

Masthead Logo

University of Iowa Libraries Staff Publications

1-1-2014

Two Cities and Two Rivers: A Collaborative Flood Response

Nancy E Kraft
University of Iowa

DOI: <https://doi.org/10.17077/9xk1-v21q>

Copyright © 2014, Nancy E. Kraft

Creative Commons License



This work is licensed under a [Creative Commons Attribution 4.0 License](#).

Comments

Chapter written for a book that was never published.

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

Two Cities and Two Rivers: A Collaborative Flood Response

By Nancy E Kraft

University of Iowa Libraries, USA

EXECUTIVE SUMMARY

This chapter recounts the collaborative response of four cultural heritage institutions located in two cities flooded by two different rivers – the Iowa River, which divides the University of Iowa and the Cedar River, which runs through the city of Cedar Rapids. The author sets the stage by providing extracts from a blog written at the time of the flooding events and reflects on the differences between the floods and the responses. She details the way in which four institutions— the University of Iowa Libraries, the Johnson County Historical Society, the National Czech & Slovak Museum & Library, and the African American Museum of Iowa—collaborated to share political clout, supplies, disaster recovery services, and expertise. Inter-institutional cooperation minimized damage to collections and reduced the time needed to become operational again. The chapter concludes with observations on managing disasters, salvaging collections, working with a conservation lab and disaster recovery company, managing volunteers and the press, and maintaining continuity of operation.

Keywords: University of Iowa Libraries, Johnson County Historical Society, National Czech & Slovak Museum & Library, African American Museum of Iowa, Iowa Flood of 2008, Cedar River, Iowa River, disaster response

INTRODUCTION

In June 2008, a report issued by the U.S. Climate Change Science Program, a joint effort of more than a dozen government agencies, concluded that the extreme weather we have been experiencing will become more extreme due to climate change. The report suggested that droughts will get drier, storms will get stormier, and floods will get deeper with a warming climate. The report noted that “currently rare extreme events will become commonplace.”

Nothing was more extreme in Iowa than the record flooding in June 2008 that caused billions of dollars in damage and impacted more than 300 communities. The Cedar River crested in Cedar Rapids at over 31 feet, nearly twenty feet above the flood stage and twelve feet higher than the historic flood of 1993. Nine rivers in Iowa reached all-time record flood levels, and 85 of the state's 99 counties were declared disaster areas. Several major libraries and museums were affected by the flood, and a number of cultural institutions were devastated. Fortunately, training and long-established networks greatly enhanced our ability to respond to the unprecedented flooding. In Cedar Rapids, seven professionals were at the gate and ready to provide assistance to the African American Museum of Iowa and the National Czech & Slovak Museum & Library when officials allowed citizens back into the flooded areas.

I live in Cedar Rapids, on a hill. (We drove our real estate agent crazy insisting that we live on a hill.) The city's downtown, with its premier cultural organizations, is on the banks of the Cedar River. The river came up fast and ugly, going well beyond the 500-year flood plain, rising more than twelve feet above the most pessimistic predictions. Malfunctioning water gauges under reported the quantity of water coming

our way, and the many precautions taken were inadequate as flows exceeded all records. Perhaps the only positive element of the entire situation was that the waters receded rapidly, allowing us to begin the recovery process earlier than anticipated.

I work at the University of Iowa which is thirty miles from Cedar Rapids and on the Iowa River. The Iowa River flooded as well, coming up slowly, giving us time to prepare. It, too, exceeded all previous records but, fortunately, did not get as high as the worst case projections. The Iowa River came up slowly and went down slowly.

Some disasters are sudden events that occur with little to no advance warning. With floods, you often have some time to get ready for the event. Preparing for the disaster — working right up until the time to evacuate — adds another layer to disaster response. It's been my standard practice to keep a log whenever I am dealing with a disaster. This time, I converted my log to a blog. I'm sharing some of my entries to give a sense of the event and have included a timeline at the end of this article.

ANTICIPATION

Thursday, June 5, 2008: Forecast of Rain

I sent out a reminder to library staff stating “With forecast of continuing rain over the next few days, roofs that are reaching their “end of life”, and reports of flooding, I thought I should remind everyone that the list of people to call in case you need assistance with damaged collections is posted at our website.” I began collecting phone numbers for a phone tree, wallet sized.

Friday, June 6, 2008: SOS! Save Our Stuff Conference

The Iowa Conservation and Preservation Consortium held their annual SOS! Save Our Stuff conference at the State Historical Building in Des Moines. One of the sessions was on disaster response and recovery. On my drive to Des Moines, I see my first ever blue heron along I-80 in a new “lake.” The ground is saturated, there is water everywhere and my sense of foreboding deepens. During the conference, the staff of the State Historical Building began dealing with water in the storage area.

Saturday, June 7, 2008: Shopping for Rain Boots

Since we can't find any rain boots in Cedar Rapids, my younger daughter and I went shopping for rain boots in Iowa City. We searched everywhere for some really cool looking, fashion-statement boots. Finding none, we went to the ever reliable Paul's farm discount store and got some sensible, sturdy boots for me that actually fit! My new size 3's are adult in height, providing lots of protection. My daughter decided to wait.

Monday, June 9, 2008: Flood Alert!

Cedar Rapids: City and county officials have jointly issued a flood alert for properties located along the Cedar River. “According to the county, the river will experience a record flood crest on Wednesday afternoon or evening at about 21.5 feet. Previous crests in 1929 at 20 feet, in 1961 at 19.6 feet, and 1993 at 19.3 feet may be eclipsed by this flood. The city of Cedar Rapids, Linn County, and the Linn County Emergency Management Agency are working together to address the seriousness of this threat. Please take all necessary precautions.”

Iowa City: The University put out a call for assistance with sandbagging low lying buildings on campus. Several UI Libraries staffers assist. An announcement is sent out “The University of Iowa has suspended normal activities on the arts campus due to anticipated flooding. University officials are making plans to temporarily relocate offices in all buildings along the west bank of the Iowa River including Hancher

Auditorium, Voxman Music Building and Clapp Recital Hall, the Theatre Building, the Museum of Art, the Art Building and Art Building West.”

Tuesday, June 10, 2008: Flood Alert Continues

Cedar Rapids: Flood Alert Update from MidAmerican Energy Company “Due to safety precautions, MidAmerican Energy has begun shutting off all gas meters for residential and non-cooking business customers from Czech Village to the Time Check areas in the Cedar River basin. All cooking customers (i.e. restaurants, etc.) in those areas will have gas meters shut off between 5:00 – 8:00 PM tonight. MidAmerican Energy will reassess the situation tomorrow morning and may expand this area to include all business and residential customers in the downtown area from 4th Street East to 4th Street West.”

Iowa City: The UI Libraries disaster response team begins meeting every morning at 9 AM to keep each other posted and make decisions. The wallet-sized emergency phone numbers were distributed. We welcomed staff relocated from the Art and Music libraries. Sandbagging continues.

Wednesday, June 11, 2008: Flood Prep Continues

Cedar Rapids: Flood Advisory Update: The Linn County Emergency Management Agency has provided the following information to the Chamber of Commerce for distribution to our members: “The 1st, 3rd, 12th, and 16th Avenue bridges are now closed. Bridges on 2nd and 8th Avenues will be closed by 8:00 PM this evening. The only way to get across the river will be on the I-380 Bridge or across the Highway 30 Bridge near Highway 13. Mid-American Energy has shut off gas to all businesses and residences in the 100-year flood plain and will soon extend that shut-off to customers in the 500-year flood plain.”

“As of 1:00 PM, Alliant Energy continues to manage the current flooding and prepare for the forecast increases. Pumps located in the downtown area continue to operate well with the current water levels. ... With the historic nature and length of the flooding predicted, it is not possible to assure that the downtown system will continue to operate normally. ... As a result, businesses located in the downtown business district are strongly encouraged to initiate their contingency plans for the loss of electric service. ... The city will be starting mandatory evacuations in the 500 year flood plain shortly. Businesses are starting to close down to help fill sand bags.”

Iowa City: We met with the water utilities engineer from facilities management to discuss flood levels and options for protecting the Main Library. He brought an elevation map with him and current flood level projections. His figures show the library at high risk of flooding. The area of greatest concern is the drain at the bottom of the loading dock. This drain feeds directly to the river. As flood waters rise, water will eventually emerge through this drain. We'll finalize plans tomorrow (as much as one can in this type of situation). We have a phone tree and monitoring in place and are working on contingency plans.

Main Library staff started moving special collections material shelved in the basement to the upper floors around 1 PM. The UI Museum of Art needed 6 volunteers to help move some of the collections out of the Museum as a precaution against the rising river level. They needed helpers with experience in handling objects and/or lifting and moving heavy boxes as there wasn't time to fully train first-timers. Our assistant conservator volunteered to help. We bought boots for our younger daughter on the way home. They are out of my husband's size.

Thursday, June 12, 2008: Constantly Changing Picture

Iowa City: In the morning we were told that there are no current plans to evacuate the Main Library. The Main Library is one of the buildings that they know MAY need to be evacuated at some point because of our location — but we are NOT at that point now nor do we anticipate this today.

In the afternoon we learned that the Corps of Engineers expects the flow from the reservoir upstream from the campus to increase, and we are under a 5 PM Friday deadline for what we need to move from the basement. At this time, we are concentrating on the lower shelves of the special collections in the basement. We also started working with members of the preservation and shipping departments to prepare them to move out of their work areas on the lower level, if necessary.

Our attempt to organize sandbagging of the library dock to keep flood waters from entering the lower level is having its ups and downs. First we hear we can; then we hear we can't. With widespread flooding throughout the state, the UI is having problems keeping a steady supply of sandbags. One encouraging note is that the power to the Main Library is on fairly high ground and not in an underground tunnel.

A new system of rotating teams is set up to move special collections materials housed on the bottom shelf out of the lower level storage area. Some material was moved to higher shelves; the rest was moved up to the 5th floor study lounge at the south end of the building. Enough staff pitched in to help so that the move is completed before the end of the day. The collection is located in the lower part of the basement with one door so the move had to be accomplished with human chains that moved books down narrow aisles and onto carts. The carts were taken to the upper floors by an elevator.

We are in agreement that if we do a 2nd phase of removing material from the basement, we should wait and make that decision during our 9 AM meeting. Our chief collections officer is reviewing a crude map and list of items in the basement storage. Special collections managers are regrouping and identifying the high value resources that are in the special collections area.

At some point we get new high water predictions: Iowa Avenue to Burlington Street – 650.5. That's us! Our basement elevation is 645 feet. As our facilities manager stated, "Not good news."

At 5 PM, our library director received word that the Main Library will be closed to the public, Friday, June 13 at 5 PM for an indeterminate period of time. All staff members must evacuate the building by Saturday, June 14 at 5 PM. Libraries and University officials will be re-locating staff to other campus locations for the duration. With so few roads and bridges open, it took us 2 1/2 hours to get home. We are met with the unbelievable sight of downtown Cedar Rapids under water. We're down to one lane with the rest of the lanes open for emergency vehicles. Sightseers further delay traffic. Seeing our home town under water, it is hard not to cry.

Friday, June 13, 2008: Evacuation of the University of Iowa Main Library

Iowa City: At 6AM, I sent the following email to library administrators: "After seeing the Czech/Slovak Library/Museum under water almost to the roof top and water to house rooftops and church steeples and watching flood level forecasts, I'm thinking we should revise our scenario of about 1 foot of water in Main to 5 feet. ... I'm starting to think I'd rather pack out dry rather than wet books." We packed bags, planning to stay overnight and left around 6:15 AM so we could be at work around 8 AM. It was very eerie as there was hardly any traffic on the road; we arrived at the university around 7AM.

We had a very brief meeting around 8 AM. We agreed that the director of library information technology would supervise the evacuation of computer equipment, I would direct my staff's evacuation of their work area, the special collections managers would direct the move of special collections, the circulation staff would coordinate volunteer sign up, and I would coordinate the removal of other collections out of the basement. We agreed on the proposed 5-foot mark for the special collections area.

One of my staff arrived in tears as she was concerned that her house would be flooded. We agreed that after all equipment and materials were out of the preservation department, preservation staff would assist her in sandbagging her house.

At the time we decided to remove materials up to the 5-foot mark, we were being denied sandbags. Of course, once most materials were out, the sandbags arrived. On Thursday, we were told we had two days to evacuate — Friday and Saturday. Knowing that the situation could change, we assumed there'd be just one day. Later in the day, we were told that we could not come back on Saturday — actually, we were told to stay home for a week. News reports resulted in the arrival of hundreds of volunteers of all ages, including faculty, students, and local citizens.

Our evacuation was phenomenal. I've never seen anything like it. We have 3 elevators and 2 stairwells leading to the basement. Our collection storage is crazy making, with an unfinished floor, compact shelves, and narrow aisles. We used carts and elevators, human book chains snaking the collection up the stairwells, and box brigades. I told everyone that I hoped my worst fears were just that and that this evacuation was just an exercise. We had a hard time keeping up with our volunteers. We'd identify a section for packing out, point them to it and they'd swoop in like locusts to empty the shelves.

The circulation assistant did an incredible job of keeping everything coordinated in the general collection storage area. When we were short of carts, we packed items in boxes. We kept 3 and 4 human chains going at a time, with volunteers sometimes belly to belly. A couple of the volunteers suggested that they could organize the evacuation better than we could and get stuff out faster. I'm sure they could have. But we were mindful that we would need to put everything back in place and were trying to keep some semblance of order as items were stacked on tables on the 2nd floor.

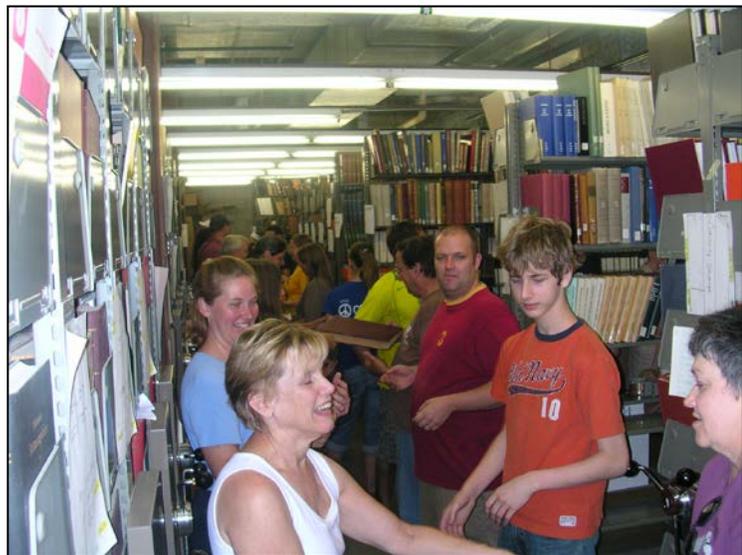


Figure 1. Volunteers evacuating collections. (©2008 by author)

Meanwhile, the library information technology staff moved the servers out of the Main Library with the goal of having an array of electronic information resources operational by evening. They sent out a reminder, that for the interim, the entire Libraries' electronic resources would be unavailable. We had until noon to save everything to the shared network so we could have access to our files from another location while we are evacuated.

At one point we were told we needed to be out by 5 PM. Officials learned that the Governor and other dignitaries would be visiting the campus, including the library. Suddenly we were given until 9 PM for our evacuation efforts. Par for the course, the Governor and his entourage arrived during a break. No one was working, and everyone was taking a pause for well-deserved food and water. We had problems acquiring food and water since the UI Libraries credit card was not authorized for purchasing food and water. Library administrators ended up using their personal funds to buy food and drink for our volunteers.

We used our elevators and stairwells effectively and evacuated all staff (150), over 100 computers, all special collections material up to 4-5 feet from the basement floor, a majority of the university theses, art

collections and music books up to 4 feet from the floor. We moved our 16 mm films out of the basement. Priorities were based on our collective knowledge of what might be the hardest to replace balanced against making the best use of our volunteer labor. It was incredible. We worked until 8:30 PM. My husband and I had several offers for places to stay overnight. We were a little concerned that if we didn't get home, it might be days before we could be there. Almost all roads were under water and closed. It took us over 3 hours to get home since we had to drive 70 miles west to find an open bridge before we could head back to Cedar Rapids. We arrived home around midnight to a darkened downtown. There are no city lights to beckon us home.

Saturday, June 14, 2008: Resting Up

Cedar Rapids: We're having quite an adventure. The situation has become very surreal. All our utilities are on, but we are on restricted water use. We plan to visit a friend outside of Cedar Rapids tomorrow to take a much needed shower. The water in Cedar Rapids is starting to recede. Firemen are escorting people into their businesses or homes so they can get essential things out and check on the structures. The City of Cedar Rapids is starting to think about its recovery. I'm not sure how long it will take for the water to recede so people can actually start repairing, cleaning, etc. so they can move back in.

Iowa City: Our facilities manager caught an announcement that volunteers should report to the Main Library this morning at 9 AM. The report was meant for volunteers to report for sandbagging. He was at the door to re-direct volunteers expecting to help move more books, and our public relations person alerted the UI Press that they needed to put a better statement out. The Iowa River still hasn't crested. The crest is predicted Tuesday morning. I don't know if I can survive the suspense. So far the University of Iowa Main Library has stayed dry. But I've looked at the flood level projections and the building elevation. It's not good. We might make it though. We have over 450,000 books in the basement, half of which could get wet.

Today I am spending time recovering. I was too wound up to sleep more than 6 hours. But I did treat myself to a 1 1/2 hour massage and should sleep really well tonight. I plan to use my week "off" helping the Cedar Rapids libraries and museums in their recovery efforts; getting rested up is important.

RESPONSE

Sunday, June 15, 2008: Preparation

Cedar Rapids: We enjoyed our time at our friends — a shower, food, and conversation. Back home, I discussed strategy with the Cedar Rapids Public Library acting director. (She's had the acting position for about a month.) The library has flooded, and she has no idea when she will be allowed back in. We're in agreement that trying to salvage first floor flood-soaked materials doesn't make any sense. Most of the titles are easily replaceable and will cost less to purchase new than to try to clean and restore. The library catalog includes a location code for each title so getting an inventory of the items on first floor should be fairly straightforward. I met with the National Czech & Slovak Museum & Library staff at the director's house. Her living room is ghostly as it is full of male mannequins in Czech and Slovak costumes. These costumes would have been the hardest to replace so during evacuation they were taken to her house. The librarian mentions that the director is fairly new, and that during her first couple weeks on board, he went over the disaster response plan with her. I'm very impressed. We discussed disaster response procedures. They already have temporary office space, storage for their dry materials, and a disaster response company on tap. Again, I'm impressed. I suggested that we could coordinate with the African American museum and pool resources. Everyone thinks this is a good idea.

Monday, June 16, 2008: The University Libraries Dodges a Bullet

Iowa City: The Iowa River has crested and started to recede. Although most university staffers are required to stay home, the key operation staff is back to work to begin clean up. Our facility manager has checked the Main Library basement. There is about 1/2 – 2 inches in various parts of the basement, including the special collections and books stack areas. No collections are wet, and there appears to be no danger of them getting wet. The utilities are still on, which will be a big help. We are working to see that the area is checked regularly and to see how soon we might be able to begin getting that water out of there.

Cedar Rapids: In the morning I met with the African American Museum of Iowa staff at their temporary office and suggested that they coordinate recovery efforts with the National Czech & Slovak Museum & Library. They, too, thought this would be a good idea. They have also found temporary storage for their dry items. We then headed out to join the National Czech & Slovak Museum & Library staff who has arranged a meeting with the disaster response company. It's a good meeting. We're hoping to get into the disaster area tomorrow. The director of Brucemore, a National Trust Historic Site in Cedar Rapids, is anxious to assist with recovery efforts. I stopped to talk to him on my way home. He plans to acquire preservation supplies and has office space if needed.

Tuesday, June 17, 2008: False Start

Cedar Rapids: Today, with the help of some local politicians, we were able to get an exemption and get a recovery team and freezer truck into the National Czech & Slovak Museum & Library area. We are greeted by the sight of a desk slammed into the front window. The mud and guck were so thick that we weren't able to do much except get some of the mud out and open doors to get air circulation going. Tomorrow, we plan to start packing the material out and "fight the good fight" to get the African American Museum of Iowa exempted so we can begin packing them out, too. The UI Libraries conservator joined me today and will continue to help this week, as will his partner.

Travel is difficult and patience-testing, taking at least double the time to get anywhere. A number of roads have been washed out so even if the water goes down, the road isn't there anymore.

Wednesday, June 18, 2008: Salvage Begins

Cedar Rapids: To our great disappointment we were not able to get into the National Czech & Slovak Museum & Library today due to a safety hazard. We spent a lot of time waiting at the barricade hoping to get in, but no luck. The National Guard and police from Nebraska and Minnesota cities are assisting local law enforcement with guarding the flood zone.

We were able to get into the African American Museum of Iowa in late morning. The freezer truck was inside the barricade at the National Czech & Slovak Museum & Library so our disaster response company had to find another freezer truck. The best laid plans The African American Museum of Iowa was not as heavy with mud as the National Czech & Slovak Museum & Library. They are on a higher bank. The carpeted floors were already thick with mold. It took a while to get doors open and paths cleared for bringing material out. Because there are no windows or electricity, we had to use flashlights to find our way around. We set up two work streams – one for clean material and one for the freezer truck. We actually ended up with a third one, to treat museum objects.



Figure 2. Hallway carpet thick with mold. (©2008 by author)



Figure 3. Cleaning museum objects. (©2008 by author).

The museum curator did a great job of prioritizing what to salvage. She decided not to rescue the library books. She had an inventory, and she should be able to purchase replacement copies. She decided it was more important to focus energies on the really unique, irreplaceable material – the archives and museum objects. The curator is “lucky.” The shelves are very tall. Half of the archival material was above the 5-foot flood line.

We were able to pack almost all the African American Museum of Iowa archival material out. They had to make some difficult choices as to what to save and discard. I had just given the Cedar Rapids area library and museum staff a refresher course in disaster preparedness and

response about three weeks ago, and my staff and I had had behind-the-scenes tours of the National Czech & Slovak Museum & Library and the African American Museum of Iowa a couple weeks ago. They knew what to do, and I knew where everything was. What a coincidence! The museum staffs couldn’t have been better prepared. They are doing a superb job.

The museum’s dry collections are up the hill in the Grand Masonic Lodge of Iowa, and wet paper items are in the freezer truck. We’ve put a call out inviting local churches, libraries and museums to add their collections to the freezer truck. We want the truck packed full when it leaves. The company will dry the archival material out. We’re working here to gear up our University of Iowa conservation lab to clean the items over the next 2-3 years.

The State Historical Society of Iowa Conservator, a visiting University of Alabama Conservator, and the University of Iowa Conservator were onsite all day and will return to help tomorrow. My spouse also assisted. I talked him into helping as I thought his height (6’6”) would be an asset. The flood waters are heading south, but if this is like 1993, the disaster has just started.

By the end of the day Saturday, eight days after the flood crested, the African American Museum of Iowa and the National Czech & Slovak Museum & Library collections were removed. Stabilization of the buildings had begun. The structures were mucked out, wet dry wall removed and emergency ventilation set up.

RECOVERY

Iowa City: Since no University of Iowa collections were water damaged, collections remained in their respective buildings. Forty-two campus buildings had been flooded to some extent. Priorities for stabilization of the buildings were based on how soon a building could be entered and the perceived importance of the building based on its content and function. Since the Main Library took just a little water, officials were able to assess the building and contents on Monday, June 16, just two days after the water crested. Cleaning began almost immediately, and emergency air was running through the building by Thursday.

The Art and Music Libraries were on the 2nd floor of severely flooded buildings. UI officials were keenly aware of the cost of mold outbreaks and had emergency ventilation running through the art and music buildings by Thursday, too. Due to the need for asbestos abatement in the music building, library staff

was not allowed to inspect the music collection until June 24 — ten days after the flood waters began to recede. Although UI officials had been keeping us posted and reassuring us that our collections were fine, there is nothing like seeing it for yourself. The library staff found no instances of mold.

In addition to stabilizing buildings, the university documented everything. Several university staff, including library employees, spent almost two weeks taking photographs of all the flood damaged student dormitory rooms and contents. It was very emotionally draining work.

Cedar Rapids: The public library and city historical sites did not fare as well as the African American Museum of Iowa, the National Czech & Slovak Museum & Library, and the University of Iowa Libraries. The Cedar Rapids Public Library staff was not allowed into the building for two weeks. By then it was too late, there was mold everywhere on the first floor — even on books that were above the water line. The Cedar Rapids Public Library lost over 160,000 items from its collection. An offer of volunteer assistance from a Minnesota conservator to assist with the Usher Ferry Historic Village and the landmark Paramount Theater was turned down by the Mayor of Cedar Rapids — apparently due to concerns about liability. The delay proved costly.

OBSERVATIONS

Managing a Disaster

1. The ideal, of course, is to have an up-to-date disaster plan complete with a list of contacts and a disaster response company on contract ahead of time with at least some specifics worked out. At the minimum, you should have a list of companies on hand.
2. Keep a log or journal, record names and phone numbers of those involved — at least those involved in major decision making — and record decisions made.
3. An important part of a recovery process is careful planning. Planning can be done while waiting to be allowed back into the building or area. Staff needs to be in agreement as to who is in charge of what. Assignments can be made: Who will coordinate the overall response effort? Who will work with the media, volunteers and the insurance company? Who will be responsible for what area or collection type? Storage for salvaged material will need to be located. Transportation for collections needs to be secured. Collection priorities need to be reviewed. Ideally, everyone will meet with the disaster response company in a sit-down meeting to introduce each other and go over strategy. It's very important that everyone is on the same page before beginning the recovery process. Participants will be stressed to the max, and the situation will keep changing. Having a common understanding of goals and directions will greatly assist during this very trying part of the recovery process.
4. Sharing, instead of competing for resources, will enhance a recovery process. When the disaster response team could not get into the National Czech & Slovak Museum & Library, they moved to the African American Museum of Iowa. The team worked to keep salvage operations going at both museums. Supplies were shared. Strategies learned at one site were used at the other. When members of the teams met with the disaster response company to coordinate the recovery efforts, the company not only agreed to work for both museums but offered to give a group discount. Later, they agreed to let us put out a call for other entities to share the freezer truck space. Late in the week, Johnson County Historical Society called after they discovered that their basement had flooded due to rising underground water levels. Their items were included in the group discount.

5. A key piece of the planning process is identifying who has the power to get you into the disaster area and into a building. For the National Czech & Slovak Museum & Library and African American Museum of Iowa, it was the local politicians. They worked hard to get us an exemption and were at the barricades with us on Tuesday, explaining to the local business owners why it was important that we were allowed into the area before anyone else. The Cedar Rapids Public Library, Ushers Ferry historical site and landmark Paramount Theater had no such advocate, and the delay in re-entry resulted in additional damage to contents.
6. At the very beginning of the process, staff needs to be advised that plans will constantly change and that many decisions will be made on the fly. For example, we were able to get a freezer truck into the National Czech & Slovak Museum & Library area on Tuesday ahead of the curfew and were prepared to begin work on Wednesday. When we returned on Wednesday, we were told that we could not access that area due to a gas line break. We were, however, able to get into the African American Museum of Iowa.
7. Follow all the disaster response steps — ensure the building is stable before entering; assess damage before going to work; establish salvage priorities; divide into teams; assign a coordinator; keep the disaster recovery service in the loop; assign individual(s) to handle public relations, insurance agents, and volunteers; document conditions of the collections and building structure as best you can; practice safety at all times. A good summary is on “The Emergency Response and Salvage Wheel” from the Heritage Emergency National Taskforce. It’s easy to keep with you for referral.
8. Have your insurance agent, lawyer, board president or whoever will be making money decisions onsite as soon as possible. If they can see the damage first hand, they’ll be more inclined to help and more receptive when money requests come in. They’ll be able to advise and assist with the steps you’ll need to take to secure reimbursement.
9. Expand your definition of staff; give volunteers assignments to fill in the gaps. The possibilities include: managing public relations, videotaping and/or photographing the disaster, directing the evacuation of materials, fetching food and water, signing other volunteers in and out, providing security, and rounding up hard-to-find supplies.
10. Remember that the recovery process will require extreme patience. Travel will be difficult, bridges, streets and businesses will be closed. Open streets will close without notice. A 15-minute errand may take up to three hours or more. Everyone in the impacted area is likely to need and compete for many of the same supplies.

Salvaging Collections

1. Good preservation practices pay off. Archival boxes provide great protection and keep a collection together. There will be some loss due to inks bleeding or pages sticking together and the edges will be stained from dirt seeping in, but for the most part, the majority of items can be cleaned, flattened, and put back into a new archival box.



Figure 4. Archival box provided good flood protection. (©2008 by author)

2. Leave items in the mud and muck until you can get to them. This is counter-intuitive. Uncontrolled drying will seal mud and debris stains, fix distortions, set fabric stains and stick photographs together. We quickly learned that we needed to keep items wet and in the mud until we could get to them. Books and manuscripts were brought to work tables in wheelbarrows and kept under plastic until they could be rinsed off and packed into the freezer truck. The textile collection was left in the mud to await salvage work by textile conservators who arrived later.



Figure 5. Items retrieved using wheelbarrow.
(©2008 by author).

3. Triaging: Once the doors were opened, we conducted a complete walk-through, assessing the situation and determining priorities. The walk-through is critical to a successful recovery. It is a time that allows you to determine salvage strategies. Rushing in without advance planning puts collections at risk of more damage and staff at risk of injury. After the walk-through, we set up three work streams at each Cedar Rapids site — one for dry material, one for the freezer truck, and one for museum objects.
 - a. Dry: Both museums had material above the flood line. This is a great place to start the volunteers. It's satisfying to the volunteer, takes minimal training, and allows work to begin while determining strategies for the wet material.
 - b. Wet muddy paper items: If at all possible, books and archival boxes should be rinsed before packing into the freezer truck. The items will be easier to box up and will be easier to work on once dried.
 - c. Wet muddy artifacts: Once rinsed, the items need to be sorted by type before boxing up. For example, glassware and heavy metal items should not be packed into the same box. Ideally, newsprint or light-weight rolled paper should be used to wrap the items. Bubble wrap should be used sparingly because even items that feel dry to the touch are most likely still damp. Bubble wrap will keep the moisture in, and mold will bloom.

4. Set up teams for specific material types and/or areas within the building. Teams can be self-directed, requiring minimal attention from the disaster coordinator. Three conservators spent most of the day walking through the National Czech & Slovak Museum & Library main building, pulling items off the walls, taking them out of the frames and packing them up to take to the State Historical Society of Iowa conservation lab. Another team pulled out all the boxes of record albums and put them on a truck for eventual transport to the University of Iowa Libraries. Other work streams dealt with items from the collections storage building, exhibit area, gift shop, and library.



Figure 6. Conservators packing items for lab. (©2008 by author).

5. If you have an important collection that is beyond the onsite expertise, promptly contact an outside conservator for advice. The National Czech & Slovak Museum & Library textiles and costumes were left in the mud until out-of-state conservators could be onsite to rinse and pack them away.
6. Make collection decisions at the macro level. Although the African American Museum of Iowa had just finished cataloging their library book collection, they decided to toss the entire collection. The books could easily be replaced, and it was probably cheaper than trying to recover the volumes. The important thing is to stabilize everything as quickly as possible and make decisions later on retention of individual items. At one point, staff tried to determine whether to keep or toss on an item-by-item basis, but even for a small museum the process was too slow. If you can't determine at the macro level, it's often better to just save the item and make a decision later. You have at least two times to make the "keep or toss" decision — on the spot and later once the item is dry and you can put it into context with what else has been salvaged. Needless to say, disaster recovery is messy.
7. Be careful in your assessments. A conservator recommended that the African American Museum of Iowa piano be discarded as it will never be able to be played again. However, it is the only surviving artifact from a local church that was flooded, has strong community ties, and there was accompanying archival collection. The piano now has two stories — the original and the flood. The piano is being cleaned and stabilized by a local piano restorer. Although the African American Museum of Iowa and National Czech & Slovak Museum & Library staffs had training in disaster response and recovery, they tossed items they thought couldn't be salvaged which I retrieved. On the other hand, volunteers were retrieving items on the discard pile that could be salvaged but were there because they were duplicates or educational materials. Communication is key.
8. Insist on everyone following safety practices:
 - a. Wear a N95 disposable respirator if working with flood damaged items
 - b. Use disposable gloves if handling the material

- c. Goggles or protective eyewear should be worn in flood areas
 - d. Don't touch your eyes or mouth if you've touched a moldy or dirty item
 - e. Wash your hands as soon as possible once vacated infected area
 - f. Take a shower and wash your clothes in hot water and bleach
 - g. Make sure your tetanus shots are up to date
9. Remember that illnesses due to exposure to mold can result from both high level, short-term exposures and lower level, long-term exposures.
 10. Clearly label each box as to ownership and type of material. It's very easy to get boxes mixed up and sent to the wrong truck and returned to the wrong owner if boxes are not labeled. Add manuscript accession numbers or range of call numbers if easily discernible, but don't spend time trying to figure it out. Items can be sorted once they are dried out.
 11. Refrain from finger pointing and playing the proverbial blame game. Mistakes will happen. You are, after all, in a disaster situation. Everyone is doing the best they can. If someone truly is not following instructions, send them home or re-assign them to another task.

WORKING WITH A CONSERVATION LAB AND DISASTER RECOVERY COMPANY

Once the disaster recovery company has arrived, take time to sit down, get acquainted and review the situation. Go over the building layout; explain the types, locations, and priorities of the collections; identify staff strengths and assignments.

Early into the recovery effort, we interviewed the disaster response company's on-site manager. If we had sensed any problem with the manager or staff, we would have kept a closer watch on their handling of the situation and provided training for the handling of the material. Luckily, the manager had the necessary training and background, a fair degree of common sense, and a practical approach to getting the job done. The company's staff had appropriate training and experience in collection recovery. They were polite and listened to our reiterations without complaint, were careful with collections and very supportive. The museum staff worked alongside the company staff with virtually no friction. The National Czech & Slovak Museum & Library assigned staff volunteers to each room to provide oversight as company staff cleared out debris.

Personnel from the Cedar Rapids museums and the disaster recovery company exchanged cell phone numbers and communicated at regular intervals throughout the initial recovery. Although the company provided a contract and reviewed the expense details during the disaster recovery, it was hard to make decisions on the spot. About a month after the disaster, the company sent estimates for freeze drying the book and paper items. The museum curators and I reviewed the associated costs and revised the original work plan. After considering the situation, we decided to have the drying only and not to have any cleaning, deodorizing or disinfecting done. The African American Museum of Iowa questioned some of the costs associated with the initial recovery work and was able to reduce their bill somewhat. Typical costs associated with sending materials to a disaster response company's freeze dryer are storage of material, transportation, and drying. There are a wide range of additional services such as cleaning CDs and DVDs, photocopying, document destruction and disposal, and insuring that sensitive documents are handled appropriately. We did not utilize these options.

Since the National Czech & Slovak Museum & Library had an extensive and valuable costume and textiles, they arranged to have staff from the Chicago Conservation Center come to the site to work with the collection. The textiles were cleaned and stabilized and then taken back to the lab for further work.

Textile items from African American Museum of Iowa were also sent to the Chicago Conservation Center. Staff reviewed the treatment proposals and opted to have some items returned rather than treated. The returns were typically items where the treatment cost estimates exceeded the value of the item. In addition to treatment costs, fees included storage and making an assessment and treatment proposal for each item, even for those left untreated. Although, the Chicago conservation lab did not give a group discount, they did coordinate delivery of materials with our disaster recovery company which was also out of Chicago. The collaboration resulted in some cost savings.

Until the book and paper items were returned from the freeze dryer facility, we regularly checked in with the disaster response company contracted by the Cedar Rapids museums. Since team members were working with the same company, we could take turns and were able to push to get our material a little earlier in the queue.

In Iowa City, the University of Iowa Libraries ramped up its conservation lab to become a flood recovery lab for the National Czech & Slovak Museum & Library, African American Museum of Iowa and the Johnson County Historical Society Museum. This arrangement allowed the local curators to have access to their collections, visit with the conservation lab staff on a regular basis and be more involved in the recovery of their materials.

A decision to turn a conservation lab into a disaster recovery lab should not be taken lightly. Since the University of Iowa is less than an hour away from the Cedar Rapids museums and the conservation lab has experienced staff, providing disaster recovery services seemed the right thing to do. If a large amount of material is involved, the conservation lab will need time to ramp up to hire and train staff, determine rate of pay, draft contract language, determine workflows and treatment strategies, find storage and conduct inventories. Maintaining a consistent workflow can be an issue. If some items have been sent off for freeze drying, those items might not be returned for several months. Then, too, there may be material beyond the lab's expertise. In this case, material may need to be sent to other labs or additional expertise brought in. We did both.

Even when institutions have a history of collaboration, it's best for all involved to have contracts for the work. Recovering from a disaster is stressful and time consuming. A contract spells out what will/won't be done and is something that everyone can refer to as a reminder of what had been agreed upon.

The UI conservation lab staff organized the flood recovery work by collection type — phonograph records, baskets and gourds, metal objects, wooden objects, ledgers, manuscripts, and photographs. This approach allowed the museum curators to assess one collection type at a time. A curator would tell us which items were highest priorities, pick the best in cases of duplicates and withdraw the culls. In the case of published items such as catalogs and yearbooks, the curator would search for replacements, often through a call for donations. In the interest of saving time and money, conservation lab staff did not write up an assessment and treatment proposal for each item but relied on the face-to-face discussions with the curator. The University of Iowa did not charge the museums for storage.

To the extent possible, we did batch work rather than item-by-item treatment. We would identify a type of material, for example, ledgers; determine a pattern of damage and treatment solutions; and then meet with the curator with a suggested treatment based on damage and the structure of item. Once we were in agreement with the curator, UI conservation lab staff would treat like items based on the result of our discussions — rarely consulting with the curator. This process allowed the curator to focus on such pressing needs as writing grants, negotiating with FEMA, preparing public programs and designing exhibits. It also allowed our conservators to be as efficient as possible with little down time.

WORKING WITH VOLUNTEERS

Typically when there is a disaster, volunteers arrive to assist. Volunteers are a valuable asset, but you need to be prepared to work with them. Most will arrive without water, food, hats, sun block, or any of the other essentials needed to keep themselves healthy. Many will volunteer to do whatever work is necessary whether they are fit and able to do so or not. It's important to remember that the experience they have will be shared with their friends, neighbors, and colleagues, creating the potential for negative publicity. Giving them a good experience while getting a job done under some very stressful conditions is quite a challenge.

At the University of Iowa, we had over 200 volunteers assist with the evacuation of our collections. We had a hard time keeping up with them. We solved this problem by assigning a leader to each crew and giving him/her a little bit of training. Delegating some of our authority allowed us to better monitor workflows, check on volunteers to make sure they weren't overtaxing themselves and do the inevitable trouble shooting. We learned that at least one volunteer in every group will tell you that they can do the job better than you can. We found it best to listen, smile, explain why you are going the route you are and then move on. You are in a disaster situation and do not have time to have a lengthy discussion.

At both the African American Museum of Iowa and the National Czech & Slovak Museum & Library, volunteers were assigned the task of packing out dry materials. This activity got needed work done, kept the volunteers busy while staff and the company were setting up to retrieve the flooded material, and brought immediate satisfaction to the participants. Since the initial recovery work occurred outdoors and volunteers did not bring hats or sun block, we eventually solved the problem by erecting tents for them to work under while they were rinsing the mud off the books.

As flood recovery work progresses, we continue to use volunteers to help keep costs down. The National Czech & Slovak Museum & Library held events to clean some of its gift shop collection. The University of Iowa conservation lab is using volunteers to clean and copy the African American Museum of Iowa working files that contain over eight years of records for researcher requests, grant applications, exhibits and projects. Other volunteer tasks include taking inventories; cleaning, flattening, and re-housing newspapers and manuscripts; and making boxes.



Figure 7. Rinsing mud off books. (©2008 by author).

In addition to their direct contribution of labor, the good will and community feeling created by using volunteers cannot be understated. At the University of Iowa library, I caught many a volunteer glancing through a book before handing it off to the next person in the book chain and exclaiming that they didn't know the library had such a fine collection. At social occasions, I've had people tell me how much they enjoyed helping the National Czech & Slovak Museum & Library wash the gift store glass items. Colleagues tell me that it's not unusual to have someone come up to them during a social gathering to talk about the participation in a book chain. The "buzz" that a good volunteer experience leads to an increased public understanding of the role an organization plays in its community.

Midway through the first week of flood recovery efforts, the National Czech & Slovak Museum & Library held a meeting for the volunteers offsite to update them on the situation and thank them. The University of Iowa and National Czech & Slovak Museum & Library both had thank you events later that summer, complete with press coverage, speeches, and food.

WORKING WITH THE PRESS

A disaster is newsworthy. If there is no one on staff to handle publicity, appoint someone. Since no one but you and your colleagues will really understand the full impact of a disaster, be prepared to talk to a reporter on the radio or stand before a camera. If possible, have a prepared message. Think of what you want the public to know. It could be “experts are hard at work,” “volunteers are doing a great job,” “half of the collection was above water and already transferred to a new site.” Even with a prepared message, coverage can take some unexpected turns as reporters look for images and stories with widespread appeal. The fact that the UI Libraries evacuated books using a human chain got great news coverage. We estimated that we were moving 100 books a minute. The chain and its speed received notice. The fact that we were only able to move ten-percent of the collection (50,000 volumes) out of harm’s way didn’t get mentioned. Even 18 months after the event, I still meet people who say “Oh, you’re the one who saved the books.”

Staying visible while being closed is important to the well-being of an organization. Exposure keeps the public invested in your organization. The recovery process offers a great venue for getting a message out to the community. Again, think about the message you want to deliver: “recovery takes time,” “we care about our collections,” “we are working to keep costs down,” “our collections are back home,” “here’s how we can help you save your collections.”

Throughout the recovery process, we created media events. When we were ready to return cleaned baskets, gourds and feathers to the African American Museum of Iowa, we invited the press in. When the curator came to our conservation lab to pick up the items, our conservation staff was available to demonstrate the cleaning process. The message delivered was that conservation work takes time (15 minutes to 40 hours to clean a basket). Museum items have unique stories to tell; basket cleaning used spit. That got everyone’s attention! The event and subsequent coverage let the community know that the African American Museum of Iowa was on the road to recovery. Other events included the arrival of archival material from a freeze-dry facility in Texas, a metal cleaning party, and the return of LPs and 45s to the National Czech & Slovak Museum & Library. We worked to highlight at least one museum in each event and to rotate the visibility of conservation lab staff.

The University of Iowa Libraries was fortunate in that it has a public relations person on staff and a university public relations department that was willing to assist. We kept the community posted on our situation via our website, news releases, and media events. The public knew about the evacuation of our collections, their safe return to the shelves, how to access the collections of our closed music and art libraries, and the work we were doing in the conservation lab. Eighteen months after the flood, we continue to garner coverage in local newspapers and on television.

The Cedar Rapids Public Library did not appoint a public relations representative and paid a huge price. They were severely criticized in letters to the editor for not moving their books the way that the University of Iowa did. There was no understanding that the site, supposedly on high ground, was not expected to flood and that staff was asked to sandbag their building, plan for damage to collections and evacuate within six hours. Despite the abundant publicity, the African American Museum of Iowa and the National Czech & Slovak Museum & Library staffs occasionally have to deal with irate donors demanding to know why their collections were lost or damaged.

CONTINUITY OF OPERATION

The ultimate goal of any disaster-affected organization is to remain operational. The flood came at the beginning of the University of Iowa summer session. Getting students back to class was the school's highest priority and, having access to library collections was part of that goal. The UI Libraries was committed to providing service with as little downtime as possible. During the Friday evacuation, staff moved the servers out of the Main Library with the goal of having them operational by evening. They sent out a reminder that in the interim all the Libraries' electronic resources would be unavailable. Library staff was reminded to save everything to the server so we could have access to our files from another location while we were evacuated.

The library information technology unit had a disaster response plan that outlined which services should be restored and in what order. The services were divided into categories: (1) critical for UI, (2) critical for the Libraries, (3) essential e-services, and (4) other. The services critical to the University of Iowa were fully operational by 5pm on Friday, June 13, after only a four-hour shut down. All the critical services for the library and many of the "essentials" and "others" were available within 24 hours. The remaining electronic services were available a week and half later.

While waiting for the Main Library building to re-open, the staff did everything in its power to provide services to the university community. We posted continuous updates to our website — reminding researchers that the online resources were still available, advising students that their books had been renewed automatically, and posting branch library hours. The library extended branch library hours to address the high demand for study areas due to the limited number of accessible buildings. The library administration negotiated access to the still-closed Main Library once a day for 30 minutes to retrieve library materials requested by researchers.

A week after the flood, library staff returned to campus and began the task of becoming fully functional again. Staff from the Main, Art, and Music libraries was reassigned to other branches. The size of the work unit and need for computer access determined which unit was assigned to what space. Since most work by the preservation department involves physical collections, finding space and work was a little more problematic. Fortunately, the book repair supervisor thought to pack our book repair equipment into her car before heading home on Friday the 13th. We were able to set up a temporary book repair station at two of the branch libraries. We also decided that staff could stay home part of the time and take an online preservation course. The assistant conservator worked in the State Historical Society of Iowa conservation lab on some of the National Czech & Slovak Museum & Library items and our conservator set up his office in the University of Iowa Center for the Book paper lab. The Preservation Department staff was so scattered that we all agreed to keep everyone posted via email as to where we were for the day.

On Monday, July 7, 2008, three weeks after the flood, the library staff received word that it could start moving back into the Main Library that afternoon via the south entrance. We moved back into the building while the barriers were still up. The north entrance stayed closed for most of the summer until the buildings to our immediate north were stabilized. University identifications were checked before we could enter the building.

Most staff members returning to the Main Library were able to turn on their computers and pick up where they had left off. Not so, the preservation department. Book repair, binding, and marking were in the part of the basement that had been flooded. Since we were completely dismantled, we decided it was a good time to get the floor waxed and walls painted. The first thing scheduled to get up and going was the marking unit which processes about 8,000 items a month. Getting marking restarted got the most students back to work and took care of our highest volume of work. Painting and reinstalling book shelves and equipment went on around them.

Once the Art and Music buildings were deemed safe enough to enter, the library began providing service by going to those two collections twice a day for retrieval and re-shelving of items. Since the buildings were without electricity, the work environment was dark, hot and humid. Staff wore “head” lights to retrieve items. Later, when University officials realized that the Music building was years away from reopening, the 100,000-volume collection was moved to the Main Library.

Although closed, the Art Library eventually had electricity again and book retrieval became much easier. Our insurance company insisted that the sprinkler system be turned back on to protect the building during ongoing construction work. Harried university facilities personnel skipped the testing phase before turning the system back on. One sprinkler head failed, soaking over 1,000 books. Ironically, preservation staff was euphoric that the books were damaged by “clean” water and had everything packed and in a freezer truck or on tables air drying within six hours. Once the sprinkler system was repaired, we tried turning it back on only to find another small leak.



Figure 8. Retrieving books in dark. (©2008 by author).

After the sprinkler incident, officials decided that the Art Library collection needed to be moved out. Yet another 100,000 volumes were added to the Main Library. The Main Library had already been over capacity before the music collection was moved in. Staff, students and collections were all vying for space, and the relocated collections compounded the problem. Luckily, University officials were able to negotiate with Federal Emergency Management Agency for financial assistance to provide offsite storage. FEMA gave us six weeks to find space, order and install shelving and move 200,000 volumes. We did it, just barely. The books were moved before logging the new location into our online catalog. The items that were selected for transfer were primarily books already tagged as low use in anticipation of moving them to an offsite archival storage facility — a building project put on hold indefinitely due to the flood.

At the University of Iowa, we discovered that it was difficult to be “in control” when a bureaucracy is experiencing a multi-building incident. Our main concern was to have good temperature control for the collections in the Main, Art, and Music libraries. The university contracted with companies to supply the vented air and controlled temperature and we monitored the environments with our preservation environmental data loggers. The art and music buildings were completely dark; the main library had one of its three air handlers down.

Our biggest problem with the art and music collections was keeping the libraries cool. If a thermostat broke on the rented equipment, it generally took several days to get the problem corrected. Even with the thermostats working properly, we had constant problems keeping the temperatures under 75 degrees. We did learn how to manage the temperature somewhat by redirecting the venting tubes and swapping out regular doors for gates to increase circulation.

In the Main Library, plastic tubes were strategically placed throughout the building to augment the two functioning air handlers in an effort to more evenly distribute air throughout the building. The disaster response company continued to provide the auxiliary air service even after the third air handler was back

in service. The company official told us they were continuing this service because our humidity was running at 60% and we were at risk of a mold outbreak. Because the preservation department maintains an independent environmental monitoring system of collection storage areas, we knew that 60% relative humidity was typical for the summer months. With multi-year reports in hand, we were able to convince the disaster response company that the augmented air was no longer needed in the main library and saved some money.

As it turned out, we had the only real time record of buildings without power, in some cases, from buildings that remained dark for months on end.

In Cedar Rapids, the public library staff re-located to a storefront library in a local mall. Although their disaster response company was able to keep the collections and servers on the second floor dry, they were not able to restart the servers for several weeks. As a result, there was no access to an online catalog shared by several area libraries. The Cedar Rapids Public Library has since contracted with their online catalog service provider to provide backup service should the system ever go down again.

The public library soon managed to secure several more spaces in the mall to expand service and bring several collections out of off-site storage for circulation. In order to keep them employed, staffers did most of needed the construction. They have also opened up a downtown store front library close to the flooded library. Unbelievably, FEMA directed the public to the Cedar Rapids Public Library storefront to use the internet to apply for assistance. With only two computers, the lines got long. Cedar Rapids Public Library staff contacted all the local libraries to identify free internet access and directed patrons to other locations around the city. The library board has determined that the Cedar Rapids Public Library will not return to its flood-damaged building.

Of the affected Cedar Rapids institutions, the African American Museum of Iowa was best able to maintain continuity of operations. (This is surprising since when the flood struck, the staff was told to evacuate a half hour after they arrived to work.) The collection manager transferred her computer files to a server on second floor. Within ten minutes of leaving the building, she had secured office and collection storage space in the Grand Masonic Lodge of Iowa. The museum maintained its outreach programs from its temporary location. They were “lucky” with their building. Most of the utilities were on the second floor and the structure was of steel and concrete. The museum was back in its building and had an exhibit installed six months after the flood. Their recovery was nothing short of phenomenal.

The African American Museum had insurance on borrowed items but did not have any other insurance. They had paid off the building and dropped the flood insurance because it was no longer mandatory and was expensive.

Since the National Czech & Slovak Museum & Library staff had a couple days notice to evacuate, they were able to pack some high-value items out. However, they were told to expect two inches to two feet of water and acted accordingly. The flood water line measured seven feet in their buildings. Fortunately, their servers were on the second floor so they did not lose their records. Within weeks, they had offices at a local business. By fall, they had set up a small exhibit gallery, museum store, a meeting/program room, administrative offices and storage space at a local mall. The following year, the museum mounted an exhibit in the Cedar Rapids Museum of Art. Within two years, they were back in the Czech Village in a small building. They were back in their original building in 2012, which was moved to higher ground, repaired and expanded.

CONCLUSION

The stress of dealing with a disaster will surface in a number of ways, at different times, and vary for each individual. Although I thought I was taking care of myself by taking a day off here and there, I found myself losing my temper or tearing up unexpectedly in the aftermath of the flooding. At times it was hard to stay focused and carry a task or project through to completion. When I mentioned that I had “flood fatigue” to colleagues who have dealt with a major disaster, I get a nod of acknowledgement and understanding.

It took two years to get beyond the stress of dealing with the flood. There are still some images and videos of the 2008 flood that are hard to view. The University of Iowa and the State of Iowa ~~have~~ established services to assist people in coping with the stress of dealing with a disaster. It is important to recognize when a colleague, staff, or you need assistance and to remember that it may be months before people can settle back into a routine.

Every disaster has its own unique set of circumstances and challenges. No matter the differences, a successful recovery from a disaster still has the same elements — a plan in place, trained staff, and the involvement of key figures in the institution and community. Taking time to assess the damage and determine a strategy for recovery before marching into action is critical. Continuous communication and cooperation become essential as plans undergo continual revision and decisions are made and unmade on the spur of the moment. Providing good security, dealing with volunteers, having adequate supplies, food and water, and working with the media are major challenges. Sharing rather than competing for resources and taking advantage of long-established networks will enhance the recovery process.

In Iowa City and Cedar Rapids, the University of Iowa Libraries, Johnson County Historical Society, the Czech & Slovak Museum & Library, and the African American Museum of Iowa all minimized damage to their collections and reduced the time required to become operational again by building on a shared history of preparedness, training, and collaborative spirit.

APPENDIX

FLOOD OF 2008 – TIMELINE⁴

Iowa River/Iowa City	Cedar River/Cedar Rapids
<p>Wednesday, June 4: Evacuation and sandbagging begins</p> <p>Friday, June 6: <i>1993 flood levels of 28.5 feet expected</i></p> <p>Sunday, June 8: <i>Surpasses flood stage of 22 feet</i></p> <p>Monday, June 9: Johnson County officials say 500-year flood now expected</p> <p>Tuesday, June 10: Coralville Lake goes over spillway in evening <i>Predicted crest at 30.5 feet</i></p> <p>Wednesday, June 11: <i>Predicted crest at 30.9 feet</i> Coralville Reservoir ups output to 33,000 cubic feet per second</p> <p>Thursday, June 12: Parkview Terrace neighborhood evacuated in the middle of the night</p> <p>Friday, June 13: University of Iowa abandons non-essential operations, including classes; evacuates flood-prone buildings <i>Iowa River passes 28.52-foot record, predicted crest: 33 feet</i></p> <p>Saturday, June 14: Huge volunteer sandbag effort at University of Iowa, Iowa City, Coralville</p> <p>Saturday, June 21: <i>Iowa River crests earlier than expected at 31.5 feet</i></p> <p>Tuesday, June 24: Water stops going over Coralville Lake spillway</p> <p>Monday, July 7: Iowa River falls below flood stage in Johnson County</p>	<p>Monday, June 9: <i>Predicted crest at 20 feet</i></p> <p>Tuesday, June 10: Braces for flood, sandbagging, building dirt levees</p> <p>Wednesday, June 11: <i>Predicted crest at 24.7 feet</i> Cedar River crest forecast gauge fails Mandatory evacuations begin in the early morning hours 2:00 PM Fears of a possible 500-year-flood crest announced; 1st Avenue, 3rd Avenue, & 8th Avenue bridges closed in Cedar Rapids 2:15 PM Mandatory evacuation of all people in the 500-year-flood-plain 3:30 PM St. Luke's and Mercy hospitals prepare for flood-related injuries. Exit ramps in Cedar Rapids closed Cedar Rapids. FEMA representative arrives in Cedar Rapids. Police block off neighborhoods and main roads in Cedar Rapids</p> <p>Thursday, June 12: Heavy rains produce flash floods in Cedar Rapids <i>Predicted crest now 32 feet</i> 8,000 evacuated Volunteers sandbag, and help save, Cedar Rapids's last water well. National Guard arrives in Cedar Rapids Mercy Medical Center in Cedar Rapids evacuated overnight I-380 restricted one lane through Cedar Rapids</p> <p>Friday, June 13: 10:15 AM Cedar River crests at 31.1 feet, almost 20 feet above flood stage 25,000 evacuated, including Mercy Medical Center</p> <p>Sunday, June 15: River falls to 24.3 feet -- still higher than any previous flood</p> <p>Saturday, June 21: River drops below 12-foot flood stage for first time since June 2</p>

Chart adapted from KCRG-TV 9. (2008) *Flood of 2008 – Timeline*. Cedar Rapids, Iowa: KCRG. Retrieved September 30, 2014 from <http://www.kcrg.com/floodwatch/video>

REFERENCES

1. United States Climate Change Science Program and the Subcommittee on Global Change Research. (June 2008) *Weather and Climate Extremes in a Changing Climate. Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands*. Washington: Department of Commerce, NOAA's National Climatic Data Center. 2.
2. Heritage Emergency National Task Force. (2011) *Emergency Response and Salvage Wheel*. Washington, DC: Heritage Preservation.