A Litany of 'Terrible, No Good, Very Bad' Things that Can Happen *After* the Disaster[1]

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Introduction

On average, 464 disasters occur each year in all parts of the globe. Some are more catastrophic than others; research reveals that excluding drought, famine and war, approximately 197 take place in Asia, 111 in the Americas, 77 in Europe, 61 in Africa, and 18 in Oceania. As a result, 50,000 people are killed annually, 74,000 seriously injured, 5 million displaced from their homes, and 80 million affected in some peripheral way[2]. While far less publicized, the resultant damage to cultural property is extraordinary.

Following a catastrophic event, a natural, first response for librarians and archivists is to try to assess how their collections fared so they can mitigate the damage that may have occurred. Time is of the essence because mold growth can begin blanketing water-damaged collections within 72 hours. However, the temptation to reenter a potentially damaged facility *must be resisted* until a range of safety concerns has been addressed. This may turn out to be a matter of life and death, as was the case in 1997 when two Italian friars were surveying damage to the vaulted ceiling of the Basilica of St. Francis of Assisi in Umbria caused by an earthquake registering 5.5 on the Richter scale. The initial quake damaged the Basilica's thirteenth century frescoes attributed to Cimabue, but nine hours later the 5.7 'aftershock' sent the painted ceiling crashing to the ground, killing the two men[3]. No matter how noble your intentions, even when the collections involved are irreplaceable, your health and safety and that of your staff must take precedence over recovery issues.

While some determinations based on observations can be made at the disaster site, preemptive disaster planning can expedite the process of safely regaining access to a damaged facility. An outline of concerns to consider constitutes the remainder of this paper.

Threats to Assess before Reentering Damaged Buildings

In some situations, you may be prevented from reentering a building until the site has been legally cleared for re-occupancy by local authorities. In other cases, you may be the first one on the premises. A word of caution: what was yesterday a safe and familiar work environment may have been transformed overnight into something much more sinister. Like a dearly-beloved pet that has contracted rabies, the building that ordinarily provided you and your collection with comfort and shelter may now harbor multiple risks. It is critical you take nothing for granted, and before setting foot inside, adopt a defensive position. Do not allow your injury or death to become the disaster concealed within the disaster.

1. Structural Stability

Flood waters, earthquakes, and other catastrophic events can destabilize sidewalks, parking lots, and building structures, and do so sometimes without producing significant outward evidence of the damage. In the aftermath of a major episode of this type, it is essential the site be inspected by a professional engineer or architect prior to reentering it to ensure no one's life is put at risk. To expedite this process, identify and pre-approve one or more qualified structural engineers or architects beforehand and list this information in the institution's disaster plan so their services can be seamlessly deployed following a cataclysmic event.

1. With apologies to Judith Viorst, whose *Alexander and the Terrible, Horrible, No Good, Very Bad Day* (New York: Atheneum, 1972) inspired this title.
2. International Federation of Red Cross and Red Crescent Societies, *World Disaster Report* (The Netherlands: Martinus Nijhoff, 1999), cited in Daya Somasundaram, Fran H. Norris, Nozomu Asukai, and R. Srinivasa Murthy, "Natural and Technological Disasters," in Bonnie L. Green, et. al., (eds.), *Trauma Interventions in War and Peace: Prevention, Practice, and Policy* (New York: Kluwer Academic/Plenum Publishers, 2003): 294.
3. Celestine Bohlen, "A Fatal Quake Shatters Fresco in Assisi Shrine," *New York Times*, 27 September 1997, A1.

2. Electrical Danger

Disruption of normal electrical service is common following a large-scale disaster and efforts to restore this utility present risks to untrained workers. Several electrocutions have been documented following hurricanes or tropical storms as a result of people touching downed power lines previously tested and thought to be de-energized[4]. 'Feedback' energy produced by improperly grounded electrical generators at either the load or supply ends of the line have been blamed for these accidents. As numerous electrical generators can be brought online following a disaster, all downed power lines should be treated as potentially life-threatening.

While properly installed and maintained building electrical systems normally pose little threat to the structure's occupants, following an earthquake or explosion, the grounded connections can become damaged, making electrocution a far greater menace. Similarly, you are at risk whenever standing water is present near electrical circuits or mechanical equipment. Disconnecting the building's power supply at the main breakers or fuse panels before entering a flooded area or handling wet electrical equipment is critical to ensuring safety.

3. Hazardous Materials

An institution's disaster plan can do much to identify and locate all known hazardous materials contained within and around the building that might affect worker safety. At the most basic level this requires an institution's stored chemicals, cleaning products, gasoline, fuel oil, and pesticides be itemized and mapped so the condition of those stores can be assessed prior to reentering the facility.

Asbestos, as long as it is bound up with other building materials, may pose no immediate health risk. However, structural damage can render asbestos friable and airborne, making even a brief walk through a damaged facility without wearing appropriate respiratory protection potentially lethal. A cause of malignant mesothelioma, some of the numerous building materials that contain asbestos include: pipe and furnace insulation, composition ceiling tiles, acoustic board and tile, transite and other asbestos boards, old wallboard and cement, vinyl floor tiles, roofing tiles, tarpaper and caulks, spackle-plaster repair compounds, wiring, old paper mâché products, and certain rocks and minerals and their powders[5]. Since 1994, the Occupational Safety and Health Administration (OSHA) has required all building owners and lessors in the U.S. to create a written asbestos plan setting out the locations of all asbestos-containing materials (ACM) as well as presumed-asbestos-containing materials (PACM). This pre-established information is extremely useful in defining whether a post-disaster facility is safe to reenter.

Treated wood, including structural plywood and outdoor lumber (e.g. fences, decks, playground equipment and some wooden structures) often contain pesticides (such as creosote, CCA, or pentachlorophenol) that release highly-toxic fumes during a fire. Indoor air quality may be compromised following a fire, and demolition of these post-combustion materials should be conducted wearing adequate respiratory protection[6].

Prior to 1978, lead was used in most paints and should be presumed present at least as an undercoating in all buildings constructed before that time. Following a fire, lead fumes and dust from burned paint, as well as melted skylights, lead-lined x-ray rooms, stained glass windows and other architectural features may increase health risks to workers and require professional abatement[7].

Additionally, polychlorinated biphenyls (PCBs) are often present in old fluorescent light ballasts, as well as old fire-retardant paints and certain pigments. When present following a fire, PCB contamination must be abated by trained hazardous-waste workers[8].

4. Collection-Based Hazards

While most library and archives collections do not contain materials that pose health-related risks, this is not the case with many museums. If your facility shares a building with a museum, it may be important to assess the contents of their collection for hazards,including: arsenic (present in older mounted

4. National Institute of Occupational Safety and Health (NIOSH), *NIOSH Warns of Hazards of Flood Cleanup*, July 1994, recovered from the web 20 March 2004, http://www.cdc.gov/nasd/docs/d000901-d0001000/d000946/d000946.html

5. Monona Rossol, "After Disaster: A Museum Employee's Guide to Re-Entry," in Cynthia Ball and Audrey Yardley-Jones (eds.), *Help!: a survivor's guide to emergency preparedness* (Edmonton, Alberta : Museums Alberta, 2001).
6. Ibid.
7. Ibid.
8. Ibid.

bird specimens); toxic or flammable liquids, such as formaldehyde or alcohol (used to preserve biological specimens and often stored in glass containers in quantities of hundreds or thousands of gallons); tetrachloride-filled glass balls (used as early fire-suppressants); antique medicines; live ammunition; radium dials; and mercury gauges. Again, tracking the location of these materials can expedite the process of initiating a post-disaster building inspection.

5. Biological Hazards

By far, the most common problem in water-related disasters is the spread of biological contamination caused by sewers backing up due to increased water pressure resulting from rising water. Subsequently, wide-spread mold growth is also common. Identifying whether significant amounts of biological contaminants are present is important as a preliminary step in determining how safe the building is for reentry. This information could radically affect the recovery strategy. Similarly, identification of the prevalent genera of mold in a large-scale outbreak could be critical: some types of mold are extremely toxic and pose grave health risks to recovery personnel. In all cases, personal hygiene, including the conscientious use of appropriate respiratory protection and disposable gloves, is critical to minimizing infection and subsequent illness. Decontamination of the work site and the collection may require the intervention of a professional disaster recovery firm experienced in disinfection protocols for permanent-retention material.

In large-scale regional disasters, wild animal habitats can be disrupted forcing populations of mammals, reptiles, rodents, or insects to seek refuge inside damaged and newly accessible buildings, thereby increasing the risk of recovery workers being bitten. Remaining alert, probing areas with a walking stick before entering, and exercising care when lifting objects are all recommended protocols.

Hantavirus, carried in the feces and saliva of rodents, and histoplasmosis, a fungus found in bird and bat droppings, can be spread to humans through inhalation of airborne contaminants dislodged by flooding or high winds. Both can be fatal and require the use of appropriate respiratory protection, disposable gloves, and protective outerwear when working in an environment where rodent, bird, or bat droppings are thought to be present.

Lyme disease, a bacterial infection transmitted by infected deer ticks, and West Nile virus, a virus spread by infected mosquitos, pose two other potential risks exacerbated by disaster-disrupted natural environments.

Issues to Assess before Commencing Recovery Work

1. Personal Fitness

Disaster recovery is physically and emotionally demanding work. Before committing to directly participating in recovery operations, each person needs to assess the state of their own all-around health and mental stamina. If you are pregnant, have recently undergone surgery or chemotherapy, or are experiencing some other type of illness or personal loss, the strain of participating in various aspects of a disaster recovery may prove prohibitively stressful. Ongoing problems with allergies or diseases that compromise the immune system may make you more susceptible to infections and, therefore, increase your health risks. Physical disabilities or impairments may affect your ability to perceive certain types of danger, further exposing you to potential harm. In any of these cases a role on the sidelines as a strategist rather than a participant directly involved in the recovery may prove more appropriate and ultimately more effective, but this determination should be made individually. Preparedness for disaster recovery work can include: maintaining a familiarity with disaster recovery literature; when possible, gaining experience in hands-on disaster recovery operations; maintaining up-to-date immunizations, as defined by your doctor; participating in training courses offered locally by the Red Cross (e.g. First Aid and Community First Aid and Safety) or Community Emergency Response Team (CERT) programs; undergoing annual respirator fit-testing; and, maintaining a personal safety kit containing immunization records, prescription medications, first aid supplies, a respirator and various cartridges, personal protective clothing including appropriate gloves, safety goggles, hard hat, fire-retardant overalls, rubber boots, steel-toed boots, etc.

Access to an institution's disaster response plan prior to entering the damaged facility may be the most pertinent piece of literature available to recovery personnel, especially when it provides insights to the organization's recovery priorities, building plans, known sources of hazardous materials, existing agree-

ments with a commercial disaster recovery firm, and the phone numbers of institutional decision makers, service providers, and equipment suppliers.

2. Fire Suppression

Following a disaster, automated fire detection and suppression systems may be incapacitated. If the event is widespread, fire department response time may also be significantly decreased, stepping-up the risk posed by fire as a secondary event stemming from the initial disaster. Fully-charged, hand-held fire extinguishers should be made available in all work areas and recovery personnel trained in their proper use.

At this juncture, I'd like to emphasize the notion that anything that can go wrong, might. The first large-scale library recovery I participated in was executed according to 1984 standards of practice: the wet books were systematically packed into plastic milk crates and shipped post-haste to a commercial freezer plant across town to await drying. The whole incident was handled like clockwork, and everyone left the work site for the weekend in high spirits, satisfied with having done a good job. A week later, however, the freezer plant burned! No one involved in the recovery had considered checking on that facility's fire suppression capability, nor did the professional literature cite this as a risk worth considering.

3. Evidentiary Obstacles

In the case of a suspected arson-related fire or other situation where the damaged building has been deemed a crime scene, access to the collection for recovery purposes may be delayed several days or weeks pending the completion of a mandatory investigation. This non-negotiable time lag may dramatically undermine the collection's condition, especially when water from fire-suppression efforts is causing extensive mold growth. In this scenario, pre-planning could make a significant difference in the outcome of the recovery. By apprising fire department officials of the location of irreplaceable collections prior to the event, a compromise may be negotiable in the face of a pending probe. With the fire chief's permission (and once the building is declared safe to reenter), a specific access and egress route to the most valuable parts of the collection could be defined by yellow-tape, preventing recovery personnel from inadvertently disrupting or obscuring evidence while allowing collection stabilization to proceed[9].

1. The Buddy System

Post-disaster building and collection assessments should be conducted in groups of two or more people. Relying on a buddy increases the possibility that each assessor's observations will complement the other once they are again outside the building, as well as provide the safety of having a partner at hand should someone need to go for help. Anchoring one end of a ball of stout twine to the entryway and unrolling the other end as you proceed can provide a useful orientation tool when initially exploring a large, unlit, unfamiliar, or severely damaged facility.

2. Respiratory Issues

Preventing respiratory problems requires an astute assessment of invisible threats and the use of appropriate levels of respiratory protection as warranted. Some situations, however, remain unsafe without appropriate levels of hazardous materials training and should be reserved for professionals.

2.1 Carbon Monoxide

Operating standalone gasoline - or diesel-fueled engines (including electric generators) in enclosed spaces will result in a buildup of carbon monoxide, an odorless, colorless gas that causes asphyxiation. Similarly, igniting charcoal or gas-powered grills indoors will also produce carbon monoxide that can poison or suffocate people present in inadequately ventilated spaces.

2.2 Confined Spaces

Basements, storage vaults, or confined areas inside a building with a damaged or inoperative ventilation system can provide opportunities for pockets of gas to accumulate. These spaces may be variously oxygen-deprived, harbor toxic gasses, or contain combustible vapors subject to explosion if a source of ignition is provided.

9. This concept was shared with me by Larry Wood, then-President of Disaster Recovery Services of Ft. Worth, Texas, now deceased.

2.3 Mold

As mentioned above under 'Biological Hazards' (p.10), mold growth can be extensive in water-related disasters. Especially in massive quantities, mold spores represent a potentially serious health risk. People's individual susceptibility to different genera of mold differs dramatically, but the risk of becoming ill through exposure becomes increasingly possible if the recovery takes a long time to initiate or to complete. Appropriate respiratory protection should be mandated for everyone working around a large mold bloom, and sampling by a mycologist to identify each genus of mold present should be initiated.

3. Risks to Vision

Protective eye wear can prevent airborne particles from scratching the eyes during material recovery and offer an extremely effective, inexpensive prophylactic against vision loss.

4. Auditory Issues

Prolonged exposure to the ongoing drone of electric generators, dehumidifiers, chillers, and other cacophonous equipment at the disaster site can result in hearing loss, especially when working in confined spaces. Earplugs or full over-ear protection can help mitigate this problem.

5. Musculoskeletal Injuries

Broken, dislodged, or obscured building parts can contribute to falls, broken bones, sprains, or torn ligaments. Use of a walking stick or ski pole to probe concealed surfaces can help prevent these types of injuries, especially when employed in standing water,in the dark, or when negotiating badly damaged surfaces. Back injuries stemming from repetitive lifting, or from moving heavy loads, can be minimized by lifting objects weighing over 50 pounds with a buddy or by devising a mechanized alternative.

6. Fatigue

Working nonstop is tremendously tempting in a disaster recovery situation as the collection's desperate need for stabilization can present a very insistent prod. However, a recovery operation is more like a long-distance marathon than a 50-yard dash and the likelihood of injuries occurring increases with the onset of fatigue. A frequent break schedule must be drawn up and adhered to, and these rest periods should be accompanied by hand washing and a constant influx of essential fluids and nourishment. Additionally, normalized sleep cycles of six to eight hours must be maintained, although team rotations can be structured if sufficient labor is available.

7. Thermal Stress

Working in an overly hot or excessively cold environment accelerates the onset of physical stress and fatigue. Overly hot working conditions – including work performed in protective outerwear and respirator – can lead to cramps, fainting, and at the extreme, heat stroke. Taking frequent rest breaks (approximately every 15 or 20 minutes) and ingesting plenty of liquids, including those that replenish electrolytes, is recommended.

At the opposite extreme, hypothermia can set in as a result of short-term exposures to freezing temperatures, as well as to spending prolonged periods in tepid water (below 75EF, or 24EC), especially in poorly insulated clothing. Exposure to cold can diminish feeling in the extremities and contribute to careless handling of material and musculoskeletal injuries. Prolonged exposure to cold can result in chilblains followed by frostbite. Again, this problem can be prevented by taking frequent breaks out of water to warm up and by wearing waterproof, properly insulated clothing.

8. Operating Heavy Equipment

Proper training prior to operating any heavy equipment at the recovery site is necessary to prevent injuries and collection damage. While this prerequisite may seem self-evident, the transitory nature of a temporary work force and the disjointed way things sometimes occur following a disaster, can subvert normal training protocols and, unwittingly, put people at risk.

Psychological Problems

1. Dysfunctional Behavior

People can act strangely following a disaster. While truly maladjusted behavior is uncommon, its appearance can dramatically affect your ability to conduct a recovery operation, especially if the person suffering the psychological problem is in charge!

For example, in the aftermath of a large hurricane,

I met with the acting head of a botanical institution who was also charged with overseeing the recovery of a historical estate adjacent to the garden. The estate was known to contain a collection of paintings and graphic works of high value. In an attempt to coordinate the recovery effort for this estate while focusing on the priorities of her own botanical collection, the acting head agreed to accompany me and several colleagues on the mile-long trek to the beach-front estate, its outer walls now washed away by waves and its interior filled with sand. The contents of the estate were strewn up and down the beach, but to my surprise, lying in the sand I spotted an engraving signed by N. C. Wyeth in nearly perfect condition. Feeling quite elated by this find, I picked up the print and showed it to our guide, who remained nonplused. "We don't have room for this," she said blithely. Confused, I asked what I should do with the print since I was still holding it in my hands."Give it to me," she said simply, "I'll take care of it." And as though in a slow motion, surrealistic dream I watched her return the N. C. Wyeth print to the spot on the sand where I had discovered it, a look of benign satisfaction on her face, the now-clam surf breaking gently in the background.
While normal in all outward appearances up to that point, this breach of logic over the recovery of this single print revealed a person exhausted by the disaster and incapable of coping with one more responsibility. Regrettably, her state of mind at that moment and her authority in that situation prevented either my associates or me from assisting further in the recovery at that juncture and don't know the final disposition of the N. C. Wyeth.

Some institutional directors understand, beforehand, the deleterious consequences a highly traumatic situation may have on their ability to respond effectively and consistently throughout the duration of a disaster response process. With this in mind, they will actively recruit an alternative to serve as the institution's disaster coordinator. This commendable bit of planning, which takes place during the sobriety of tranquil times, transfers authority for a specific activity to a trusted colleague, eliminating the ineffectuality of ceding control – or worse – failing to yield once the event has occurred. It can also be argued that subletting emergency planning responsibilities to someone else who has demonstrated skill or interest in this area can be in the institution's best interest because the ongoing nature of the work requires an investment of time and attention a director can never afford to invest.

2. Post-Traumatic Stress

Victims of disasters invariably experience significantly different levels of suffering related to the event, and people's post-disaster stories clearly reveal the role individual perspective and attitude can play. For example, when asked how extreme her personal losses had been six weeks after a major hurricane, one museum employee told me, "We suffered very little. We only lost part of the roof to our house, the kitchen, and two adjoining rooms. Others had it much worse, and the insurance adjuster has already settled our claim."

At the other extreme, post-traumatic stress victims can become fundamentally unsettled by the disaster. In addition to people experiencing extremely different things within the context of a single event, individuals. At the other extreme, post-traumatic stress victims can become fundamentally unsettled by the disaster.

In addition to people experiencing extremely different things within the context of a single event, individuals also react quite differently to the same stimuli. Post-traumatic stress is a disorder occurring in some people who, after witnessing life-threatening, extraordinarily grotesque, or emotionally devastating events, relive the incident incessantly through flashbacks and nightmares. The condition includes sleep deprivation and persistent mental and emotional stress, often causing its victims to become overly reactive, detached, or alienated from their normal activities[10]. It is impossible to tell from simple observation who among the cast of characters populating a disaster site is suffering from insomnia, lack of concentration, memory loss, or other symptoms of post-traumatic stress, but it is important to bear in mind that this may be one of the subtexts running through the events of the day.

Suggesting to people who appear to be exhibiting signs of post-traumatic stress that they may benefit from talking with a councilor or a social worker is a compassionate response, but other approaches, including confiding in friends, learning about coping

10. For more information on PTSD, see the web site of the National Center for Post-Traumatic Stress Disorder http://www.ncptsd.org/index.html
11. More information about traumatic-stress syndrome is available from the National Center for Post-Traumatic Stress Disorder at: http://www.ncptsd.org/facts/disasters/fs_survivors_disaster.html.

mechanisms for dealing with trauma, and engaging in personal relaxation methods are also recommended[11].

3. Rejection

Even the role of the disaster consultant can be a thankless one. Once the grim strangeness of the initial event starts to become a norm and the monotony of weeks or possibly years of recovery work sets in, transference of resentment to the outsider is not uncommon. For someone who has risked much and devoted considerable energy to trying to help rectify a bad situation, the letdown of discovering they have become a scapegoat can be disappointing and even depressing. However, as suggested in 'Assessing Personal Fitness' (p.10) above, disaster response is not for the thin skinned or the weak of heart.

Unethical Conduct

Finally, the preselection of a conservation consultant and a professional disaster recovery firm should be addressed as a priority in an institution's disaster plan. Establishing a standing agreement through a formal Request for Proposal (RFP) process that outlines the terms of the contract with each type of specialist could allow any authorized staff member to initiate a request for help by phone if the need arose, and would be a huge boon to the institution if, for example, the director happened to be out of town the day the incident occurred.

In terms of things that can go wrong following a disaster, the choice of an inappropriate disaster consultant or commercial recovery firm may be among the worst. While reputable companies exist, notoriety in the disaster recovery field is not always based on exemplary credentials. Many frequently-cited firms identified in institutional disaster plans are listed because the plan is largely modeled on other disaster plans. Seldom is the track record of these firms investigated thoroughly to discover how efficacious their treatments have proven or what these services have previously cost. Nor are the institutions who have formerly employed their help necessarily well equipped-to assess their own experience, having no standard available against which to measure the quality of the work received or the price they paid. There is no national or international clearing house for investigating the performance of these firms[12], and when it comes to first-hand reports of malfeasance, the risk of being sued for slander prevents candid disclosure in the professional literature.

And yet, problems exist affecting the successful outcome of the recovery. From my personal experience in one recent flood recovery operation, a company attempted to charge approximately four times what an alternative firm ultimately billed for the same work. In another situation, a recovery firm refused to disclose the location of a refrigerated truckload of irreplaceable student records it had removed from the disaster site.

When discovered a week later, the refrigeration unit had been turned off and an out-break of mold was consuming the interior of the semi-trailer involved. A third example involved a firm misdiagnosing a situation and specifying in situ air drying for a library collection that had been completely submerged in a hurricane storm surge. The collection began molding long before the books began to dry and the collection was ultimately declared a complete loss and thrown away. A fourth example involves a company whose drying equipment was incapable of pulling a vacuum, resulting in books being boiled dry rather than having the frozen water sublimated off as water vapor.

This scenario was obfuscated by identifying this process as 'vacuum thermal drying' which sounds similar to 'vacuum freeze drying', a vernacular twist that continues to befuddle the ill-informed. Lastly, I witnessed a disaster recovery contractor unfairly delay payments to his subcontractor over a prolonged period of time, ultimately resulting in legal fees and a fiscal shortfall in excess of $200,000 to the subcontractor who had successfully completed his charge to dry hundreds of thousands of books.

These examples underscore how critical it is to identify a reputable disaster consultant and an appropriate commercial disaster recovery firm long before they are needed. Building on past experiences, a competent consultant can help an institution rapidly define its most cost-effective and efficacious recovery options, saving time and money while minimizing further damage to the collections. Similarly, a good commercial recovery firm will not take advantage of a bad situation.

12. The Better Business Bureau in the company's home town is the only place these complaints might reside, but as disaster recovery firms usually conduct their work on the road, and, in fact, often have multiple corporate addresses, few complaints are ever registered.

They should be able to provide a high-quality product for a competitive price and be able to demonstrate this through the bid process. The firm should also be accountable for its past performances, as expertise gleaned through previous library and archives recoveries can be invaluable to the institution in custom-tailoring protocols that meet the unique problems of the disaster situation. However, cases of previous unscrupulous behavior should also tip off an institution to potential problems that might lie in store.

The University of Utah (U of U) developed an RFP for selecting a disaster recovery company that I would be happy to share with anyone interested in having a copy. While designed to address the specific needs of the U of U, this document may prove a useful model for initiating the vender preselection process at your institution. I would also be pleased to discuss the reasons the U of U selected Belfor USA as its disaster recovery firm[13].

13. Belfor USA, Kirk Lively, Director of Technical Services, 2425 Blue Smoke Court South, Fort Worth, TX 76105 USA. Tel. 817-535-6793; 24-hour toll free: 800-856-3333; <email: kirkl@us.belfor.com>; Web Site: www.belfor-usa.com. I would be delighted to discuss this firm's credentials at length with anyone interested. Please contact me at: tel. 01-801-585-6782; email; randy.silverman@librfary.utah.edu. More information on this topic can be found in my article, "The Day the University Changed," retrievable at: http://www.idaholibraries.org/newidaholibrarian/200402/ColStateFlood.htm

Une litanie de catastrophes après la catastrophe

Un certain nombre de dangers peut menacer le bien-être des personnels chargés de la remise en état après la catastrophe. Ces risques sont liés à la stabilité des bâtiments endommagés, au courant électrique, à la présence de matériaux dangereux et à celle des collections sur le lieu des opérations, ainsi qu'à des facteurs biologiques. Avant de commencer le travail de remise en état, il faut considérer plusieurs aspects : la condition physique de chaque participant, l'état des équipements de sécurité incendie, et les problèmes liés à des témoignages obscurs lorsque le lieu de la catastrophe a fait l'objet d'un acte criminel.

Les risques inhérents aux opérations de remise en état impliquent de travailler à plusieurs et de se protéger de façon appropriée contre les affections du système respiratoire, de la vue et de l'ouïe. Il faut également pouvoir faire face aux lésions musculaires et articulaires, à la fatique, aux effets du choc thermique, et aux risques liés au fait de manoeuvrer des équipements lourds.

Les problèmes d'ordre psychologique peuvent être sérieux et entraîner un comportement dysfonctionnel, un stress post-traumatique et le refus d'une aide extérieure. Enfin, un comportement contraire à l'éthique professionnelle de la part de spécialistes chargés de la remise en état peut nuire à l'institution d'un point de vue économique, mais aussi à cause de la mauvaise qualité des services rendus. Un plan d'urgence approfondi peut être un remède à ces problèmes.

Peligros después de un desastre

Existen varios peligros que pueden amenazar el bienestar del personal encargado de las labores de reparación después de un desastre. Estos riesgos tienen que ver con la estabilidad de los edificios dañados, la energía eléctrica, la presencia de materiales peligrosos y de las colecciones en el sitio de las operaciones, y a factores biológicos.

Antes de comenzar los trabajos de reparación, es necesario considerar varios aspectos: la condición física de cada participante, el estado de los equipos contra incendio y los problemas relacionados con testimonios confusos cuando el sitio del desastre ha sido objeto de un acto criminal.

Los riesgos inherentes a las operaciones de reparación implican una protección adecuada contra las afecciones del sistema respiratorio, de la vista y del oído. Igualmente, se debe estar en capacidad de atender lesiones musculares y articulares, fatiga, efectos de los cambios bruscos de temperatura, y los riesgos asociados con el hecho de maniobrar equipos pesados.

Se pueden presentar problemas de orden psicológico serios que traen como consecuencia comportamientos disfuncionales, estrés postraumático y el rechazo de ayuda externa. En resumen, un comportamiento contrario a la ética profesional por parte de los especialistas encargados de las reparaciones, así como la mala calidad de los servicios prestados, pueden afectar a la institución desde un punto de vista económico. Un plan de emergencia bien diseñado puede ser la solución a estos problemas.