

PUBLIC LIBRARIES AND THE INTERNET

Roles, Perspectives, and Implications

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LIBRARIES UNLIMITED

AN IMPRINT OF ABC-CLIO, LLC

Santa Barbara, California • Denver, Colorado • Oxford, England

Public Library Roles in Hurricane Preparedness and Response

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INTRODUCTION

With virtually all public libraries having public access workstations connected to the Internet, numerous new applications and service roles offer opportunities for public libraries to better serve their local communities. Indeed, public libraries and Internet service roles have significantly changed the manner in which public libraries interact with their communities (McClure & Jaeger, 2009). One such set of service roles that clearly is evolving—especially in the southeastern portion of the United States and the Gulf Coast—is public library roles in community hurricane preparedness and recovery.

The purpose of this chapter is to provide an overview of the *Hurricane/Disaster Preparedness and Response by Utilizing Florida Public Libraries* study undertaken at the Information Use Management and Policy Institute (Information Institute), Florida State University. The Florida Catastrophic Storm Risk Management Center at Florida State University's College of Business awarded the grant to the Information Institute for the period August 8, 2008 through August 6, 2010. The Institute has partnered with the State Library and Archives of Florida, LYRASIS (formerly SOLINET), Florida's Multi-type Library Cooperatives, public libraries throughout the Gulf Coast region, as well as federal, state, local and community agencies concerned with Florida hurricane preparedness and response.

Public libraries, reacting to hurricane emergencies, have fulfilled a range of useful hurricane and disaster preparation and response roles. However, there

has been no systematic effort to identify these roles, their associated best practices, and guidelines that might quicken widespread adoption of the roles by public libraries in the hurricane-affected region. The study described here begins to address this need.

The purpose of the study was to reduce communities' overall risk by raising the readiness level of public libraries to meet the challenges posed by these catastrophes. Study objectives included:

- Identify and then organize relevant public library hurricane-related information resources, services, roles, and best practices;
- Identify, aggregate, assess, and organize successful individual public library best practices related to hurricane preparedness and response;
- Develop model plans, standards, guidelines and recommendations—which are available via print materials and an interactive Web portal;
- Provide workshops and other training activities throughout the state of Florida and the Gulf Coast region;
- Offer strategies to assist state and regional public library and government officials with disaster coordination and organization responsibilities;
- Disseminate to public libraries, agencies, and other organizations, via print materials and the project Web portal, resources, services, experiences, best practices, plans and guidelines to coordinate Florida's public library managers and government partners to better prepare for and respond to hurricanes.

Ultimately, the project offers a significant opportunity for public libraries to better demonstrate the range of services and responses they could provide during such disasters.

EVOLVING ROLES OF PUBLIC LIBRARIES

Since 2004, researchers at the Information Institute have collected data that describe the roles and services that public libraries in Florida and along the Gulf Coast have played in hurricane/disaster preparedness and response. These data come from annual national surveys of technology use and deployment funded by the Bill & Melinda Gates Foundation and the American Library Association (Bertot, McClure, Thomas, Barton, & McGilvray, 2007; Bertot, McClure, Wright, Jensen, & Thomas, 2008, 2009), the State Library & Archives of Florida (Snead, McClure, & Bertot, 2007), as well as numerous interviews conducted by staff at the Information Institute.

These data show that:

- Public library hurricane response works best when the library is a partner with other responders in local hurricane/disaster preparedness and response teams;
- The public library contributes a range of skills and knowledge to handling information management and various communication prior to, during, and after such storms;

- The public recognizes the public library as a trusted and effective government agency in such emergencies.

These data, in conjunction with observations from the 2006 hurricane season, suggest a number of key roles in which public libraries are participating in hurricane and disaster preparedness and response.

THE 2006 HURRICANE SEASON

In the aftermath of the 2006 hurricane season, the study team found that the major areas in which libraries played a key role were the following (Bertot, Jaeger, Langa, & McClure, 2006; Jaeger, Langa, McClure, & Bertot, 2007):

1. *Helped communities prepare*—created and distributed emergency preparedness guides, both printed and Web-based; conducted disaster information workshops; and ran volunteer coordination programs.
2. *Provided emergency information*—staffed emergency operations centers and answered phone calls; answered email questions; conducted interactive chat services; handled communications in and out of the city; created community contact centers allowing community members to re-establish contact with family and friends; and addressed inquiries from other parts of the country and around the world about area conditions or particular residents.
3. *Provided shelter*—ran and staffed shelters for evacuees both in library buildings and in other buildings; provided city employees and relief workers with places to sleep; and housed city command centers for disasters (i.e., police, fire, public works).
4. *Provided physical aid*—cooked and distributed homemade meals; distributed water, ice, meals ready to eat (MREs), tarps, and bug spray; registered people with the “blue roof program”; provided hook-ups to recharge electronics and communication devices; filled water bottles; let people use library refrigerators for food and medication; and unloaded truckloads of relief supplies.
5. *Provided continuity of services, stress reduction, and normalcy restoration for community members in need*—assisted with the completion of Federal Emergency Management Administration (FEMA), insurance, and other paperwork; responded to special needs and elderly evacuees; worked as translators for evacuees; ran day camps for children when schools were closed and for children of city employees who had to work unusual hours; held programs, provided library materials to evacuees, and established temporary libraries in shelters; and sent bookmobiles and response teams to devastated areas.
6. *Worked with partner government and relief organizations*—assisted FEMA, Florida Division of Emergency Management, Red Cross, and Army Corps of Engineers personnel in their duties; provided meeting spaces for relief and rescue personnel; provided FEMA, Red Cross, National Guard, and Army Corps of Engineers personnel with a place to meet with

residents; provided relief personnel a place to use the Internet, email, and telephones; gave temporary library cards to relief workers; and helped FEMA personnel identify local areas that suffered major damage.

7. *Cleaned up the damage after the storms*—secured city buildings after storms; checked structures for damage; cleaned up debris; and restored damaged government structures.

These activities are not intended as an exhaustive list but suggest the broad areas in which public libraries were involved with hurricane preparedness and response. These services were provided by libraries throughout the Gulf Coast region, which employed their professionally trained staff, library resources, Internet access, and many other resources to assist their communities in hurricane preparedness and recovery.

In preparation for a community emergency or during a hurricane crisis, many public libraries have provided a range of useful services and activities. Yet there are no guidelines, recommendations, or best practices available to help public libraries more effectively serve in these roles. In short, those libraries that were involved in the provision of disaster services learned by doing. There has been no systematic effort to transfer what was learned at these individual libraries to all public libraries. More specifically, there has been no systematic effort to identify the activities and services provided or to better organize, coordinate, and assist public libraries to provide these hurricane/disaster planning and response services.

There are a multitude of federal, state, and local agencies, private organizations, and other entities that prepare for and address state level emergency preparedness and response. There are so many that there is some confusion as to how public libraries might best coordinate activities with them. A clear need exists to organize and define duties, responsibilities, and resources available from each/all of these different agencies and organizations, and to inform and train library staff on the available resources and information from all of these different entities.

Virtually every community in the Gulf Coast region has access to a nearby public library. These public libraries are exceptionally well-positioned to provide hurricane/disaster preparedness and response services to their local communities. Provision of these services can be facilitated by the project's definition and organization of duties and responsibilities and identification of best practices and resources.

STUDY APPROACH

The overall goal of the study was to identify ways to reduce hurricane risk by better utilizing public libraries in community hurricane preparation and recovery. Given this goal, the study team developed some initial research questions to guide the study approach and the data collection activities, including:

- Which are the public libraries in Florida and the southeastern United States that have successfully assisted their communities to prepare for and recover from hurricane disasters?

- What role can traditional library partners play related to community hurricane preparation and recovery?
- Which are exemplar public library-agency partners?
- What information or services do citizens need related to hurricanes that public libraries might provide?
- How best can the study team transfer and communicate research results, products, and services?

Because of the exploratory nature of the study, the study team recognized that the research questions might need to be modified and refined as the study progressed. Table 5.1 in Appendix A presents the initial research questions in more detail.

Approach

A number of considerations informed the development and deployment of the study approach:

- *Exploratory*: There was no pre-conceived model available. Assumptions, research questions and study populations shifted during and after each phase, and often after each interview.
- *Pragmatic*: The conscious intent of the research was to reduce hurricane risk by better utilizing public libraries to prepare and aid their communities.
- *Iterative, phased learning*: The study operated on a continuous learning cycle—conceptualize (adjust study populations, samples and research questions as needed), collect data, synthesize/analyze data, test and re-conceptualize until saturation.
- *Opportunistic*: The study anticipated unscheduled opportunities to collect and analyze data throughout the course of the project and designed the study approach to take advantage of these opportunities.
- *Multi-method*: The study included literature review, document analysis, various qualitative techniques (e.g., individual and group interviews, focus groups, and panels conducted face-to-face, by phone and email), brief open-ended and structured surveys, and some simple social networking analysis.
- *User-based*: Wherever possible, theory development and data collection methodologies were driven by the studies' users.

Table 5.2 in Appendix A presents the Study Approach in more detail. Also in Appendix A Table 5.3 illustrates how the study's strategy was altered or refined during its course.

Data Quality

The study team made every effort to systematically reduce error due to researcher bias, incomplete or inaccurate data, and a host of other causes. The evaluators took a number of steps to reduce the threats to data quality in

the present project, both during data collection and later during analysis, including (Creswell, 1994; Guba & Lincoln, 1981; Miles & Huberman, 1994; Patton, 1990; Schatzman & Strauss, 1973):

- Used pre-structured research questions and interview instruments, pre-planned fieldwork, and, where possible, a pre-planned final report format.
- Chose standard, well-regarded methods familiar to the evaluators and appropriate to the setting. Primary methods were qualitative (Miles & Huberman, 1994), including the use of documentary evidence, interviews (Spradley, 1979) and focus groups (Kruger & Casey, 2000; Morgan, 1988).
- Fully documented research design decisions in writing and in discussions among the study team.
- Actively sought disconfirming and outsider evidence and points of view. The study team attempted, within the constraints of a site visit, to interview stakeholders from multiple perspectives.
- Responded with flexibility to the new and unexpected opportunities the data offered.
- Fully documented the data collected. Evaluators conducted follow-up interviews where necessary.
- Triangulated the data collected and used multiple methods. Data collected from one source was cross-checked with another. The evaluators compared data collected using one method with answers obtained via another method. The evaluators shared drafts of factual portions of the final report with a key liaison in each region to check for accuracy.
- Pre-structured data analysis and reporting (Miles & Huberman, 1994). This approach was possible because most of the data collection was pre-structured and the intended shape of the final report was known.
- Checked the quality of the data by tracking the chain of evidence that the study team gathered to be sure it was firm enough to support statements made.

Each of these efforts and others increased the validity and reliability of the findings and provided a firm basis for making recommendations.

FINDINGS AND PRODUCTS

There are a number of findings and products that have resulted from the study thus far. These include:

- Identifying the value of building a hurricane response network;
- Synthesizing, utilizing and implementing public library hurricane service roles;
- Creating documents that help make the case for public libraries being "essential services" and better assisting residents and evacuees to prepare for and recover from hurricanes/disasters;

- Developing a Web portal to disseminate project findings and encourage social networking and collaboration among public librarians and emergency responders.

These will be briefly reviewed here; an in-depth discussion of the findings and products are available on the project Web portal at: <http://hurricanes.ii.fsu.edu/>.

Building a Response Network

Before disaster strikes, library managers have an opportunity to focus on what they can control and manage: preparing the library facility and staff, finding partners to help, and pre-coordinating emergency response activities, particularly with local emergency operations leaders and local government, as much as is reasonable. The team approach has proven to yield rewards greater than individual agency and independent efforts. As one library manager noted, "If I can build a relationship with directors of [local, state, and federal] agencies, it brings credibility of libraries to the table."

The first step in managing hurricane response partnerships is to gain a better awareness of what each potential partner does in community hurricane response. Discussions need to be open and frank with a range of local emergency responders and others about the resources necessary to provide services and meet partner needs. The next step is to pre-coordinate what the library can contribute, what the library needs from each partner in order to do so, and how library activities can mesh with other partners' activities.

Next, 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, and results in forming bonds of trust and understanding.

After a storm strikes, it is useful to assess what worked and what didn't, and then determine what else can be done to better assist the community in the future. In initiating these collaborative efforts, 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.

Multi-type Library Cooperatives (MLCs), the State Libraries, large library systems, libraries adjacent to hurricane-affected libraries, library vendors, LYRASIS and others can all make significant hurricane response contributions. The key, however, is for the public library to (1) clarify relationships, responsibilities, and activities with other community, state, and federal emergency agencies prior to a hurricane; and (2) understand which of the service roles (discussed next) it has the capacity and knowledge to offer to its local community.

Public Library Hurricane Service Roles

The study team interviewed over 200 public library managers who had aided their communities to prepare for or recover from a hurricane. The project team

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then synthesized common service roles that were performed by hurricane-affected libraries. These roles include:

- *Get to Know Your Local EOC*: Getting to know your Emergency Operations Center (EOC) should be on the top of the list for every library so the library and EOC can work together to best provide for the community's needs.
- *Safe Haven*: The public library is the community's living room and study, before and after a storm, with safe, 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, be it book, DVD or Internet use, reference or family programming. Normal service provides hope, re-establishes government presence, reduces stress, returns normalcy, and offers recreation and distraction.
- *Disaster Recovery Centers (DRC)*: Disaster Recovery Centers (DRCs) attempt to assemble under one roof all agencies providing disaster benefits. A DRC may be a FEMA designated DRC; a state, county or municipal DRC; a point of distribution (POD) of aid; or simply a place for neighbors to make sense 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, to be a trusted provider of accurate, reliable information, to produce needed information aids where they do not exist, and to deliver this information using whatever technology the community uses and can afford.
- *Cultural Organizations Liaison*: Public libraries may serve as liaisons between emergency management agencies and communities' cultural organizations.
- *Evacuee Resource*: Evacuees count on the nearest public library for a safe haven, normal service, disaster recovery center, and information hub.
- *Improvise*: Should a disaster strike, the community counts on the public library to improvise and do what is needed to assist in the community's recovery. The library must be flexible, innovative, and creative to efficiently and effectively meet the needs of those impacted by this type of disaster.

Many of these key public library community hurricane response roles are further discussed on the project Web portal: <http://hurricanes.i.fsu.edu/>.

Documents, Templates, and Booklets

The project team developed documents, templates, and booklets, based on study findings, that can assist public libraries make the case for being an essential service in a disaster and help residents and evacuees prepare for and recover from hurricanes (Ryan, 2009a–e):

- *Making the Case*: This document presents an extended argument for why public libraries should be viewed as an "essential service" in a community's response to hurricanes.

- *Booklets and Templates:* These resources help libraries design community-specific booklets containing essential information for hurricane/disaster preparedness and response. Booklets include: Library Recovery booklet, Resident Hurricane Preparation booklet, Evacuee and Resident Hurricane Recovery Information booklet and the Back-Home Web page template.

These resources are available on the project Web portal: <http://hurricanes.ii.fsu.edu/>.

Public Library Hurricane Preparedness and Response Web Portal

The project Web portal, <http://hurricanes.ii.fsu.edu/> summarizes and presents project findings to date. The portal has three intended phases, including:

- *Experimentation:* The Web portal went through four beta versions exploring various content and ways to present it. Of particular note was the increasing use of graphics (over text), including maps and Web 2.0 social networking.
- *Project findings:* This phase sought to summarize what the study team learned from those interviewed. Key organizing elements were the public library community hurricane response roles and their associated best practices, aids or tools promoting adoption, as well as identification of relevant resources. For example, an important role identified was the public library as Safe Haven. An associated best practice for a library playing the Safe Haven role was to have an emergency or continuity of operations (CoOP) plan. An aid to adoption of a plan is a template that outlines and provides examples of a plan.
- *Social networking:* A key early project finding was that a number of public libraries, reacting to hurricanes, had developed a series of great best practices. But often a library in the next county was unaware of these developments. There was no forum for hurricane-affected libraries, and those who might be affected at a later date, to exchange and discuss best practices. This phase focused on developing ways that public libraries could share what they have learned in this area, to encourage social networking among hurricane-affected libraries to share issues, practices, aids, news and resources.

The portal contains more detail on project findings, including descriptions of best practices for, and related resources to each of the eight service roles.

Summary of Findings and Products

Project findings demonstrate the importance of public libraries for hurricane and disaster preparedness and response. Public libraries engage in eight disaster preparedness and response service roles, helping local communities and

evacuees prepare for and recover from hurricanes and other disasters. These public library service roles may be facilitated by project products, such as the documents, templates, booklets, and Web portal.

NEXT STEPS FOR PUBLIC LIBRARIES IN THE HURRICANE ZONE

Interviews with public library managers who have experienced hurricanes suggest the follow steps to consider if a library seeks to improve service to its community in preparing for hurricane season:

- *Review the service roles, their best practices and aids as outlined on the project portal.* Decide 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 CoOP plan. Decide which components 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. There will be opportunity to do more next hurricane season.
- *Coordinate what you do with other responders in advance of a storm.* Key partners are local emergency management and government agencies, but also important are local utilities, police, fire, church groups and local businesses. Learn what these organizations intend to do and acquaint them with the roles your library intends to play. Find ways to strengthen the community's ability to respond through collaboration.
- *Prepare your staff.* Communicate with library staff what is expected of them, why their work matters to the community in emergency situations, and details of hurricane response roles and responsibilities. Reviewing this information at least once a year prior to hurricane season should become standard operating procedure.

Librarians and the library community know from experience that public libraries are essential service points in times of crisis, but they need to make the case to federal, state, and local agencies to be formally recognized as essential services in disaster recovery. This is necessary for library directors to have quick access to their facilities after a disaster strikes, not only to assess damages but also to provide access and services to the local community the library serves.

BENEFITS

The study has benefited public librarians, local communities, and local, federal, and state emergency managers by:

- *Enhancing the public library's ability to provide services, information, resources, and expertise to assist local communities and their residents.* The public library has a range of information and other services, expertise, and resources that, if properly organized and deployed, can significantly improve a community's planning for and response to hurricanes.

- *Providing a comprehensive approach for public libraries to work more effectively in their local communities and with the state for hurricane preparedness and response.* Developing a comprehensive approach for how libraries can best assist in hurricane preparedness and response will increase the library's effectiveness in serving Florida and Gulf Coast residents.
- *Improving communication and planning/response between the public library and various government and other agencies regarding hurricane preparedness and response.* Currently there are no guidelines and best practices for how libraries can collaborate with other agencies. This project will improve overall coordination and avoid duplication of efforts among agencies.
- *Educating local community members, government officials and others as to the roles public libraries can play in hurricane preparedness and response.* Previous experience among the study team suggests that many local, state, and other community members are not aware of the range of expertise and services that public libraries can contribute to hurricane preparedness and response. This project will help educate these stakeholders about the valuable roles public libraries can and do play in hurricane/disaster preparedness and response.

Ultimately, the study will improve the ability of Florida and other Gulf Coast residents to better prepare for, survive, and cope with the results of a hurricane and better leverage and coordinate the expertise of public librarians in working with other state and local government agencies for hurricane preparedness and response.

ACKNOWLEDGMENTS

The Information Institute acknowledges the generous help and support from project partners, the State Library and Archives of Florida, and LYRISIS (formerly SOLINET), as well as Florida Multi-type Library Cooperatives, librarians and state library staff who participated in the various data collection efforts, and emergency management personnel who shared their time and experiences. We are especially grateful to the Florida Catastrophic Storm Risk Management Center (<http://www.stormrisk.org>) at Florida State University that funded the project. The study team also acknowledges additional Institute staff for their work on this project including Susan Thomas, Mike Falcon, Bradley Wade Bishop, Lynne Hinnant, and Jordon Andrade.

REFERENCES

- Bertot, J. C., Jaeger, P. T., Langa, L. A., & McClure, C. R. (2006). Public access computing and Internet access in public libraries: The role of public libraries in e-government and emergency situations. *First Monday*, 11(9). Available at http://www.firstmonday.org/issues/issue11_9/bertot/index.html.

- Bertot, J. C., McClure, C. R., Thomas, S., Barton, K., & McGilvray, J. (2007). *Public libraries and the Internet 2007: Report to the American Library Association*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://www.plinternetsurvey.org>.
- Bertot, J. C., McClure, C. R., Wright, C. B., Jensen, E., & Thomas, S. (2008). *Public libraries and the Internet 2008: Study results and findings*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://www.plinternetsurvey.org>.
- Bertot, J. C., McClure, C. R., Wright, C. B., Jensen, E., & Thomas, S. (2009). *Public libraries and the Internet 2009: Study results and findings*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://www.plinternetsurvey.org>.
- Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage Publications.
- Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco: Jossey-Bass Publishers.
- Jaeger, P. T., Langa, L. A., McClure, C. R., & Bertot, J. C. (2007). The 2004 and 2005 Gulf Coast hurricanes: Evolving roles and lessons learned for public libraries. *Public Library Quarterly*, 25, 199-214.
- Kruger, R. A., & Casey, M. A. (2000). *Focus groups: A practical guide for applied research* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- McClure, C. R., & Jaeger, P. T. (2009). *Public libraries and Internet service roles: Measuring and maximizing Internet services*. Chicago: American Library Association.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage Publications.
- Morgan, D. L. (1988). *Focus groups as qualitative research*. Newbury Park, CA: Sage Publications.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage Publications.
- Ryan, J. (2009a). *BackHome template*. Tallahassee, FL: Information Use Management & Policy Institute. Available at http://hurricanes.ii.fsu.edu/docs/04InfoHub/SlashBackHome_Initiative.doc.
- Ryan, J. (2009b). *Evacuee and resident hurricane recovery information booklet*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://hurricanes.ii.fsu.edu/docs/04InfoHub/EvacueeResidentRecovery-Booklet3.27.09.doc>.
- Ryan, J. (2009c). *Library recovery booklet*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://hurricanes.ii.fsu.edu/libraryRecovery.html>.
- Ryan, J. (2009d). *Making the case*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://hurricanes.ii.fsu.edu/docs/01safeHaven/MakeTheCase3.11.09.pdf>.
- Ryan, J. (2009e). *Resident hurricane preparation booklet*. Tallahassee, FL: Information Use Management and Policy Institute. Available at <http://hurricanes.ii.fsu.edu/docs/04InfoHub/ResidentPreparationBooklet8.3.09.doc>.
- Schatzman, L., & Strauss, A. L. (1973). *Field research: Strategies for a natural sociology*. Englewood Cliffs, NJ: Prentice-Hall.
- Snead, J. T., McClure, C. R., & Bertot, J. C. (2007). *Florida Electronic Library five-year evaluation 2003-2007*. Tallahassee, FL: Information Use Management & Policy Institute.
- Spradley, J. P. (1979). *The ethnographic interview*. New York: Holt, Rinehart and Winston.

APPENDIX A. STUDY APPROACH: FURTHER DISCUSSION

TABLE 5.1 Research Question Summary

Overall: What can the study team learn that will enable or persuade public libraries, current or potential library-agency partners and other key stakeholders to reduce hurricane risk by better utilizing public libraries in community hurricane preparation and recovery?

Specific research questions included:

- **Who are exemplar public libraries?** Who are the public libraries in Florida and the southeast U.S. that have successfully assisted *their communities* to prepare for and recover from hurricane disasters?
 - What were these libraries' hurricane *experiences* that might be of use to other public libraries?
 - Did they do any *advanced planning* or develop a hurricane plan? Did the plan include public library community hurricane preparation and recovery efforts? Was the planning effort useful, and why?
 - What *roles* did these public libraries play when assisting their communities to prepare for and recover from hurricanes?
 - What *best practices* have these libraries developed?
 - What checklists, standards, Web links, guides, forms, policies, procedures, and other *documents* have these libraries developed?
 - How did these libraries establish and maintain partnerships with other agencies related to community hurricane preparation and recovery?
 - What advice do these libraries have for other libraries?
 - What needs and issues do these libraries have related to community hurricane preparation and recovery?
- **What role can traditional library partners play related to community hurricane preparation and recovery?**
 - Traditional library partners include library systems, multi-type library consortia, state libraries, state library associations, and Lyrasis.
 - What do these library partners currently do to assist public library community hurricane preparation and recovery?
 - What do these traditional library partners believe should and can be done?
- **Who are exemplar public library-agency partners?**
 - Public library-agency partners may include units of local, state or federal government, emergency management agencies, the Red Cross and other non-governmental organizations.
 - How can public libraries establish and maintain these partnerships?
 - What opportunities are there for libraries?
- **What information or services do citizens need related to hurricanes that public libraries might provide?**
 - For example, would a model citizen hurricane desktop containing hurricane-related resources be of use to citizens?

(Continued)

TABLE 5.1 (Continued)

- **How best can the study team transfer and communicate research results, products, and services?**
 - How can the project team best communicate study results, products, and services to public libraries, current or potential library-agency partners, and other key stakeholders, to reduce hurricane risk by better utilizing public libraries in community hurricane preparation and recovery?

TABLE 5.2 Summary of Broad Characteristics Affecting Study Approach

Characteristic	Discussion
Exploratory	The project team was not testing a pre-conceived model, as the research literature did not suggest one. Rather, models, methods, project products and services had to be developed based on what the data suggested and what the study team learned. Assumptions, research questions and study populations shifted during and after each phase, and often after each interview.
Pragmatic	A conscious intent of this research was to use research results to persuade public library managers, their library and non-library partners, emergency management, fellow responders and other key stakeholders to reduce hurricane risk by better utilizing public libraries to prepare and aid their communities. Project results should be of immediate use for communities to better utilize public libraries in response to hurricanes.
Iterative, phased learning	<p>This study was consciously structured to learn iteratively. In a large sense, the study's strategy and tasking were broken into research phases:</p> <ul style="list-style-type: none"> ◦ Get organized, ◦ Identify Gulf Coast library managers experienced with hurricanes and listen, ◦ Synthesize field research, ◦ Identify Florida library managers experienced with hurricanes and listen, ◦ Analyze and synthesize data, ◦ Design and test Web portal, ◦ Transfer learning through presentation and training, and ◦ Have key stakeholders assess and review project products (ongoing). <p>On a smaller scale, the exploratory research ran on a cycle of continuous learning: conceptualize (adjust study populations, samples, and research questions as needed); collect data; synthesize/analyze data; test and re-conceptualize until saturation throughout the study period.</p>
Opportunistic	The study team anticipated informal opportunities to collect and analyze data throughout the course of the project and

TABLE 5.2 (Continued)

Characteristic	Discussion
	designed the study approach to take advantage of these opportunities (e.g., the Southern Council of State Library Agencies and the Council of State Library Agencies met in the area early in the study). The project team adjusted to collect data and brief Gulf Coast State Librarians about the project.
Multi-method	The study included literature review, document analysis, various qualitative techniques (e.g., individual and group interviews; focus groups and panels face-to-face, by phone and e-mail), brief open ended and structured surveys, and some simple social networking analysis.
User-based	Wherever possible, theory development and data collection methodologies were driven by the studies' users—the sample drawn from the study population. For example, rather than impose a model of roles that public libraries play in community hurricane preparation and recovery, the study team developed the model based on the experiences of exemplar public libraries. Therefore, rather than present a fully populated project Web portal, the project team solicited input from project participants about what was and was not useful and designed the site based on that input.

TABLE 5.3 Study Strategy Refinement

Strategy Element	Strategy Refined
Identify study population	<p>Public library managers with hurricane experience: identified by project team, state libraries, MLCs and LYRASIS, prior contact, and a literature review.</p> <p>External library supporters: added to the study population.</p> <p>Emergency management: added to the study population because they coordinate local recovery efforts including the public libraries; only interviewed state, regional and county emergency managers as opportunity permitted.</p> <p>Other responders: county, state and federal agency responders and non-profits were added to the study population as potential public library partners, but only interviewed as opportunity permitted.</p>
Listen	<p>Literature and Web review: conducted review of library literature and a sample of other responder literatures. Examined Web-based Florida public library materials, hurricane preparation materials, hurricane recovery materials, and Web 2.0 hurricane materials.</p> <p>Interviews: included individual and group, phone, e-mail and in-person interviews following standard practice (e.g., pre-scripting, recording where possible, more than one observer of participants, multiple session review/synthesis, etc).</p>

(Continued)

TABLE 5.3 (Continued)

Strategy Element	Strategy Refined
Synthesize	<p>Model testing: Regularly prepared summaries of current thinking and circulated among experts for evaluation. This included the 2/20/09 Eppes External Support Panel Discussion.</p> <p>Roles: A first finding was that public library hurricane responses could be consolidated into a set of public library community hurricane response roles.</p> <p>Best practices (Activities): Each role had a set of associated activities.</p> <p>Best practices (Tools): Adoption of role activities could be aided by tools or aids.</p> <p>Basic processes: Role acceptance could be eased by certain basic processes.</p> <p>External support options: Study identified a list of potential ways to externally support hurricane affected public libraries.</p> <p>Next steps: need for understanding, advocacy, partnerships, and funding.</p>
Transfer	<p>Project Web portal: Developed capacity to offer various Web site features, in particular Web 2.0 features; tested their utility and usability; and populated site with useful content.</p> <p>Training: Presented study findings and offered training.</p> <p>Publications: Communicated findings in print and via the Web.</p> <p>E-network: Communicated ongoing study results via listservs, blogs and e-mail.</p>