for, respond to and recover from catastrophic storms (Florida Catastrophic Storm Risk Management Center, 2010, para.1).

In 2008, the Information Use Management and Policy Institute (Information Institute; www.iui.fsu.edu) at the Florida State University was awarded a grant from the Florida Catastrophic Storm Risk Management Center to investigate Hurricane Preparedness and Response by Utilizing Florida Public Libraries (Hurricane Preparedness and Response; McClure, Mandel, Pierce, and Sneed, 2010). Since 2004, the Information Institute has collected data that describe the roles and services that public libraries along the US Gulf Coast (i.e., Texas, Louisiana, Mississippi, Alabama, and Florida) have played in hurricane disaster preparedness and response. These data come from annual national surveys of technology use and deployment funded by the Bill and Melinda Gates Foundation and the American Library Association (Bertot, Jaeger, McClure, and Langa, 2006), the Florida Division of Library and Information Services (McClure, Mandel, Sneed, Bishop, and Ryan, 2009), and from numerous interviews conducted by staff at the Information Institute (Bertot, McClure, and Jaeger, 2006). These data revealed a number of cases where individual public libraries joined together as partners to create local hurricane disaster preparedness and response teams. By working together, these libraries were able to leverage resources and contribute a range of skills and knowledge to handling information management and various communications prior to, during, and after such storms. Public libraries also have joined forces with local government agencies and community organizations to create integrated emergency response teams. This teamwork has placed public libraries at the forefront of emergency management networks, a position further supported by public recognition of libraries as trusted and effective government agencies. Individual public libraries have proved to be effective team members in supporting state and local government preparedness for, and response to, hurricanes and other disasters.

The Hurricane Preparedness and Response project’s intent was to reduce the state’s overall disaster risk by raising the readiness level of all public libraries to meet the challenges posed by these weather-related catastrophes. Specifically, this project:

- identified and organized relevant public library hurricane-related information resources, services, roles, and best practices;
- developed model plans, standards, guidelines, and recommendations, making them widely available via print and through an interactive web portal;
- offered strategies to assist state and regional public library and government officials with disaster coordination and organization responsibilities; and
- disseminated information resources, services, experiences, best practices, plans and guidelines to coordinate public library managers and government partners in order to better prepare for and respond to hurricanes.

Collectively, these project activities served to improve the state’s overall hurricane disaster preparation and response, reduce risk, and contribute to the mitigation of these crises.

This chapter begins by providing a brief overview of the background and methodology of the Information Institute’s Hurricane Preparedness and Response project, as well as a summary of the public library hurricane/disaster service roles. Then, the chapter details how libraries can coordinate and collaborate with other government agencies, specifically with local emergency operations agencies, to better assist their communities in managing crises. The chapter concludes with next steps and recommendations for how libraries can implement identified service roles and become more involved in community crisis management.

Background

Several significant efforts have examined the contributions made by libraries during times of disaster. An oral history project developed a knowledge base of stories about the roles that librarians performed during and in the aftermath of disasters (Featherstone, Lyon, and Ruffin, 2008). This knowledge base described service roles and activities related to emergency and disaster planning, preparedness, response, and recovery. The study identified eight service role categories:

- institutional supporters
- collection managers
disaster plan will be irrelevant’ (Davis, 2000: 341). Library disaster planning must be comprehensive, while retaining the flexibility to react to unforeseen emergencies. A formal planning effort provides the foundation that helps ensure that the library is ready to be an active participant in the community’s recovery efforts by engaging as a vital link in the larger emergency response scenario. In responding to disasters, service roles evolve and come to the forefront of the library’s service to the community.

In the US Gulf Coast region, libraries have demonstrated outstanding efforts towards providing services and support when hurricane events devastated their communities (McClure, Ryan, Mandel, Brosht, Hinnant, Andrade, and Sned, 2009). Welsh and Higgins (2009) interviewed library workers who had experienced Hurricane Katrina on the Gulf Coast. They found that those libraries that could open after Katrina prioritized their efforts to offer essential services, including access to computers and information via computers; assistance in filling out necessary relief aid forms; listening; providing comfort; and providing volunteer support to the community recovery efforts. Also, Jaffer, Lunga, McClure, and Berton (2007) conducted a number of interviews with public librarians and state library officials along the Gulf Coast regarding their activities, roles, and services during the 2004 and 2005 hurricanes. This study found that public libraries successfully provided a range of disaster preparedness and recovery services that were unique, as other government agencies were not providing and could not provide such services. The public libraries clearly played roles in both providing information and facilitating communication, illustrating the unique value that public libraries offer to their communities during and after disasters.

With over 2,200 public library outlets in the Gulf Coast states, virtually every community in that region has access to a nearby public library (National Center for Educational Statistics, 2003). To varying degrees, each of these libraries has the potential to contribute to or assist in emergency preparedness and response. These public libraries are exceptionally well positioned to provide emergency preparedness and response services, but they need access to information as to how to organize in order to assist their local communities effectively in emergency preparedness and response.

By developing plans, guidelines, and recommendations, as well as documenting best practices for how libraries can serve in these roles, the Hurricane Preparedness and Response project is designed to contribute to the overall success with which the Gulf Coast states can manage and respond to hurricanes and other disasters and reduce the impact of these
crises on Gulf Coast residents. Armed with such tools, public libraries, in partnership with other agencies, can mitigate some of the damage and destruction that these emergencies bring to the region. In this way, the project supports the region's need to prepare for, respond to, and recover from catastrophic storms and other disasters.

Project overview

Research by the Information Institute shows that libraries have responded to hurricanes and other disasters by taking steps to better prepare for the information needs of the libraries themselves and the communities they serve (McClure, Ryan, et al., 2009). Libraries have adapted their service roles to provide information services tailored to emergency support and assistance to hurricane victims (Bertot, Jaeger, Langa, and McClure, 2006; Jaeger et al., 2007; McClure, Ryan, et al., 2009). The project design specifically addressed the aforementioned need to conduct a systematic investigation of how libraries have responded to community needs during hurricane-related emergency management actions. Major activities to support that objective included:

- finding the best available recovery and preparedness information;
- conducting interviews with seasoned professionals to gather best practices;
- building a user friendly web portal to provide easy access to this information; and
- disseminating research findings and promoting the public library service roles to the Gulf Coast public library and emergency management communities.

The web portal provides an effective means of organizing and disseminating a range of information on how public libraries can assist local communities in preparing for and recovering from hurricanes and other disasters. That portal is available at http://hurricanes.lib.fsu.edu. Included within the portal is a more extensive discussion of project findings, which centers on eight critical service roles that libraries play in hurricane/disaster preparedness and response (described in the next section of this chapter).

Overall, the goal of this project was to work with public librarians to better assist their communities in preparing for and responding to hurricanes and other disasters. Individual public libraries provide a range of useful hurricane and disaster preparation and recovery services to their communities, but their discrete efforts are often isolated and unavailable to the rest of the library community. Fundamental to the project was the objective to identify the roles, best practices, activities, tools, and resources developed by local public libraries for their communities and to make them available to the larger library profession. All public library managers could help their communities respond better if they had the benefit of some portion of their fellow library managers' disaster experiences. The project had three critically important tasks: first, to identify useful information; second, to make that information available; and finally, to build awareness of the existence of that information to the user community.

Public library hurricane service roles

The project team interviewed over 200 public library managers and emergency management officials who had aided their communities to prepare for or recover from a hurricane or other disaster. These interviews revealed eight possible service roles performed by hurricane-affected libraries:

- **Safe haven**: The public library is the community's living room before and after a storm with secure buildings, relaxing space, light, air conditioning, bathrooms, and comfortable chairs.
- **Normal service**: The community counts on normal library service before and after the storm to provide hope, re-establish government presence, reduce stress, return normalcy, and offer recreation and distraction.
- **Disaster Recovery Centers (DRC)**: DRCs attempt to assemble under one roof all agencies providing disaster benefits, possibly as a Federal Emergency Management Agency designated DRC, a state, county or municipal DRC, a point of distribution (POD) of aid, or simply a place for neighbors to talk about their experiences and provide each other with aid.
- **Information hub**: The community counts on the library before and after a storm to offer access to various communication equipment, be a trusted provider of accurate, reliable information, produce needed information aids where they do not exist, and deliver this information using whatever technology the community uses and can afford.
- **Cultural organizations liaison**: Public libraries may serve as liaison points between emergency management agencies and the community's cultural organizations.
Joining the emergency response network

Before disaster strikes, library managers have an opportunity to focus on what they can control and manage. This includes preparing the library facility and staff, finding partners to help with preparation and recovery, and coordinating emergency response activities with local emergency operations leaders and government agencies as much as is reasonable. The team approach has proved to yield rewards greater than individual agency independent efforts. As one library manager noted, "If I can build a relationship with directors of [local, state, and federal] agencies, it brings credibility to the library." (personal communication, October 15, 2009).

The first step in managing disaster response partnerships is to gain a better understanding of what each potential partner does to support community-wide hurricane/disaster preparedness and response. Open and frank discussions need to be held with a range of local emergency responders and others about the resources necessary to provide services to the community while meeting partners' needs. The next step is to plan and coordinate what the library can contribute, what the library needs from each partner in order to do so, and how the library's activities can mesh with other partners' activities; as far as possible, the library and its partners should prepare and test these new arrangements prior to an emergency. Working out the details in advance saves time, significantly improves response time and quality, and helps form bonds of trust and understanding among partners.

The director of one county emergency management agency identified several areas where libraries have directly assisted local emergency responders during the hurricane season (personal communication, December 3, 2009). Libraries have served as recruitment centers to solicit volunteers because typically they are located centrally within a community or offer several convenient locations from which to recruit seasonal participants. The library can provide rooms for organizational meetings, including serving as a Volunteer Reception Center, coordinating and organizing newly recruited volunteers, and conducting training sessions. Also, the library can serve as a coordination point for scheduling volunteer activities and for last-minute recruiting of volunteers. Community rooms can support various emergency operations and recovery programs, and library technical staff and personal computer resources can support the information and communication needs that facilitate the emergency activities. Emergency agencies often recruit library staff members to help as volunteers, because library staff members tend to have excellent people skills, organizational skills, and information retrieval skills.

After a crisis occurs, it is useful to assess what worked and what did not, and then determine what other efforts can assist the community in the future. In initiating these collaborative efforts, the library and its partners should keep in mind that making arrangements to aid each other and to coordinate these activities takes time, and that what is possible may vary from location to location due to local situations and library-county or library-city policies. Other organizations can make significant disaster response contributions, such as Multi-type Library Cooperatives (MLCs), state library agencies, larger library systems, libraries adjacent to hurricane-affected libraries, library vendors, library membership organizations such as LYRASIS (LYRASIS, 2010) and other regional library consortia. The key, however, is for the public library (1) to clarify relationships, responsibilities, and activities with other community, state, and federal emergency agencies prior to a hurricane or disaster, and (2) to understand which of the service roles it has the capacity and knowledge to offer the local community.

Benefits of partnering with emergency management organizations

Libraries need to become an integrated element in the overall network of emergency response that prepares for and reacts to disasters. Libraries
can assist local, state, and federal emergency response efforts during each phase of emergency/disaster preparedness: planning, preparing, responding, and recovering. The following section addresses each of these phases and outlines specific activities that the library can undertake to better integrate the library into the local community's overall emergency response network, resulting in the provision of higher levels of service to the local community.

Planning phase

Libraries should take the initiative to introduce themselves to key officials and agencies involved with emergency management. This introduction will afford the library the means to promote the unique services that it can provide towards assisting in the overall disaster preparedness and recovery picture. Such services could include offering to display and distribute information, including print materials and electronic media. Through its reference services, the library can identify useful resources that the public can access in their efforts to gain information about planning for a disaster.

As an example, libraries often provide hurricane planning resources on the library’s website before and during the hurricane season. To complement this, the local emergency management agency’s website could add an active link to the library website, or the library could develop a special section of its website that addresses emergency preparedness. That special section would be a valuable asset to the public and would be another resource that the local emergency management agencies could promote or utilize. The special section of the website could include the identification of informative resources or practical guides that indicate how to develop disaster plans, for both individuals and for businesses. It also could include such helpful resources as links to the local emergency management agency’s website, assistance programs, evacuation services, and even online tutorials on texting, as this is often the only means of communication when there are widespread power outages (American Library Association, 2010).

Preparing phase

Once libraries have introduced themselves to the emergency management organizations in their area, they should update and review their own disaster plans with staff. Activities would include identifying and inventoried supplies needed for various disaster scenarios as well as beginning to develop materials for display and distribution. During this phase, the library should reach out to local emergency response agencies to obtain informative brochures and materials for public display and access. These materials may need to be available in English and also in other languages, as determined by the demographics of the local service area. At this point, the library can expand the website developed in the Planning phase as a valuable tool in helping to provide informative resources.

More intensive efforts during this phase could include developing library-sponsored programs tailored to address specific emergencies such as hurricanes, epidemics, terrorism, and chemical spills. Promotional and awareness-building activities can help the public recognize the role of the library as a source for emergency preparedness and recovery information, and can build awareness of how well the library integrates into the overall emergency response network. Building this awareness before a disaster hits will help the public respond to and recover from a disaster event.

Responding phase

Several beneficial steps can help prepare and inform the public upon notification of a disaster. In the case of hurricanes, there may be days of advance notice before the disaster strikes. During this time, the library can update its website to provide more targeted information that will enable the public to make last-minute preparations or to decide whether to stay in an area or evacuate it. By monitoring local emergency communications and staying abreast of ongoing developments, this information could be disseminated using the library website or library-sponsored social networking sites.

Building an awareness of the library as a vital resource during this emergency situation could include efforts to publicize the library’s role on its website and arranging on-camera interviews in the local news media. When disasters strike suddenly, such as tornadoes or earthquakes, the library can respond by posting relevant content on its website and providing links to key emergency agencies and relief organizations. As Internet connectivity may be sporadic, contact information should include telephone numbers and physical addresses.

Recovering phase

Once the immediate danger or disabling effects of a disaster have passed, the library should continue to provide ongoing updates to its website.
These updates could include information on library openings and closures, and provide current information on where to get help. Once the library is back to normal operations, local emergency management agencies should be informed as to which library outlets are open and what relief services they can provide. This approach of informing the emergency management agencies is the preferred procedure, as these organizations have priority access and are in a better position to prioritize the information that needs distributing. The library should initiate efforts early on to identify the appropriate officials who will handle such news releases. To maintain a steady and accurate stream of information to the emergency responders, the library should hold daily management briefings to provide updates on all recovery efforts and the availability of library outlets throughout the community.

The library also needs to have an emergency communications plan in place to ensure that information flows quickly and accurately throughout the organization. This plan could incorporate use of listservs, e-mail, texting, blogs, or social networking sites (such as Facebook, MySpace, and Twitter) to connect to and update library staff and library users. Many individuals can now access these social networking sites on their cell phones, should the library’s Internet access remain down due to service interruption caused by the disaster.

These are just a few examples of the ways in which the library can integrate itself more effectively into the larger emergency response network that springs into action when a disaster becomes imminent. Many of these efforts rely on early preparation to contact and coordinate with local emergency management officials. By starting early and building the necessary relationships, these activities will help the library to be better prepared and to be organized earlier in advance of a disaster, and then to operate more smoothly after a disaster. Additional guidance on integrating the library into the local emergency operations management organization is available via the Hurricane Preparedness and Response web portal (http://hurricanes.co.fsu.edu; Information Use Management and Policy Institute, 2010).

The web portal: a technology for crisis management

A web portal provides a means to gather together a wide range of information in a single location, in a way that is conveniently accessible to users and easily obtainable with just a few mouse clicks. Implementation of web-based technology has become a popular application in libraries, which already organize a wide range of information to make it accessible to users in a variety of locations. Examples of successful library portals abound, such as the highly localized SkokieNet from the Skokie Public Library (IL) and numerous MyLibrary portals like MyLibrary@NCState from North Carolina State University, BUILDER Hybrid Library Demonstrator at the University of Birmingham (UK), and MyLibrary@LANL service at the Los Alamos National Laboratory, among others (Buchmann, Greenwald, Jacobsen, and Roehm, 2009).

The Information Institute began this project by conducting a formal needs assessment, which included interviews with over 200 hurricane-experienced librarians, emergency management officials, and other experts in the field. This user-centric assessment indicated the need for a one-stop, comprehensive collection of hurricane and other disaster information. Interviewees indicated that such a consolidated resource would greatly improve the services librarians provide their local communities in hurricane/disaster preparedness and response. The needs assessment also indicated that librarians and emergency management officials required mechanisms to share information, collaborate, and communicate with each other. The project team determined that this need for a comprehensive collection of information and a collaborative communication platform would be met best by the creation of a Hurricane/Disaster Preparedness and Response web portal.

What the portal offers the practicing librarian

A guiding principle in the design of the web portal was to ensure that the information, resources, and best practices were readily available to all public libraries and their staff. With that principle in mind, the portal design provided an easy-to-use resource for librarians, containing valuable information on all aspects of hurricane preparedness, such as guidance on developing effective hurricane plans, integrating efforts with governmental agencies, and identifying best practices for public librarians. The completed web portal is dynamic, content-rich and delivers timely and relevant information to librarians, including emergency information, web-based resources, and informative links for multiple resources.
Interactive features such as the project blog and wiki promote effective collaboration and information exchange as libraries prepare for and react to emergencies. In addition to serving the needs of the librarians, these interactive tools provide effective communication mechanisms for integrating library efforts with the various local emergency response organizations.

Employing the web portal approach provided the Information Institute with the capability to consolidate and organize numerous resources in an easy-to-use structure while providing timely and relevant content. The portal (available at http://hurricanes.ufl.edu) provides a wealth of information for practicing librarians, including the following:

- a consolidated set of resources that provides everything librarians need in one place, including plans, workbooks, and success stories from disaster-experienced libraries;
- best practices for response and recovery that detail how libraries can prepare for and respond to disasters; and
- detailed service roles that explain how libraries can function as integral parts of the emergency response network.

In providing these resources to the library community in a consolidated and easy to use format, the web portal was very successful in supporting the project’s intention, which was to reduce the state’s overall disaster risk by raising the readiness level of all public libraries to meet the challenges posed by these catastrophes.

The coordination, management, and integration of information resources through the project web portal are important contributions to public library hurricane/disaster preparedness and response. In addition, the portal offers fast searching for resources on a variety of topics, with the best resources for each of the identified service roles through additional project data collection and analysis. Part of the original project plan was to evaluate the use of the portal before, during, and after a major hurricane. However, the 2009 hurricane season was relatively quiet for Florida and the Gulf Coast region, and this was not possible. Therefore it is not possible to include any examples of real use of the portal during an actual hurricane.

**Value of the portal**

The project team conducted interviews with practicing librarians to ascertain their views on the utility of the portal. The librarians indicated that they were pleased to have access to the wiki and blog to communicate directly with one another regarding requests and needs. Interviewees indicated that many times in the past they had problems exchanging ideas and sharing information quickly, and that the project blog provides a solution for that issue. The librarians also appreciated that they do not have to reinvent the wheel when it comes to creating library policies that would apply during a hurricane/disaster event, since the portal includes ‘real-life’ library policies. One librarian said, "It seems that everything you need to set up a plan and execute it is here and it is great to go to one place and find it at all rather than hopping around from library to library and different organizations’ [websites] with less information than is included here’ (personal communication, November 18, 2009).

Many librarians appreciated the Web 2.0 Tools section of the portal as a means to communicate amongst librarians and emergency responders, saying things such as ‘this could be a one-stop-shop for anyone who is a librarian’ (personal communication, November 5, 2009). Also, one remarked on the Web 2.0 tools’ usefulness for members of the library’s community, saying: ‘There’s a part for residents? I am curious about that. I can see that being extremely useful to people, they would be thrilled. When you are busy at the desk and you have 20 people asking you [to] set them up on a computer so that they can browse and get information. People can get practical information from people who have already done the research. Rather than a librarian saying "Maybe you could do this, or maybe you could do that.” A person could see that this person found groceries here, and they found ice there' (personal communication, November 18, 2009).

Although no major hurricanes hit Florida or the Gulf Coast in 2009, the librarians already see the value of the portal to their work in hurricane preparedness and response. Helen Moores, then Director of the Leon County Public Library (Tallahassee, FL), summed up the overall librarian viewpoint:

After disasters, people flock to their public libraries for information, computers, a safe place to be with other people, to relax, to read, and to borrow materials. Your website will provide much needed information in a standard framework that is not readily available elsewhere. Great job! (personal communication, May 29, 2009)

This and similar comments by other librarians suggests that the portal addresses an important service need.
Next steps: public librarians as crisis managers

This project included interviews with numerous hurricane-experienced librarians, emergency management officials, and other experts in the field. From these interviews came success stories and findings that indicate how librarians can undertake several general activities that will allow them to execute their critically important roles in hurricane/disaster preparedness and response more effectively. These activities center on efforts to build community awareness of the value that the library can offer before, during, and after disasters and to clarify the service roles that have proven to be successful in aiding recovery and rebuilding efforts. Such activities include:

- enhancing services, information, resources, and expertise to assist local communities and their residents during emergency response events;
- taking the initiative to work more effectively in their local communities and with the state for hurricane/disaster preparedness and response;
- improving communication, planning, and response among various government and other agencies regarding emergency preparedness and response; and
- building awareness and educating local community members, government officials, and others about the roles public libraries can play in disaster preparedness and response.

When libraries undertake these activities, they greatly improve the ability of Gulf Coast residents to better survive and cope with the results of a hurricane or other disaster by leveraging and coordinating the expertise of public librarians in working with other government agencies for disaster preparedness and response.

There are several specific steps librarians can take to help their libraries and communities manage crises. First, librarians can review the service roles, best practices, and guides as outlined on the project portal. As a first step, a library can select one practice to develop this season. For example, if you want to improve your role as Safe Haven, a likely best practice to adopt is to have an emergency or Continuity of Operations Plan (COOP). Decide which component of the plan to work on this year and do them. The underlying message is: do not try to do everything all at once. It is easy to get overwhelmed. Pick one small thing and do it well.

Second, librarians can coordinate their efforts with other responders in advance of a storm. Key partners are local emergency management and government agencies, but also important local utilities, police, fire, church groups, and local businesses. Librarians should learn what these organizations intend to do and acquaint them with the role(s) the library intends to play. The goal should be to find ways to strengthen your community's ability to respond through collaboration.

Third, the library should prepare its staff. Library managers should communicate with library staff, telling them what is expected of them, why their work matters to the community in emergency situations, and giving details of disaster response roles and responsibilities. Reviewing this information annually should become standard operating procedure.

Finally, the library should publicize its role in emergency preparation and response. Public libraries can make certain that community members are aware of the services that the library can provide should a hurricane or other emergency situation occur. This should take place periodically so that community members are aware, and remain aware, that they can take advantage of the librarians' knowledge and skills in an emergency situation.

Public libraries are essential service points in times of crisis, providing a range of uniquely valuable services that extend beyond traditional roles. Libraries must now build an awareness of this important value in the community, and make that case to federal, state, and local agencies in order to gain recognition as essential service providers during disaster recovery. Improving awareness will help libraries better integrate into the overall emergency response network, making libraries a key component in a community's reaction to a crisis situation. This enhanced awareness is necessary to ensure that others see that it is a priority to provide library directors with quick access to their facilities after disaster strikes, not only to assess the library's damage, but also to provide access and services to the local community that the library serves.

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