

Masthead Logo

University of Iowa Libraries Staff Publications

1-1-2018

Bridging the Rivers

Nancy E Kraft
University of Iowa

Copyright Nancy E Kraft

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Flood in Florence, 1966: A Fifty-Year Retrospective, ed. Paul Conway and Martha O'Hara Conway. Ann Arbor, MI: Michigan Publishing, University of Michigan Library, 2018. DOI: <http://dx.doi.org/10.3998/mpub.9310956>

Hosted by [Iowa Research Online](https://researchonline.iowa.edu/). For more information please contact: lib-ir@uiowa.edu.

Flood in Florence, 1966: A Fifty-Year Retrospective

Paul Conway; Martha O'Hara Conway

Ann Arbor, MI: Michigan Publishing, University of Michigan Library, 2018.

DOI: <http://dx.doi.org/10.3998/mpub.9310956> 

Bridging the Rivers

Nancy E. Kraft

Kevin Driedger at the Library of Michigan once dubbed me the “Queen of Disaster,” but sometimes I think when it comes to disasters, I’m the character in Al Capp’s *Li’l Abner* comic strip—Joe Btfsplk, the jinx who brought disastrous misfortune to all around him! We have nine major rivers in the state of Iowa, and so the odds of flooding are high. This contribution to the symposium proceedings is an overview of my experiences with cultural heritage disasters since 1993 and a reflection on some of the changes I have seen in that time.

Two weeks after I became preservation librarian for the State Historical Society of Iowa (SHSI) in 1993, Iowa rivers and creeks started flooding, and high water continued until mid-August. That was my first disaster response experience. SHSI pulled together an assessment team and traveled around the state providing training and advice to the small institutions that had been impacted. In 1996, SHSI conservator Jane Meggers and I wrote a disaster plan and conducted training for our staff. Three weeks later, a pipe broke on the top floor, and the entire building took on water. In 2001, after just a few months at the University of Iowa Libraries, the Old Capitol dome in Iowa City burst into flames during renovation. Then, just to reinforce my hands-on experience, we had a major mold outbreak on campus in 2003. On reflection, I think all this was just training, because in 2008, we had massive flooding in Iowa. Both the Iowa River in Iowa City, where I work, and the Cedar River in Cedar Rapids, where I live, flooded. Those events were followed by some minor experiences in 2010 with the Skunk River, and then again this year, 2016, in Cedar Rapids—the second-highest flood level we’ve ever had. Throw in a few tornadoes along the way, and I feel like I have been dealing with disasters most of my career. So what has changed over these twenty-five years?

The ways we communicate during disasters have changed tremendously. In 1993, we communicated by fax machine. National organizations, including the Federal Emergency Management Agency (FEMA) and the American Institute for Conservation of Historic and Artistic Works (AIC), faxed masses of information to affected Iowa institutions. University of Iowa Libraries preservation librarian Cathy Larson and I had a horrible time trying to sort out what information would be pertinent to us. We picked out the most practical and useful and created the *Flood Recovery Booklet*. The state printer printed and distributed the booklets. Today we have the World Wide Web, email, and cell phones. Moreover, we have standardized the way to handle flood recovery for the various types of materials we have in our cultural collections. Now we can focus on getting the job done instead of sifting through reams of advice and information.

Our understanding and use of personal protection equipment have changed dramatically. In 1993, we had no idea that we needed to protect ourselves during a disaster response. No one on the team used protective gear. We went into buildings covered with bird droppings, mold, and gunk from rivers. I don't like to remember what we encountered. By 2008, we understood the kinds of protection we needed. Ellen McCrady and her *Mold Reporter* publication^[1] and Mary Lou Florian's research on mold and heritage collections^[2] made a significant difference to our understanding and ability to deal with mold safely. Since the 1990s, too, more and more training has become available on staying mentally healthy as responders, and we have a better understanding of the emotional impact disasters have on those dealing with the loss of collections. These developments are a good thing; over and over again in the field, I have seen the importance of recognizing our mental responses and adjusting for them.

Public awareness has also come a long way. In 1993, one of our biggest problems was that the rain continued the whole summer. It seemed as if we were flooding all the time. But temperatures never went above eighty degrees or so. In frugal Iowa, we didn't use our air conditioners, and we didn't use fans. As a result, we experienced a series of mold outbreaks. We did not know that we needed the air conditioners and fans to prevent mold. By 2008, even the general public knew to put things in freezers. This became apparent that year when I met a woman who had one book survive the flooding of her business, but she knew to put it in the freezer. Later she brought it to University of Iowa Libraries, where we salvaged it for her.

Early on, I focused my training on library material—books, photographs, microfilm—with the thought that this area of expertise would be most needed in a disaster. I did not think initially that the entire built environment of the library is impacted in a flood. For example, during stabilization of the SHSI whole-building incident of 1996, I learned about wood swelling and the importance of opening wooden drawers quickly lest they swell shut. That’s when I started concentrating on really learning about the building itself, as well as the materials in it. My experiences gave me a broader understanding of disaster planning and recovery: to respond effectively, you cannot just have a specialized understanding of the objects collected, but you also must understand the whole system and environment in which they are kept.

Methods for drying out buildings have changed. In 1998, we used turbo fans, turned up the heat in the building, opened windows—anything we could do to get the building dried out. By 2008, it was common practice to contract with a commercial company to use venting tubes or flex ductwork along with a desiccant system.

Another big change is environmental monitoring. By 2008, we were routinely monitoring our environment with data loggers. By the time of the Iowa City flood, we knew what the building environment could and could not do because we had the charts documenting our temperature and humidity over a number of years. Soon after the flood, our insurance company brought in a team of people to walk around the library with their temperature and humidity sensors. They kept telling us, “We still have to keep these vents going because you’re not down to 50 percent relative humidity yet.” I responded, “We’re never down to 50 percent. This is Iowa in summer; 65 percent is normal.” We saved a lot of money and completed the remediation process much more quickly because we had information on our environment ahead of time and could pull the evidence when we needed it.

We’ve learned to use triage methods in a number of different ways, not just to identify things that are most valuable. Adapted from the experience of battlefield medics, triage quickly separates damaged materials into three categories: safe for now, hopeless, and salvageable with immediate attention. Disaster response focuses particularly strongly on the third category. For example, in 2008, we could leave in place items that were dry; they were shelved above the eight-foot flood mark. We put our volunteers to work evacuating those materials that wouldn’t get

damaged by the handling. Meanwhile the disaster response team met to decide how to deal with the other more seriously damaged materials, making decisions about who should do what and what we were not going to try to salvage. We were able to act more efficiently by applying triage to the collection on the macro level even before we had a detailed plan in place.

In the beginning, I never thought about disaster response as an evacuation process, but if you're in a flood situation, you hope to get your collections out before the water gets there. And not just collections. It was in the 2000s that we started thinking, talking, and seeing literature about Continuity of Operations (COOP) plans. In 2008, as we were moving our collections from the basement, we were also taking out our equipment—book repair presses, computers, and servers—so we could stay in business as a library and keep staff employed while safety authorities kept us locked out of our buildings. Continuity of operations planning is now standard operating procedure in the threat of disaster, recommended by FEMA for agencies at all levels of government.^[3] Of course, we don't think about our servers as much anymore because many of us are following best practices and keeping digital records in multiple sites or in the cloud.

One lesson I've learned about disaster preparedness and mitigation is that politics can work either against you or for you. We were so lucky in 2008. One of our county superintendents was a former museum curator, and one of our state senators was keenly aware that the flooding had not only damaged and destroyed homes in the area but also caused major losses to our community culture. Salvage teams for our museums were the first ones the authorities allowed past safety barriers because the community leaders understood the importance of saving our cultural heritage resources. What a refreshing change from typical past practices!

Cultural heritage responders are increasingly collaborating with other disaster response professionals. Together, we are advancing, experimenting, and learning better ways to respond to disasters and to prepare ahead of time. In 2008, flood control was all about sandbags, and we had very short notice of an impending disaster. By the time of the 2016 Cedar Rapids flood, advance notice gave us time to put up ten miles of HESCO barriers, a sophisticated alternative to sandbags, borrowed from the United States Army. Since HESCO barriers have to rest on a flat surface, some buildings still ended up in the river, but we saved the majority of

them. The city experienced little damage because of these barriers and the advance warning afforded by improvements in medium-term weather forecasting.

The establishment of disaster response networks among cultural institutions has become more common in recent decades. Networking can make a big difference. In 2008, we had five professionals ready at the gate waiting for authorities to give permission to enter the flood area. That's when I learned that having an outside professional is a huge asset, even if the institution's own curators are well trained. Someone on-site who is not emotionally invested in the materials can see problems and solutions more objectively. The curator of the African American Museum of Iowa in Cedar Rapids estimated that because we were there with her, we were able to save 90 percent of those collections from the 2008 flood.

Other reminiscences of the Florence Flood at this symposium mention batch work. I can confirm that batch work is a good practice for disaster recovery and salvage. At the University of Iowa Libraries, we converted part of our conservation lab into a disaster salvage workshop after the 2008 floods. We asked staff from each of the three museums we assisted to identify the most important types of material from their collections. If they said phonograph records were really important, we would focus just on those materials for a block of time. We worked out protocols for phonograph records and ran the protocols by the curators; they'd sign off on them. After the initial consultation, we only contacted them when we encountered exceptions. This methodology allowed the curators to get back to the work of recovering the building and getting the museum back in business. The African American Museum of Iowa was open within six months—and they had taken in seven feet of water!

Finally, there are the disaster plans themselves. I suspect that these past few decades could be called the era of the disaster plan for cultural heritage institutions. Not everyone has a disaster plan, and I doubt everyone ever will. But the profession certainly has simplified and codified the process. We have countless new tools at our disposal, including our cell phones and specialized apps for them. Training has become widely available. The curator at the African American Museum of Iowa took a training course just a couple weeks before the 2008 flood. When the waters hit, she didn't have a written plan in place, but she had the Emergency Response and Salvage Wheel^[4] with her. She consulted it religiously, and it helped her. The wheel was her lifeline, and holding on to it got her through the event.

When sifting through my own files to prepare this paper, I found a report that I had written in 1993, as a total beginner. I had forgotten how we'd had to work around all kinds of institutional grandstanding and politics. Different heritage organizations in the region—museums, libraries, archives—did not have a way to work together. In the report I recommended that in the future, we should work with the Department of Emergency Management, continue training, and maintain networks. Twenty-four years later, those recommendations still hold true. When it comes to preparing for the inevitable waterborne disaster, perhaps there are some universal laws that we should all heed.

Notes

1. McCrady, Ellen (ed.). *The Mold Reporter*. Newsletter. Austin, TX: Abbey Publications, 2001–4. ↗
2. Florian, Mary-Lou E. *Fungal Facts: Solving Fungal Problems in Heritage Collections*. London: Archetype Publications, 2002. ↗
3. Federal Emergency Management Administration. "Continuity of Operations (COOP)." <https://www.fema.gov/media-library/assets/documents/72598>. ↗
4. Emergency Response and Salvage Wheel. Washington, DC: National Institute for the Conservation of Cultural Property, 1997. Reprinted in 2016 for Friends of the American Institute for Conservation of Historic and Artistic Works (FAIC). http://www.conservation-us.org/emergencies/aaslh-technical-leaflet-resources#.WT5y_3XytIp.