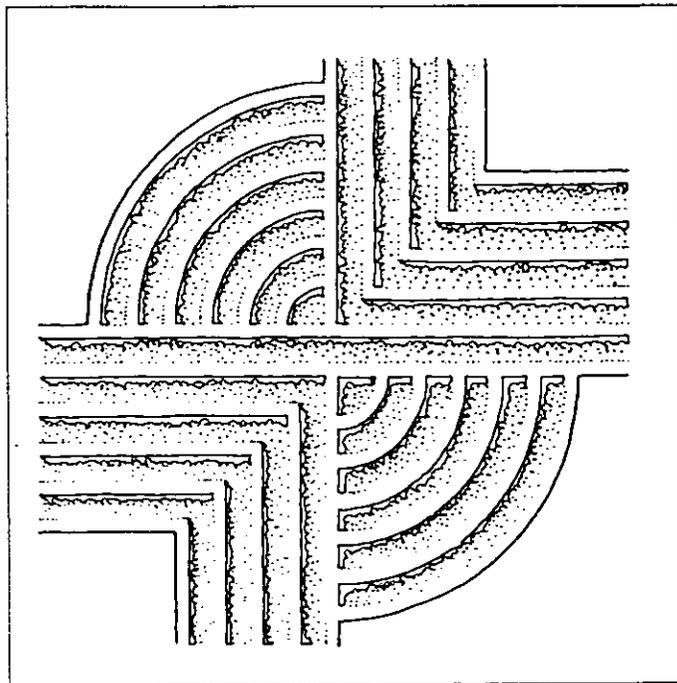


PREPARING TO SURVIVE:
DISASTER PLANNING AND YOUR INSTITUTION



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DISASTER PLANNING AND YOUR INSTITUTION**

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Chicora Research Contribution 219

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April 2, 1997

Paper presented at *Disaster Planning and Recovery for Historic Resources* symposium,
Restoration/Atlanta 97, April 18, 1997

This report is printed on permanent, recycled paper ∞

Introduction

I appreciate your interest in this topic. Far too often, I'm afraid, preservation is seen as a peripheral issue to many historic organizations and museums. It gets lost among the multitude of other issues — fund raising, personnel law, education, access — facing institutions today. And, I suspect to many of you in museums those of us in preservation are a rather dour lot. Having a preservationist speak is something akin to inviting your church pastor to a social gathering — you may know he or she is right, but it does cut down on the fun.

Well, for the next few minutes I hope that I can put a little different face on preservation. I realize that the goal of talks like this is primarily to inspire you to action. But in addition, most successful speakers also make listeners "feel good" about themselves and the issues being discussed.

Its hard to make anyone feel *good* about disasters. And it's even harder for a preservationist. You see, I spend most of my professional career working to make people feel *bad* about disasters — warning them of impending doom, cajoling them into the seemingly distasteful act of preparing a preservation plan, convincing the, that the unthinkable can actually happen to their institution. You understand, now, why preservationists are so rarely welcomed as disaster planning presenters.

I'm also a collector of unusual disasters. We've all heard of tornadoes and hurricanes, and earthquakes. But how many of you remember the January 1994 water main break in downtown Cleveland. It threw thousands of gallons of water and road debris over 60 feet in the air. While causing no injuries, the sudden break damaged a number of offices. There was flooding from basements through second floors.

Then there are the exploding toilets — and they don't just exist in Dave Berry columns. The first, but by no means only, incident occurred at the Olin Corporation's operations center in Stamford, Connecticut in 1985. The company had been very careful to have no water in the ceilings — no steam pipes, no water lines, no condensate lines. But what they did have were toilets — one floor up and about 100 feet down the hall. The toilets were the tankless variety, operating on water pressure — about 85 pounds per square inch to be precise. One night a flush valve failed and the top blew off. Water came out at a rate of around 250 gallons per minutes for hours. It poured out of the restroom, down the hallway, saturating everything in its path. As water will do, it found the one hole leading from the floor above to the floor below — and right on top of Olin's main frame computers.

Moving briefly to hurricanes, one of my favorite stories concerns those institutions which had emergency generators, but found they were located under water during the hurricane surge. Or found that their emergency generator was water cooled, and inoperable when the city's water failed. Then there was the institution located well above the storm surge, but its plumbers neglected to install a backflow preventer valve. Left, after the storm, with a dry location and intact roof, the staff was encouraged. Until, that is, they found the basement flooded with several feet of other people's sewage.

More of us live, work, and play in areas subject to a wide variety of natural disasters. Consequently, we allow architects, planners, and business partners to force us into areas where we probably shouldn't be — for example, on fault lines, or in floodplains, and on barrier islands. But Mother Nature isn't the only villain. As an expert with the National Fire Protection Association observed, "We are more than eager to step in ourselves, with hazardous materials, explosives, matches, shoddy construction, carelessness, or malicious intentions to commit mayhem."

I could go on, but my point is that we have to think positive, but plan for the worst. To do otherwise is to ignore the importance of our collections and the responsibility we have to the public.

Factory Mutual reports that about 40% of the participants in their disaster preparedness course come from companies with no plans whatsoever. The other 60% range from those with superb to barely functional plans. But lets look at the 40% who have no plan first.

The single greatest stumbling block to developing a plan, cited by about 34% of those responding to the Factory Mutual study, was a lack of awareness. These people aren't aware of the problem, the potential for disaster, and the potential impact on their institution. In the workshop trade, we refer to these individuals as the walking unconscious. They don't even know they have a problem.

Following right behind, accounting for about a third of the responses are those who cite a lack of time. We can all relate to this — I know that I operate on a crisis management system where the most critical issues are dealt with first. There never seems to be the time to do everything. So decisions are made about what is most pressing today. Too often disaster planning isn't on that list.

Lack of money was cited by almost 24% of the study. Again, we can all relate to this problem. It seems that we are all being asked to do far more with far fewer resources. With resources already stretched thin, it's hard to take on additional tasks — like funding disaster planning and providing for recovery supplies.

About 17% of the poll noted that disaster planning just wasn't urgent. These are likely the same ones who comment, "why worry . . . be happy . . . it'll never happen here."

Issues like the corporate culture, lack of staff, and denial were low on the list, never accounting for more than about 14% of those responding. I'm willing to bet, however, that the lack of staff excuse would be heard often among the museum and historic sites communities.

So that accounts for those with no plans. What about the other 60% who say they have a plan? Although Factory Mutual didn't include them in their study, over the years I have seen a lot of plans — an awful lot, meaning both a lot and a lot which were awful.

I have seen the "fill in the blank plans," where no real thought was given over to the issues involved and the plan was never updated, much less tested. These plans offer more hope than substance, providing institutions with a false, and potentially fatal, sense of security. I have seen the plans which consist of "lists," apparently held together with the glue of good hopes. Unfortunately, the glue is water soluble and quickly falls apart when put to the test. I have tried using several PC-based packages that were supposed to help develop a disaster plan. They gave new meaning to "garbage in — garbage out." And I have seen the multi-volume tome plans crafted with careful precision and relegated to oblivion on the director's bookshelf. My favorite was the plan which helped staff deal with the potential of a nuclear holocaust. I couldn't help but wonder who would come in afterwards to handle the cleanup.

We have all seen these, or some variant. Maybe we've even been responsible for one. If so, this is the place to be. Since our other speaker today is dealing with recovery, I'll try to deal with issues prior to that point. And we'll also focus on water, although I suspect that almost everything I mention will be much more generally applicable.

Risk Assessment

Traditionally preparing a disaster recovery plan began by assessing the risks your particular institution might reasonably face. After looking at a wide range of institutions and plans, I'm pretty well convinced that the risk assessment phase of traditional planning can be eliminated, or at least "downsized." First of all, its impossible to take into account all of the possible threats, especially in today's climate. And

while you can take all the precautions you can think of, there is still no guarantee that a toilet won't explode or that your plan will actually work when needed.

Consequently, it seems that the fundamental element of disaster recovery planning comes to one simple concern. Be more concerned with what you are going to do when there is a problem, not why the problem occurred. In other words — plan for the effect, not the cause.

Prevention or Mitigation

Please don't misunderstand, I strongly advocate prevent, or what some call mitigation — taking steps to reduce risk or exposure. Somewhere along the line this aspect of disaster planning is often overlooked. While its easier to create a plan than to make changes, I am convinced that making preventative change is every bit as useful to an institution.

There are an exceptional number of commonplace disasters, such as mold and pest outbreaks, which would never occur had adequate preventative measures been in place. By monitoring temperature and humidity, by ensuring a watertight building, by ensuring appropriate ventilation, and by achieving good housekeeping, most mold — and many pests — would never be given a chance. Certainly minor problems could be prevented from becoming major disasters.

Prevention also includes staff training. In virtually every industry the importance of staff education and training has been recognized. Management is realizing that well trained staff members are more productive, more alert, and happier. For their part, workers are more aggressively seeking out training opportunities, realizing that continuing education is the same as career advancement. Just when we need more educational opportunities to maximize staff potential, I hear too many institutions explaining that their workshop and travel budgets were cut or that staff can only attend one meeting a year.

Training is essential. I'm reminded of one housekeeper who dutifully swept up all of the frass she found under an institution's prized furniture collection for several years, never being able to figure out who kept dropping all that sawdust. It wasn't until a small powderpost beetle problem turned into a major infestation that anyone bothered to educate the housekeeping staff. A clear example of too little, too late. The National Fire Protection Association has found that an individual with basic training in the use of a portable fire extinguisher can extinguish 2½ times as much fire as a novice with no training. That's a pretty clear recommendation for staff training, but how many institutions regularly and thoroughly train their curators, registrars, docents, and secretaries in the use of fire extinguishers?

Planning

Coupled with prevention, of course, is planning. A team is assembled, resources are allocated, and plans are devised. It is also here that many otherwise good efforts crash on the hard rocks of reality and politics.

Far too few teams have the solid support of the executive level. Even fewer have the authority necessary to make changes and spend funds. We talk of unconditional love and how rare it is. Even more rare is the unconditional support of disaster planning efforts. Too often it's "just one more task" on an already overburdened, and perhaps even burned out, chief curator or registrar. In the era of "Total Quality Management," assigning an individual the task of preparing a disaster plan when this is not a measurable goal in his or her job description is another certain route to resentment and, ultimately, failure.

Disaster planning, like virtually every other aspect of preservation, requires funding. Its essential to get management to "buy-into" the planning process early. Its equally important to ensure that this support

doesn't slowly evaporate as more exciting, and glamorous, projects are found.

Even with management support, I have seen some planning programs drift into the twilight zone. What should have taken a month — tops — slowly evolves, or is it devolves, into a two year project. Meetings follow meetings. Committees are divided into subcommittees, and staff members gradually forget exactly what it was they were meeting about. Its the perfect example of bureaucracy in action. All systems slowly sink into chaos and committees sink the fastest.

I don't want to leave you with the impression that I support the concept of a benign dictator approach. You *do* need the input, and support, of as many factions as possible for a disaster plan to be a success, but you must always have a clear time table and operate on the premise of the Nike commercial — JUST DO IT.

While I have already voiced my disdain for "fill in the blank" and "list" plans, there are several pre-developed plans that I *can* recommend. Chicora Foundation helped review, and fund, the Southeastern Registrars Association's *Steal This Handbook!* which is a good example of template modeling for disaster planning. It offers a wide variety of appropriate disaster planning modules. Not as good, but still interesting and worth looking at, is the Texas Association of Museums' *Planning for Response and Emergency Preparedness: A Disaster Preparedness/Recovery Resource Manual*. Although dated and designed for libraries, Judith Fortson's *Disaster Planning and Recovery* is still another valuable document, put out as Number 21 in the "How-To-Do-It Manuals for Libraries" series.

There are also personal guides. Janice McCann and Betsy Shand's *Surviving Natural Disasters* and Bruce A. Bolt's *Earthquakes* are two examples. If you ignore the section which deals with surviving a nuclear attack, I even like FEMA's *Are You Ready?* which is subtitled, "Your Guide to Disaster Preparedness." These books can help clarify issues and point out problems which might otherwise not occur to you.

What I discourage is the tendency to become overwhelmed by disaster planning guides. They are like diet plans — everybody, it seems, has written one. They are all about the same and, after awhile, you become overwhelmed at their sheer volume. A good day spent researching disaster planning is almost sure to kill any enthusiasm you might have had when you began.

When I visit an institution for a preservation assessment, I briefly scan their plan. How easy is it, first of all, for someone to find a copy? Once presented to me, how easy is it to find out what to do if, say there's a fire? Or a bomb? Is the advice accurate? And just as importantly, is it appropriate for the institution? I also ask who has the plan. I'm still waiting for the day when I'm told that every staff member has not one copy, but three — one at home, one at work, and one in their car. I'm also waiting for an institution to develop "pocket plans" — short versions designed for individuals to carry around detailing his or her specific responsibilities should a disaster strike.

Focusing on flood situations, there are essentially three approaches to flood mitigation: permanent floodproofing, contingent floodproofing, and emergency floodproofing. Which approach an institution takes will depend on the potential threat, as well as the funding available.

Permanent floodproofing includes a variety of permanent measures that, once completed, require no further human intervention. They include the filling-in of non-essential windows and doors with some form of water resistant materials. This approach, of course, assumes that the structure itself is strong enough to withstand flood waters. Permanent floodproofing also includes installing check or backflow preventer valves to prevent water from entering through sewer and utility lines. Walls will likely need to be reinforced to resist water pressure and sealed to prevent seepage. The institution may need to build

watertight walls around equipment, such as HVAC systems. It may also be appropriate to construct floodwalls or levees outside the institution to help divert water.

Contingent floodproofing includes modifications made prior to the flood, but still require action at the time of the flood. Flood shields are perhaps the best example of contingent floodproofing. These barriers are design to allow doors, windows, and ventilation shafts to appear normal when there is no threat of flooding, but to be closed and protected to prevent water passage in the event of a flood. Another approach is to install permanent pumps to remove floodwater afterwards.

Emergency floodproofing is generally less expensive, but requires substantially more warning. They also do not satisfy the minimum requirements for watertight floodproofing under the National Flood Insurance Program. Examples of emergency actions include the use of sandbags or double wall cribs to keep water out of susceptible to damage.

Preparation

The development of the plan is just the beginning. Next comes the preparation. Staff members must be trained to perform their responsibilities. It really does no good to tell housekeeping that they must be constantly vigilant for pest problems if you don't show them what cockroach dropping look like or what frass is. Nor is it appropriate to emphasize the importance of staff members being the first line of defense against fire if you fail to train them to know when and how to use extinguishers. Employees must be capable of performing their duties during and after a disaster if the plan has any hope of success.

This training must focus on worst case scenarios. A tornado strikes your museum during your busiest season. An earthquake hits when your historic site is full of school kids. A flash flood occurs during the biggest fund raising event of the year at your institution, which is in the floodplain. The devastation is terrible. Roads are blocks, or gone, there are numerous fires. Will your staff be able to handle severe medical traumas there disasters will certainly cause? Have they been trained as first responders? Are they certified in CPR? Have they been trained in the prevention of the spread of bloodborne disease required by OSHA?

Far too many institutions place an unjustified, almost irrational, trust in their plans. Plans which haven't been updated in years. Plans which have never even been tested. Plans which their staff members barely understand, much less are accustomed to implementing in the midst of destruction, chaos, and personal stress.

Coupled with training is the equally important need to ensure that necessary materials are on hand at all times. What good are sandbags, without the sand to fill them? In the case of major water damage, there really isn't time to order blotting paper from University Products and plastic sheeting from the neighborhood hardware store. You must have these items immediately available and in sufficient quantities to meet your needs.

In terms of flooding, there are non-structural measures which the staff can take prior to floods. One essential step is to secure light fixtures and other items that can move. While even very heavy fixtures, such as filing cabinets, can be easily moved by flood waters, certainly the smaller items should be stored away. Larger items with particular buoyancy, such as hot water heaters and propane tanks, should be bolted to walls or otherwise securely anchored. Heavy or breakable items should be moved to the lowest shelves, while items most easily damaged, or most essential, should be either removed or at least placed as high as possible. Staff work stations and essential collections should be moved away from windows, which are likely to give way, releasing large quantities of water into the building with considerable force.

Response

Certainly part of your disaster plan must also be the realization that your response will depend on the nature of your institution. If you have a staff of 30 or 40 your ability to respond will be significantly different than if you have one paid staff member (yourself) and a half-dozen volunteers. While the former may be able to handle a wide range of emergencies, the latter might do well to recognize the necessity of retaining outside preservation consultants to guide disaster responses and recovery firms to handle the actual work.

Regardless of actual approach, I have seen several plans which nowhere mentioned *people* — only objects. I'm sure that such thinking is in the minority, but let me emphasize, right up front, first and foremost we must be concerned with human lives — staff and patrons. There is no object worth the loss of human life. Consequently, is anyone missing? Does anyone need medical attention? Do staff members need to try to contact their families? Do staff members need to try to get home to their families? These must be among the first questions asked after a disaster.

Almost immediately you will be contacted by the media. While we can't live without them when things are going well and we're trying to raise funds, we can hardly live with them when there is a crisis — but we must. There is no more damning press release than, "no comment." Those two words speak volumes, allowing the media — and the public — to read into the situation whatever they want.

Certainly I don't need to emphasize the importance of having only one staff member deal with the press. One voice, consistently calm and honest, is far better than several shrill voices all saying something different.

Also, be aware that the response phase of disaster planning only comes into play if the disaster is manageable. Some disasters are just too serious to attempt disaster control or response. Examples are the Loss Angles Public Library fires and the Cabildo fire in New Orleans. Sometimes all you can do is evacuate. Know what to shut off, what doors to lock, what alarms to put on stand-by, and then get out.

Recovery

Regardless of how severe the disaster, the last phase of disaster planning is, hopefully, recovery. I say hopefully since recovery means restoration of services. It also means continuation of jobs. If your museum and its collections burn to the ground, there may well be no need for you as a staff member. However harsh, this realization may be an effective motivator to encourage staff members to seriously focus on disaster prevention.

After the disaster, your first concern should be the safety of staff and patrons. Your second concern should be the condition of the building. Is it safe? Can it be entered? What about electricity and gas? Is there a fire hazard? All of these issues affect the safety of your staff as you begin recovery efforts and must be considered. If you aren't sure of the safety of the building then stay out — assume that it isn't safe until it has been examined by a competent architect, structural engineer, or contractor.

During recovery you need to understand your options. Where can you get recovery equipment — fans, lights, dehumidifiers, portable generators, wet-dry vacs, uninterruptible power supplies, rental computers, tables — at reasonable rates? Lists, if well constructed, may save the day. But the difference between a master's list and a quickie list is all the world. While a quickie list may have hardware stores and phone numbers from the yellow pages, a true master will include the owner's and manager's names and their home telephone numbers. There will also be similar lists of hardware stores for surrounding towns within a couple of hours driving time. Likewise, it's fine to have the name and phone number of

your building's architectural firm, but you'll probably do better having the beeper number, mobile telephone number, and home telephone number of the firm's principals.

Is There Help for the Small Institution?

I do a lot of disaster workshops. Over time, I have noticed that the small institutions tend to withdraw. Often they see little hope for their collections in the event of any major disaster. Many probably go into denial or more philosophically just don't see any reason in pursuing an issue over which they have so little control.

I think the stress on small institutions is even greater today. IMS and NEH continue to be under siege, although it isn't as obvious as it was two years ago. I am inclined to believe that the days of government support of museums are coming to a close. Funding will likely get tighter in the future. With less money around it is likely that the small institutions will be disproportionately affected.

Many institutions will likely turn away from preservation issues — such as disaster planning — believing that there is so little they can do there is really no need to bother. Some of my colleagues in preservation encourage this impression by focusing on the big ticket items.

There are, however, other options for small institutions. One is to simply work smarter and work closer with one another.

Small institutions should focus on ways they can band together to reduce their costs. The opportunities are virtually unlimited. Considering prevention, small institutions can see appreciable savings in training costs through group workshops and that involve large segments of their staffs. Even preventative maintenance costs may be more easily controlled by developing consortia that develop scopes of work and contract for work as a group. Two or three small institutions may be able to cut themselves a much better deal all getting new roofs at the same time, under the same contract, then by individually entering the market and seeking bids.

Institutions would likewise see significant savings of staff time if they combined resources to develop plans. Similar institutions with similar collections will likely have similar disaster planning needs. This isn't to say that one plan will fit all — it won't. But, there is no need for every institution to re-invent the same approach. It's likely that major savings in disaster supplies would accrue from the combined purchasing power of small institutions over a single museum.

Some of the most significant savings will likely be found in the phases of response and, especially, recovery. Stock piling materials for use of all institutions would reduce the need for duplicate efforts and resources. Large ticket items like generators and fans need not be on the inventory of every institution. They can be purchased by consortial arrangements and used by all contributing institutions. Expertise is also less expensive when it is shared. If several institutions are affected by the same disaster, they can share the services of an outside preservation consultant, who typically will charge by the day, not by the institution.

In other words, I am suggesting the economy of scale which is only available when institutions stop competing and band together. Many are doing this already. Many more need to learn the lesson of working together.

Disasters won't stop because of budget cuts and limited federal funding. If anything, we'll see greater impact, greater need, and a less organized response. In other words, the problems will only get worse in the near term. It's essential that museums be prepared. I'm convinced that in today's world this

means we all either hang together, or we shall surely hang separately.