DEVELOPING AN EMERGENCY RESPONSE PLAN
FOR NATURAL HISTORY COLLECTIONS
SPNHC 2004, American Museum of Natural History, New York City
May 14, 2004

David Tremain
Conservator, Preventive Conservation Services
Canadian Conservation Institute

Introduction

By way of introduction, did you know that the whole of Manhattan consists of a series of fault lines? The London *Sunday Telegraph* reported in 1996 that Dr. Klaus Jacob, a seismologist at Columbia University, believed there was a high probability of an earthquake of magnitude 5.8 or 6 within the next fifty years. In a worst-case scenario Dr. Jacob predicted that:

> "There will be no Metropolitan Museum of Art, no Museum of Modern Art, no Lincoln Center."[1]

and an article in *Sierra Magazine* suggested that with global warming, "Wall Street could end up looking like Venice's Piazza San Marco".[2]

On September 11th 2001 New Yorkers and staff at the Pentagon saw what effects a catastrophic event could have on the emergency services — their resources were stretched to their limits. The effects of an earthquake would not be dissimilar. Together with art works in the World Trade Center, some museums in the immediate area were also affected and objects damaged or destroyed. With such a strain on resources in situations such as this, museums would likely find themselves having to cope on their own. Human life always takes precedence over collections.

So, is having an Emergency Response Plan on every institution's priority list? No. Why? The reality is that

- Emergencies and disasters can and do happen
- Most emergency situations can be avoided
- Many effects of emergencies and disasters can be mitigated
- Most institutions are not well prepared

Maybe it's the innate belief that they don't need one — because it can't happen to them, but if it did, the emergency services would deal with it — while others may feel that it's too much work, that they don't have enough time, and there are too many other things to get in the way. Possibly all of the above, but, as Abraham Lincoln once said: "By failing to prepare, you're preparing to fail."

An Emergency Response Plan outlines:

$ **What** should be done
$ **Who** should do it
$ **When** it should be done
$ **Where** it should be done
$ **Why** it should be done
$ **How** it should be done

It also helps to minimize damage and loss, and reduces chaos and confusion. There are four key points to emergency planning:

$ Preventing the event from occurring
$ Mitigating its effects if it should not be preventable
$ Cohesive teamwork and collaboration
$ Ensuring the right people are involved and properly trained.

Getting Management Support

Getting support from management is key to the success of the plan. Without this, you will get nowhere. While the Director does not have to be directly involved in the planning process or chair meetings, ultimately he or she will have to sign off on it, so management needs to initiate it and someone representing senior management should be at the table. One of the major stumbling blocks faced by anyone trying to prepare an Emergency Response Plan is getting this across the message across to the powers-that-be, that emergency preparedness isn't just a fanciful whim dreamed up by museum staff with nothing better to do. Emergencies cost money, big money. They can mean the closure of institutions or suspension of operations for a period of time, time which could be during the height of tourist season, meaning a considerable loss of revenue and a dent on the institution's reputation. It could also mean the difference between a small, poorly-funded museum surviving or being forced to close forever.

But how do you convince management that a plan is necessary? While museums are not a business, in the commercial sense, they are in the business of providing a series of services. So, adopt a Business Continuity Planning (BCP) approach and examine:

1. What are the key functions of the museum?
2. What services does it provide?
3. What would it cost if an incident caused the museum to shut down for a period of time?
4. What would be an acceptable amount of down time?
5. What would be the impact, financially and on staff, in the short-term and in the long-term?

Getting Started

Whether it is a natural history collection, library, archives, museum, or art gallery, the planning process is the same. The first question that needs to be asked is

1. Who needs to be involved in the planning process?

The plan can only work if the right people are involved. You cannot rely on it all being in someone's head. Include all areas of responsibility:

- Management
- Curatorial staff
- Registrar
- Head of Security
- Facilities Manager
- Administrator and/or Financial Officer
- Conservator

Everyone on the planning committee will have an important role to play and each person's opinion *must* be respected. There will be some who may have a larger role to play, such as the Head of Security, and Facilities Manager, but no one person should be placed above another. Curatorial input needs to come, preferably from the chief curator. Each curator will have his or her own priorities — mounted botanical specimens will have a different set of priorities to mammalian specimens, and granted, some artifacts may be more vulnerable than others, and when it comes to salvage, priorities will shift — but all collections should be considered as equally important. Whatever you do, don't forget to involve the conservator. It will be he or she who will end up picking up the pieces — literally!

2. What needs to be done, and in what order?

The planning team will have many tasks to complete and generate much information, that will need to be collated. In order to collate it all, use project management methods, such as the "Critical Path Method" (CPM), to determine whether there are tasks which, if not completed by a certain time, will impede the progress of others. However you do it, deal with each task in small, bite-sized chunks and set realistic deadlines which can be achieved.

3. What needs to be protected?

These are your assets: staff, the collection, and possibly the building, based not only their value and how important they are to the institution, but also on their vulnerability to damage by, say, water. This may seem obvious but without this, you will be making more work for yourself when it comes to salvage. Draw up a list of priority items which must be protected at all costs saved first if something should happen. With natural history collections, all type specimens and original field notes should be regarded as Priority One. Other items that might receive a high

priority are those which cannot be moved easily, such as dinosaur skeletons, whales etc.

4. What does it need to be protected from?

How vulnerable are collections to various threats, (how much risk they are exposed to), and which hazards need to be addressed first? Carry out a risk assessment, what security professionals refer to as "threat risk assessment" (TRA) or "threat matrix". There are many ways to do this, and no time to discuss them here, but I can highly recommend both Rob Waller's workshop *Assessing and Managing Risks to Your Collections*, and also Jonathan Ashley-Smith's book *Risk Assessment for Museum Objects*. One way is to consider things in terms of

$ your environment (i.e. your immediate surroundings)
$ the building's structure
$ the building and its systems, and
$ activities and procedures that go on inside

Threats and hazards Some threats and hazards, sometimes referred to as "agents of deterioration", will have a immediate and possibly devastating effect on collections and will be common to all institutions, such as fire, water, theft and vandalism, and direct physical forces, such as shock, vibration. Earthquakes, hurricanes and tornadoes may be regional, and also not preventable. Pest infestations, incorrect temperature and relative humidity, high light levels are insidious and not always immediately apparent.

Since 9/11 institutions need also to worry about terrorism. What was once a threat confined to military and government installations has now been extended to mean any public place. As a museum or cultural institution, you should now consider yourself much more vulnerable, either as a direct target or as collateral damage.

> "[T]errorism is a global problem...As long as there are people who are not happy, as long as the United States is perceived to somehow be the cause of this unhappiness, there will be terrorism."[3]

Where to obtain information There are many government agencies on-line from which you can obtain information about your environment, the kind of climatic conditions (i.e. whether you are located in an earthquake zone or "tornado alley"). Those involved with protection services or facilities management will likely already have some of the answers. But don't confine your information-gathering to within the museum. Talk to city and state officials, particularly those involved with emergency planning, to see where your institution fits into the grand scheme of things. You may be surprised to learn that your museum has been designated as a gathering point in the event of an emergency. Have the fire department and police department visit to advise on fire protection and security. Make sure that all shifts from the local fire hall have the opportunity to visit, as who knows which of them may have to respond. If you have a head of security, he or she should receive updates from the local police and FBI field office of any immediate threats, or special activities going on in the area which might compromise your security i.e. demonstrations,

presidential visits etc. If you have insurance, read the policy and find out what is covered and what is not. For example, if you have to salvage collections, will the insurance company pay for the cost of vacuum freeze-drying?

5. What needs to be included in the plan?

Once you have identified the different types of emergencies that will have an impact on your institution or collection, determine what steps you need to take to reduce the risk by either:

$ preventing or avoiding them from occurring
$ mitigating their effects, should they still occur
$ responding to specific threats when they occur

and develop procedures for responding to them, bearing in mind that life safety must always be paramount. Many standard procedures for responding to say, tornadoes or earthquakes have already been worked out and are available from the FEMA website.

Include a list of **telephone numbers of key staff and service providers**, such as carpenters, electricians, plumber, as well as other resources; resources, such as **supplies and equipment**. Some institutions maintain a cabinet or trolley for materials, stored in a safe place that will not be damaged by an incident, and that can't be pilfered or tampered with. You should know where to obtain materials and equipment at short notice, not just within your own city, but also out of state, in case of a major event.
Having **funding** available for emergencies should also be included in the plan, but the reality is, most museums probably can't afford the luxury of setting aside a few thousand dollars for that rainy day when the heavens open and the museum gets flooded. That money, if it hasn't already been spent on something else, will mysteriously disappear. Knowing how to raise the money to pay for, say, the loan of equipment, hiring extra temporary staff, etc. and also where to get state and local funding should also be identified and included in the plan. If the emergency is widespread and large enough and the mayor, governor or president has called a state of emergency, this may result in funds to pay for the recovery.

You will also need to identify **alternate locations** to which you can move collections in the event of an emergency. This may be elsewhere on-site or on campus, or another building owned or leased for that purpose. It goes without saying it should be secure and not prone to disasters.

You will also need to include some **basic guidelines for handling, salvaging, and initial cleaning** for the *specific* types of artifacts you have in your collection. Unlike paper and textiles, it is difficult to develop any procedures that are too generic for natural history or ethnographic collections because there are so many different types of materials involved, and each material must be treated differently. This is where conservators intimately involved with the behaviour of artifacts under various conditions can use their knowledge and experience to develop guidelines for salvage and recovery.

Establish a **network** of museums in the city, area, or state is one way of sharing the burden. To

quote Michael O'Malley at the Centre de conservation du Québec:

> "One of the simplest ways to ensure help in the event of a major disaster is to develop an emergency response network in your local community. The goal of such a network is to enable its members to pool together their human and material resources to overcome a crisis."

Even if you have conservators on staff, you may require assistance from other institutions. For liability reasons, these should be accredited and permanent members of staff. In exceptional circumstances involving the salvage of classified material, or collections at a secure facility, you should ensure that all response team members have the appropriate security clearance *before* an incident occurs. The AIC provides a list of conservators throughout the country, some of whom may be cleared to handled classified material.

Criteria for a good Emergency Preparedness Plan

The Plan must be:

1. **Written** — as opposed to relying solely on an electronically retrievable format, in someone's head, or assumed that someone, somewhere is responsible for reacting, but no-one is really sure who.

2. **Portable** — in an easily transportable format (i.e. in a ring binder, pocket-size), and not solely attached to a bulletin board. While this presumes it to be in a written format as opposed to an electronic format, a copy could be stored on a laptop, Palm Pilot, as a back-up.

3. **Accessible** — the plan and all of the relevant information must be easily available to all essential personnel (i.e. the information is not kept locked away in a drawer, office, someone's head).

4. **Practical**, **Effective, and Efficient** — not theoretical or cumbersome; something which is capable of being put to use and produces a decided, decisive, or desired effect.

5. **Clear, Concise, and Simple** — written in plain, uncomplicated language, so that it can be easily understood by all who have to use it, and free from superfluous detail, obscure or ambiguous information.
6. **Flexible and Revisable** — capable of being easily updated on a regular basis to adapt to new, different or changing requirements.

7. **Comprehensive and Relevant** — covering all situations that the institution is likely to encounter, and dispensing with those which do not apply.

8. **Supported by management** — above all, for a plan to even get off the ground, it must receive the support of the senior executive of the institution, whether it be the director, archivist, librarian or curator.

A word of caution — avoid so-called "generic" disaster plans that require you to fill in the blanks. They can lure you into a false sense of security, that now you have your disaster plan. But there is no such thing as an idiot-proof disaster plan! Everybody's situation is different — what may work for one institution may not work for another. You still have to go through the motions of working these things through with your key staff.

Conclusion

Once the plan is written don't assume that all your worries are over. You should include some provision for training. There are a number of ways that this can be done:

$ "Hands on"
$ Demonstrations
$ Scenario-based — with role-playing
$ Table-top exercises
$ Training video

Not only that, but since the plan is a "living" document and planning a cyclical process not linear, it must be updated, at least on an annual basis, more frequently if there are high staff turnovers.

NOTES

---

1. Langton, James. "Fault lines in Manhattan", *The Sunday Telegraph*, January 7, 1996, p.23. Klaus H. Jacob, Senior Research Scientist, Division of Geology and Geophysics Lamont-Doherty Earth Observatory (LDEO) of Columbia University P.O. Box 1000 (61 Route 9W, Seismology Building Rm 225) Palisades NY 10964-8000, USA Phone: (914) 365 8440; Fax: (914) 365 8150; Email: jacob@ldeo.columbia.edu

2. Eisenstadter, Ingrid. "Global Warming. Bobbing in the Big Apple", *Sierra Magazine*, July/August, 2003.

3. Black, J. Cofer, *Testimony before the National Commission on Terrorist Attacks upon the United States*, April 13, 2004.