RECOVERING FROM A MAJOR DISASTER

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According to Noah Webster, disaster occurs when one's governing planet or star is in "an unfavorable aspect." There are those who claim that they can read your stars and those who claim that they can predict when your stars will cross and bad fortune will befall, but I have yet to hear of anyone who has made the claim that they can "change" the stars. If you believe in the techniques of astrologers, you might consider consulting one to predict the fortunes of your archives, but even an astrologer will not claim to be able to protect you from your "star-crossed" fate. Disaster is bound to happen; it's in the stars. Have you ever thought about it? What will you do? Let's take a little time to think the unthinkable: let's create an archives, subject it to calamity, and then look at the various procedures necessary for coping and recovering.

You are the curator of a medium-sized archives in a small city of 75,000-100,000 people in the midwest. Your collection is housed on its own floor in the main library building of the local college. This building is approximately seventy years old, of brick and stone construction, possessing all of the charm and cussedness typical of structures of that style and vintage. Your collection, of which you are, naturally, inordinately proud, contains the customary collections of the papers of former college staff, the archives of the college, the archival records of the leading industries in your city, and the very valuable papers of three prominent and historically important 19th century midwesterners whom we will call the Reformer, the Inventor, and the Banker. The Reformer's papers contain over 4,000 photographs and negatives, and the papers of the Inventor contain the microfilm equivalent of 36 linear feet.

But you are not really thinking about any of this. It's Monday morning, and like any other Monday, you are not quite awake as you head down the back stairs to the rear entrance of your facility. As you open the door, however, this Monday loses all semblance of Mondays past because you find yourself in the middle of a

DISASTER!

The sight that greets your eyes is water pouring out of the ceiling and cascading in sheets from the tops of the stacks to the floor below. This spectacle stops you cold for a moment, but, being an extremely competent and professional archivist, you realize immediately that you have a choice of one of the following reactions:

a. scream.
b. faint.
c. wade into the room picking up boxes and calling for help.
d. slog to your office and start the coffee.
e. find the nearest telephone OUTSIDE of the flooded area.

You certainly feel like screaming, but you look around and decide that fainting would be sloppy, and probably not very healthy, since you wouldn't have a dry place to land. You rule out options C and D immediately: your instincts tell you that one should never rush into the site of a disaster, especially while the disaster is still in progress. You decide to telephone for help from a safe place. You go upstairs to call emergency services (campus police, building maintenance) and your supervisor from a telephone outside of the affected area. You wait near the phone until the police arrive.

When the police and maintenance personnel have arrived, you tour your facility and discover the following:

1. There has been a water main break in your sprinkler system. The break is located in the east stacks; water is still pouring out, but it will be shut off within the hour.
2. There is water standing six inches deep in all of the stacks and in the processing area. It is beginning to seep into the research room.
3. Waterlogged boxes of records have tumbled from the top two shelves of the stacks in aisles one through four.
4. Your staff of three has arrived and is waiting for you to tell them what to do.
5. Several patrons are standing on the front steps waiting for you to open your doors for business.

Since you are a competent archivist, you have copies of your previously prepared disaster plan in your office, at home, and at the house of your assistant. You now retrieve the copy from your office and assemble your staff and the building maintenance personnel. Following the disaster plan, you:

Establish Recovery Headquarters

- You choose the research room, just off of the lobby, as recovery headquarters. It has been relatively unaffected by the water and has two operating telephones.
- You assign the calmest staff member to make phone calls for

recovery supplies and aid, using the list of suppliers and telephone numbers in your disaster recovery plan.

- You ensure personal safety by having the maintenance staff check all electrical systems in the building. The electrician notifies you that the house electricity is inoperable, and so you ask the employee assigned to the telephone to rent a portable generator that fits the electrician's specifications. You also have the electrician check to make sure that your supply of extension cords, to be used with the portable generator, meets current standards for waterproofing and grounding.
- You remind your staff to MAKE HASTE SLOWLY, since wet floors are slippery and standing water presents hidden hazards.
- When your supervisor arrives, breathless and on the verge of hysteria, you let him know that you have the situation in hand but that certain salvage supplies and services will need to be purchased quickly. You ask him to arrange for emergency procurement authorization for you.

Stabilize The Environment

- The next step is to arrange to have the standing water pumped out of the stacks. Maintenance does not have the proper equipment, but with prodding from you and your supervisor, they are persuaded to rent the necessary equipment from the local hospital and pump the water out. (You develop a strong suspicion that they will try to charge your department for this and make a mental note to follow up on the billing as soon as the crisis is over.)
- Next you ask maintenance to reduce the building temperature to sixty-five degrees or less as rapidly as possible. It is summer, and so you keep the building cool with two window unit air conditioners and several fans that are run on the portable generator, because you know that reduced temperature delays the growth of mold and mildew.
- Throughout, you keep constant watch, before and during the salvage operation, for signs of mold development. Since it is hot and the water has been standing in the building for hours, mold is beginning to develop on the damp papers, boxes, and volumes. From your reading on disasters and disaster recovery, you know that in cases like this fungicidal fogging may be necessary. You have the phone employee call the fumigator listed in your disaster plan, and when he arrives both of you tour the stacks. The decision is made not to fumigate at this time, since the waters have receded and the materials can be removed immediately.
- To retard the further development of mold, you create maximum air flow in the affected area with the fans and air conditioners.

The fans are directed so as to expel the humid air from the building and prevent the formation of pockets of moist, stagnant air.

Salvage The Collections

- Organize a salvage crew consisting of yourself, your staff of three, your conservation consultant, and any volunteers you have deemed conscientious enough to be of real help. Salvaging is hard, frustrating, and dirty work which must be done with a great deal of care and thought. You make sure that neither you nor your staff become overtired. Everyone rests frequently, and you try to keep the atmosphere as light as possible. Someone starts an informal contest to rename the stack area, and "Sog City" becomes the runaway favorite.
- To set up the salvage operation, you look for an area for packing and drying the materials to be salvaged. You know that it should have flat work surfaces at table or counter height which can be covered with polyethelene sheeting. You successfully commandeer a chemistry lab in a building 200 feet away from the library. It has rows of counters with sinks that are covered with three-inch plywood lids. You remove all equipment and supplies from the lab that are not needed for your operation.
- Next, the salvage crew removes and packs materials to be salvaged. The materials on the floors in the aisles are handled first, then the items on the lower shelves; and, finally, partially wet or damp items from the upper shelves are removed.
- Materials are removed in the condition found. You instruct your crew not to attempt to separate sheets, close swollen books, or open sodden folders. Material is passed separately, via a human chain, out the door and to the dry salvage area where the packing team will work. You do not allow anyone to stack wet materials on the floor.
- Paper items are packed in the condition you find them. If an archival box is too wet to be lifted or to stand on its own, a crew member carefully removes the contents and repacks them in plastic milk crates or in new boxes.
- Plastic milk crates are used to pack unboxed papers. Milk crates are sturdy and lightweight, and their open sides allow air to circulate freely around the wet materials. Fortunately, one of your student assistants is the grandchild of the owner of the local dairy. The milk crates have arrived in abundance, along with some much-appreciated pastries and a few gallons of chocolate milk.
- The crew is instructed NOT to turn drawers or wet manuscript boxes upside down to empty them, since the wet contents may

stick to the container and be torn if handled roughly. Container and papers are frozen as found. One over-enthusiastic student volunteer is observed repeatedly dumping wet boxes, and so you take him from his place on the removal crew and put him to work unloading empty milk crates from the dairy truck.

- The packing crew packs the milk crates and dry boxes loosely to allow for maximum air circulation during the freezing process, but makes no attempt to remove mold from wet papers or to separate single sheets found in masses.
- When each crate or box is full, your accessioning clerk tags it, using paper labels coded to show the original location of the damaged materials. The labels are attached to the boxes and crates with string because glue does not always survive freeze-drying intact. The accessioning clerk is the right person for this job since she knows your description techniques and the location coding system.
- After the crates and boxes are tagged, the packing crew moves them into a waiting refrigerated truck which has been leased by the staff member operating the phone. When the truck is filled, the driver (a chemistry professor who was eager to get involved) and one of your staff members take it to the nearest vacuum-drying facility, a twelve-hour trip.

As the salvaging of papers in aisles one through four is progressing, it is discovered that a portion of the Reformer's collection—ten boxes of photographs and negatives—has also been subjected to water damage. You alert your conservation consultant, who reminds you that photographic materials should not be frozen unless they cannot be professionally dried.

- You immediately have the salvage crew seal the wet black and white negative film and prints in polyethelyne bags, and place the bags in plastic garbage cans (NOT METAL) under clean, cold running water. The sinks in two janitor's closets in the chemistry building are pressed into service. Your conservation consultant reminds you, also, that the film and prints can be kept under these conditions for only three days without damage.
- The employee making the telephone calls makes yet another one, this time to Eastman Kodak's emergency service for cleaning and drying the negatives and prints. Kodak agrees to take them, and you ship them "Express" in ice and water, in the sealed plastic garbage cans which themselves have been packed in styrofoam from a local commercial cold-storage facility.

Later that day, in another aisle, the salvage crew uncovers a box of microfilm—records of the Inventor's patents—that has been soaked through. Another call is made to Kodak, and another package is sent off in the same manner. You are exasperated at the duplication of

effort, until your assistant curator somewhat testily reminds you that the microfilm and the photographic negatives would have required separate packaging anyway. You make an "executive decision" to send out for ice-cream at this point, and tempers are restored. You try not to imagine how *that* expense will be received by the controller.

As your staff is busy packing and dispatching containers of soggy papers, they discover two shelves of cloth-bound account books from the Banker's papers. One shelf is completely soaked, the other only slightly damp.

- You instruct the crew to pack the completely soaked volumes loosely in milk crates for freezing. They make no attempt to close the swollen books or to squeeze out excess water.
- The conservator washes the moderately wet volumes and stands them upright on the head end, to ease the strain on the stitching caused by the heavy, sagging book block. The volumes are set upright on several layers of blank newsprint, which is changed often as it becomes soaked with the runoff from the books.
- The conservator also prepares thymol-impregnated sheets according to Peter Waters's directions and places them between the front and back covers and the book block, because the covers dry very, very slowly and thus are more subject to mold growth than the rest of the book. These thymol-treated sheets will reduce the possibility of mold damage as the books are drying.
- Under the conservator's watchful eye, the salvage crew begins placing a single sheet of aluminum foil between each of the thymol sheets and the book block to halt the migration of moisture from the slow-drying covers to the faster drying pages.
- As the volumes become drier, the salvage crew begins opening them slightly and inter-leaving them with thymol-impregnated paper. They are careful not to open a volume more than thirty degrees at first. They inter-leave at fifty-page intervals, starting from the back of the book. The handling of the account books proceeds with great caution under the supervision of the conservation consultant.
- Some of the book bindings become distorted as they dry and develop concave spines when they are closed. Such problems are corrected by hanging each volume on three short lines of monofilament nylon. The conservator hangs only the books that are not dripping, feel damp but are not wet to the touch, and can be opened easily throughout.
- Books with wet edges only are air dried without inter-leaving because the room temperature is kept between 50 and 60 degrees Farenheit, and the relative humidity is kept constant at 25 to 35 percent. Under these conditions, the books dry in two weeks.

- When the books are nearly dry, the salvage crew closes them, lays them flat on a table, forms them gently to their normal shape, and then places each under a light weight. They are returned to the stacks after four weeks of drying, when the conservator judges them to be thoroughly dry.

As the salvage operation progresses, your archives slowly takes on a revised routine. Handling of the ordinary day-to-day work is cancelled or severely curtailed until the crisis has abated. These ordinary activities include:

- *Mail Delivery.* You have mail redirected to a temporary collection point in the library until two weeks after the salvage operations in the chemistry lab are finished. A staff member sorts mail according to priority, and only letters containing fee payments are handled. A one-page explanatory/apology letter is sent to all regular correspondents.
- *Reference Service.* Despite your private disaster, life goes on as usual in the rest of the world, and your services continue to be sought. You keep as many of your reference services as possible functioning throughout the recovery effort. You reduce the number of hours that the reference room is open from seven per day to three and relocate it to a small lounge in the library. Because the college archives were not damaged in the flood, researchers are allowed to continue using these records.

A portable bulletin board in the lobby of the library informs your public of the disaster, lets it know how you are responding, and explains the special needs that have arisen as a result. This board generates much interest, and several students who did not know of your repository's existence wander in to introduce themselves and to peruse the collection inventories. College administrators, who pass the bulletin board every day, are kept aware of your plight and, therefore, are supportive when your supervisor approaches them about an increased allocation for the fiscal year.

As the salvage effort concludes, it is time to call your staff together and evaluate the experience. You ask staff members to complete reports on their part in the recovery operation, and then you meet to hear the reports and to assess and change the disaster plan. On the whole, you find relatively little to change in the plan. You decide that a yearly review of the plan with all staff would be a good idea, since newer student staff were not familiar with it, nor with salvage procedures, when the flooding occurred. You let your staff know how much you have appreciated their help and announce that a "going out of business" party will be held in the chemistry lab which served as the salvage headquarters. Suppliers, maintenance personnel, and the dairy owner who was so helpful are also invited to the party, where mock awards for valor are given.

You become used to the sad fact of life that for many Mondays to come you will hesitate before putting your key in the door at work, wondering what kind of unpleasant surprise awaits you. That feeling will eventually pass, leaving behind one of justifiable pride in your and your staff's extraordinary achievement in rescuing and preserving a large slice of history that was threatened with extinction.

BIBLIOGRAPHICAL NOTE

There are many publications available on disaster prevention, preparedness, and recovery. Each archives should designate one staff member to keep abreast of new developments in disaster planning and salvage techniques by reading current publications and by acquiring training in basic conservation procedures.

The best place to begin is with *Problems in Archives Kits: Disaster Prevention and Preparedness*. Chicago: Society of American Archivist, 1982. This publication includes a comprehensive bibliography by Margery S. Long, examples of disaster plans from several archival institutions, and Peter Waters, *Procedures for Salvage of Water-Damaged Library Materials*. 2d ed. Washington: Library of Congress, 1979.