

COUNCIL OF NOVA SCOTIA ARCHIVES

DISASTER PREPAREDNESS MANUAL

*"... it is more important to have a simple plan in place
than to have the perfect plan in preparation."*

Connie Brooks

Compiled & edited by
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C.N.S.A. Conservator
1995

ACKNOWLEDGEMENTS

The information in this manual has been compiled from a wide variety of published sources, all of which appear in the bibliography. In addition, I am most grateful to the following individuals for their invaluable input and assistance during the development of this project: Chris Lavergne, Conservator, Planning and Communication Division of the Nova Scotia Museum, who led the Project Team that developed the Nova Scotia Museum Emergency & Disaster Preparedness Plan on which this manual is based, Harold Holland, Conservation Manager, Public Archives of New Brunswick and David Tremain of the Canadian Conservation Institute in Ottawa, who generously gave of their time to answer questions and supply information. I would also like to thank the members of the C.N.S.A. Conservation Committee for their contribution. This project

has been made possible by financial assistance from the Federal Government through the National Archives of Canada and the Canadian Council of Archives.

Julia M. Landry
February 24, 1995

TABLE OF CONTENTS

Introduction	4
Designated Response Co-ordinator	5
Fire	6
Flood	8
Structural Damage/Collapse	10
Heating/Ventilation/Air-conditioning Systems Failure	12
Power Failure	14
Natural & Community Wide Disasters	15
Bomb Threat	17
Bomb Threat Particulars	19
Appendices:	
1. Floor Plans	20
2. Locations of In-House Supplies & Equipment	21
3. Basic Salvage Procedures	23
4. Emergency Assistance Numbers	27
External	28
Services	30
Site & Staff	33
5. Bibliography	35

INTRODUCTION

This manual has been developed to provide a guideline for the completion of a site specific disaster response plan. One of the most difficult decisions in a project of this nature is what information to include, so it is hoped that the "fill in the blanks" format will make this part a little easier. However, the information is only valuable if it is current, so it is also important that someone take responsibility for the regular updating of all copies of the manual.

Only the most basic information on the recovery of collections has been included, as it is impossible to predict the variety of material held by such a diverse body of institutions. Therefore, it is suggested that each site research and collect the salvage details that are most applicable to the specific material they hold and add this information to the appropriate section of the manual.

The information in the manual must be required reading for all staff and volunteers and it should be reviewed regularly. There must be at least one copy in a known central location on site and additional copies with the Designated Response Co-ordinator and their alternate(s). Procedures must be practiced, as ideas that seem theoretically sound, sometimes do not work well in reality.

The directions in the manual may not be applicable to every situation, but, used in conjunction with training and common sense, they should enable staff to cope with most problems that arise. **The safety of staff and patrons is the most important consideration in any emergency situation.**

DESIGNATED RESPONSE CO-ORDINATOR

In emergency situations, it is essential that there be a single individual in charge whose authority is clearly recognized. This individual must be completely familiar with the site, the institution's collections, the directives contained in the disaster preparedness manual and the resources at their disposal. Failure to appoint such an individual can waste precious time in the event of an emergency with the result that efforts are duplicated and salvage operations jeopardized through unnecessary delays. The Designated Response Co-ordinator (D.R.C.) should be someone who is not easily flustered in a crisis and is capable of employing initiative when required to do so.

The positions of the D.R.C. and their alternate(s) are appointed by the institution's governing body. In a small institution, they may be the same person as the institution's curator or archivist, but not necessarily. It must be understood that they are in charge during an emergency situation until the situation has been stabilized or until they are relieved of their duties by someone in higher authority. They have the authority to undertake and delegate tasks in an emergency and this authority should include the authorization of financial expenditure. They may also call upon other agencies and organizations for assistance as required.

FIRE

1. Sound the alarm and evacuate the area.

Remain calm and direct others to the nearest safe exit point.

Do not use elevators.

Assist anyone requiring help.

Check for stragglers.

Close all doors on the way out.

Assemble in a designated area, a safe distance from the fire location.

2. Telephone the Fire Department.

number

Give the fire department the location and nature of the fire.

3. Call an ambulance, if required.

number

4. Meet the Fire Department on their arrival.

Tell the fire (and/or police) officials;

- if there is someone in need of special assistance
- what you have done so far
- if there are potentially dangerous items stored on or near the fire site
i.e. gas, painting supplies etc.
- if arson is suspected

5. Advise the Designated Response Co-ordinator or alternate(s).

D.R.C.

Work

number

Home

number

FIRE (cont'd)

D.R.C. Alternate

Work

number

Home

number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

6. Immediate follow-up.

Only re-enter with the permission of the Fire Department and the Designated Response Co-ordinator.

As far as possible, re-establish building security.

7. If collections are damaged ...

Do not attempt salvage or clean-up without consulting with the Designated Response Co-ordinator.

Consult salvage directions before beginning any collection evacuation.

FLOOD

1. **Determine if there is potential danger from electrical hazards or structural damage.**
2. **Secure the area.**
3. **If there is, or might be, an electrical hazard, shut off the power if it is safe to do so. If it is not safe, or if there is any doubt, contact the power utility to have the power shut off.**

Power Utility:

number

4. **If there is a danger of structural damage, refer to Page 10.**
5. **If there is no danger due to electrical hazard or structural damage, identify the source(s) of the water and stop or channel the flow by shutting off valves, catching the leak or otherwise directing it.**
6. **Minimize damage by moving or covering objects.**
7. **Contact the Designated Response Co-ordinator or alternate(s) who will authorize and/or co-ordinate the salvage operation.**

D.R.C.

Work

number

Home

number

FLOOD (cont'd)

D.R.C. Alternate

Work

number

Home

number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

8. Immediate follow-up.

As far as possible, re-establish building security.

Do not attempt salvage or clean-up without consulting with the Designated Response Coordinator.

Refer to Appendix 2 for in-house supplies and equipment.

9. If collections are damaged ...

Consult salvage directions before beginning any collection evacuation.

Contact a professional conservator for detailed advice on specific salvage problems.

STRUCTURAL DAMAGE/COLLAPSE

- 1. Evacuate and secure the area.**
- 2. If the damage is extensive, call the Fire Department.**

Fire Department

number

- 3. Provide first aid, if required.**
- 4. Call an ambulance, if required.**
- 5. Advise the Designated Response Co-ordinator or alternate(s).**

D.R.C.

Work

number

Home

number

D.R.C. Alternate

Work

number

Home

number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

- 6. Immediate follow-up.**

As far as possible, re-establish building security.

Do not attempt salvage or clean-up without consulting with the Designated Response Co-ordinator.

STRUCTURAL DAMAGE/COLLAPSE (cont'd)

Refer to Appendix 2 for in-house supplies and equipment.

7. If collections are damaged ...

Consult salvage directions before beginning any collection evacuation.

Contact a professional conservator for detailed advice on specific salvage problems.

HEATING/VENTILATION/AIR-CONDITIONING (H.V.A.C.) SYSTEMS FAILURE

1. Contact system repair company or companies.

name number

name number

name number

2. Contact the Designated Response Co-ordinator or alternate(s).

D.R.C. Work number

Home number

D.R.C. Alternate Work number

Home number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

3. Limit opening doors to minimize heat loss/gain in building.

4. **If necessary, alternative heat sources may be used temporarily, but beware of fumes from such things as kerosene heaters if used in a poorly ventilated area.**

H.V.A.C. SYSTEMS FAILURE (cont'd)

ventilated area.

5. Points to remember:

1. Collections will suffer more from rapid fluctuations in temperature and humidity than from slow gradual ones. If the building has cooled slowly, then it should be warmed slowly.
2. Any collections particularly vulnerable to temperature extremes should be relocated, if possible, to somewhere with an environment similar to that to which they are accustomed.
3. Under freezing conditions, failure of the heating system can result in damage to pipes, sprinklers etc.. It may be necessary to drain these systems if the heat loss will be prolonged.

POWER FAILURE

1. Evacuate all visitors,
2. Make sure that all emergency and exit lighting has switched to battery power.
3. Make sure that all security and fire protection/detection systems have switched to battery power.
4. Inform the power utility of the outage.

number

Try to find out when power will be restored.

5. Disconnect any sensitive electrical equipment, immediately.
6. Disconnect or turn off any other electrical equipment.
7. Avoid opening freezers or refrigerators. Limit opening doors to minimize heat loss/gain in building.
8. Contact the Designated Response Co-ordinator or alternate(s).

D.R.C.

Work

number

Home

number

D.R.C. Alternate

Work

number

Home

number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

NATURAL & COMMUNITY-WIDE DISASTERS

When a warning of potential disaster is received, or a disaster is declared:

1. Obtain as much detailed information as possible.

Emergency Measures Organization number

Weather Office number

Police Department number

Fire Department number

Television News Bureau number

Radio News Bureau number

Newspaper News Bureau number

Other number
name

Other number
name

2. Contact the Designated Response Co-ordinator or alternate(s).

D.R.C. Work number

Home number

NATURAL & COMMUNITY-WIDE DISASTERS (cont'd)

D.R.C. Alternate

Work

number

Home

number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

3. If the institution is to be closed:

Evacuate visitors, volunteers and unnecessary staff.

Notify booked groups of closure

4. After discussion with the Designated Response Co-ordinator, it may be decided to institute protective measures:

Move some or all of the collection to a safe area.

Cover collections and displays.

Turn off power and close water valves.

If appropriate/practical cover windows and take any other measures necessary to safeguard the building and the collections.

Lock windows and doors.

BOMB THREAT

This section is based on the R.C.M.P. pamphlet Bomb Threat Telephone Procedures.

1. Evacuate the building.

Remain calm.

Check exit routes for suspicious packages, containers or other objects, **do not touch or move anything that is suspicious.**

Direct others to leave the area by the nearest safe exit route.

Assist anyone requiring help.

Check for stragglers and close all doors on the way out.

Assemble in a designated area, a safe distance from the building.

Do not assume that the suspicious object you have found is the only one.

2. Telephone the Police Department.

number

3. Record the bomb threat particulars (Page 19) and any other suspicious activity.

4. Meet police on their arrival and tell them what steps have been taken so far.

5. Contact the Designated Response Co-ordinator or alternate(s).

D.R.C.

Work

number

Home

number

BOMB THREAT (cont'd)

D.R.C. Alternate

Work

number

Home

number

The D.R.C. will ensure that the appropriate people within the Institution, such as the curator, are advised of the situation.

6. Only re-enter the building with permission from the Police Department.

7. Points to remember if a bomb threat is received;

Listen to the caller.

Be calm and courteous.

Do not interrupt the caller.

Obtain as much information as possible.

8. Sample questions to ask.

What time will the bomb explode?

Where is it?

What does it look like?

Why did you place the bomb?

Where are you calling from?

What is your name?

BOMB THREAT PARTICULARS

Fill in after evacuation.

Exact wording of the threat:

Identifying characteristics of caller:

Sex Estimated age

Accent (English, French, etc.)

Voice (loud, soft, etc.)

Speech (fast, Slow, etc.)

Diction (good, nasal, lisp, etc.)

Manner (calm, emotional, vulgar, etc.)

Background noises.

Was the voice familiar? (specify)

Was the caller familiar with the area?

Any other relevant details.

APPENDIX 1: Floor Plans

This section should include plans showing the locations of water and power lines and such things as the storage of flammable materials. If desired, they can also show the locations of priority collections as an aid to the salvage team.

APPENDIX 2: Locations of in-house supplies and equipment.

Disaster Kit(s)

Pails and Mops

Ladders

Rope

Tape

Plastic sheeting



Tools

Equipment

Other

APPENDIX 3: Basic Recovery Procedures

These procedures are compiled from a variety of sources and are intended as a guide only. Please set priorities for your institution and consult with a trained conservator in order to develop detailed instructions for the salvage of the collections in your care. Do not begin the salvage operation until the Designated Response Co-ordinator, or their alternate(s), arrives.

It may not be possible to enter the disaster site immediately. Use the waiting time productively to implement the initial stages of your recovery plan, assemble the team and materials needed for the operation, find a suitable location for the recovered materials and alert the necessary services, i.e. trucks, freezer facilities, etc..

Stabilize the Environment:

- once the building has been pronounced safe, it is critical that steps be taken to stabilize the environment as mould growth will be the most immediate danger facing the collection
- lower the temperature as much as possible
 - in winter, turn off the central heating (N.B. don't forget to protect pipes from freezing)
 - in summer, use existing air conditioning systems or portable units
- keep air circulating by using fans and opening windows and doors, weather permitting
- decrease humidity by removing water and wet debris, including carpets, as quickly as possible
- use dehumidifiers in conjunction with fans if necessary
- if there is no power available use portable generators for electrical services (N.B. all lines must be waterproofed and grounded)
- use hygrothermographs to monitor temperature and RH in the disaster area and also in the drying area(s)

Paper:

- the first 48 - 72 hours are the most critical for the prevention of further deterioration
- as much as possible, separate wet material from damp or partially wet
- remove material systematically, and, if time permits, identify the boxes as they are removed, even identifying the range will be a help
- remove material on the floor first, then wet material, then damp, then dry
- any problematic materials such as books or documents on coated paper, unstable media,

plans on coated linen, blueprints or any books or documents made of parchment or vellum should be segregated for special treatment (see table on Page 25)

- **pack as found**, do not close open books or open closed books
 - do not attempt to separate documents or open file folders
- do not attempt to remove dirt or debris from wet books or documents on site
 - this should only be attempted under the supervision of a conservator, after the material has been removed to a secure location
 - the removal of stubborn dirt and the residue of smoke and carbon is better done after the material is dry
- wet material should be wrapped or interleaved with polyethylene or freezer paper and sent for freezing as soon as possible
- damp material should be spread out in a secure area for air drying
 - the drying of material must be closely monitored; changing blotting and interleaving papers, etc. as necessary
 - interleave only every 50 pages or so to reduce the chance of swell, coated papers **must** be interleaved at each page or frozen/freeze dried immediately to prevent blocking
 - vigilance at this time may also mean that distortion can be minimized and outbreaks of mould handled promptly
- mouldy material should be isolated from the rest of the collection, thoroughly dried and then the mould brushed off in a fume hood or well ventilated area
 - always wear a mask and gloves when dealing with mouldy material
- books must be packed flat or spine downwards, make sure they are well supported
 - books are heavy, particularly when wet, use small boxes, no more than one cubic foot, to minimize stress on the books and fatigue on the part of the recovery team
- to minimize shrinkage and distortion of leather bindings they should be bound, spine to fore-edge with cloth tape or elasticized bandage
- transport large objects on sheets of plywood covered with polyethylene
- do not remove the contents of drawers, but transport as is to recovery area

Art on Paper

- air dry, image side up, on clean blotting paper, do not blot the surface of the image
- if framed, carefully remove from frames, unless image is stuck to glass
- if it can be done easily, remove and discard mat, air dry as above
- if the mat cannot be removed easily, air dry as a unit and seek professional assistance

Parchment/Vellum

- as it is prepared under great tension, parchment and vellum will become extremely distorted as it dries
- drying must be a slow controlled process using restraint to minimize dimensional distortion

(cont'd on Page 26)

SALVAGE PROCEDURES FOR LIBRARY AND ARCHIVAL MATERIAL

This table is reproduced from the following publication;

Stewart, Deborah and David Tremain. Emergency and Disaster Preparedness for Museums.

Rev. Ed.. Ottawa: Canadian Conservation Institute, Department of Communications, 1993.

Page 55.

- inappropriate drying can result in permanent damage, so it is best to seek the assistance of a qualified conservator
- illuminated manuscripts and bindings are particularly vulnerable and must be handled by a professional
- freeze drying this material can also cause dimensional problems, slow air drying is a safer option
 - freeze drying paper text, but not the vellum covers, may be an option for saturated vellum bindings

Paintings (on canvas or other non paper support)

- because of the wide variety of paints, supports and framing styles, it is safest to consult with a fine art conservator before attempting any interim measures

Microforms/Motion Picture Film

- water damaged microfilm and microfiche should be immersed in buckets of clean cold water, preferably with lids, and transported to a film processing laboratory for conservation
- motion picture film must be rewashed and dried within 72 hours
 - keep the material wet and transport to a film processor for treatment

Magnetic Media

- there has been very little research into the salvage of magnetic media, contact the National Archives in Ottawa as soon as possible for specific advice.

Photographs

- as different photographic processes respond in different ways, an effort should be made to identify the different types of photograph in the collection as part of the planning process
- consult with the photographic conservators at the National Archives for specific advice
- keep water immersion time to a minimum, there are very few processes that will withstand an immersion period of more than 48 hours
- handle only the support side
- air drying, emulsion side up, on clean blotting paper is preferred
 - if there are too many photographs, or insufficient time, space and personnel, photographs with a gelatin emulsion may be frozen

APPENDIX 4: Emergency Assistance Numbers

The numbers in this section are for emergency use only and are not to be copied.

EXTERNAL ASSISTANCE NUMBERS

Police: Local

Police: RCMP

Fire

Ambulance

Poison Control

Hospital

Doctor

INFORMATION

Emergency Measures Organization (EMO)

EMO HQ Stand-by Officer (24 hour) (902) 424-5620

EMO Local Zone Controller telephone 1

EMO Local Zone Controller telephone 2

Emergency Preparedness Canada (24 hour) (902) 426-2082

Environmental Emergencies 1-800-565-1633

Environment Nova Scotia (Local)

Forest Fire

Highways: Conditions December to April (902) 424-3933

News (Radio)

News (Television)

News (Newspaper)

Weather Information

Other

Other

SERVICES

Ambulance

Animal Control Officer

Building Supplies

Building Supplies

Canadian Conservation Institute (CCI), Ottawa
In an emergency, call collect. (613) 998-3721

Canadian Heritage Conservation (Parks Canada)
Business Hours (902) 426-7448

Canadian Heritage Conservation (Parks Canada)
Outside Business Hours

Car/Truck Rental

Coast Guard telephone 1 (Halifax Area) (902) 426-6030

Coast Guard telephone 2 1-800-565-1633

Contractor

Contractor

Contractor

Council of N.S. Archives Conservator
Business Hours (902) 424-6081

Doctor

Electrician

Elevator Repair

Environmental Emergencies 1-800-565-1633

Equipment Rental

Equipment Rental

Fire Department

Fire Detection System

Freezer Facility

Heating System

Hospital

Insurance

Legal Adviser

Locksmith

Parks Canada (Canadian Heritage Conservation)
Business Hours (902) 426-7448

Parks Canada (Canadian Heritage Conservation)
Outside Business Hours

Plumber

Poison Control

Police: Local

Police: RCMP (Local)

Police: RCMP HQ, Halifax (24 hour) (902) 426-9111

Power Utility

Security System

Sprinkler System

Storage Space

Storage Space

Taxi

Towing

Veterinarian

Water Utility

Other

Other

Other

Other

Other

Other

Name

Work

Title

Home

Name

Work

Title

Home

Name

Work

Title

Home

Name

Work

Title

Home

Name

Work

Title

Home

Name

Work

Title

Home

APPENDIX 5: Bibliography

- Anderson, Hazel and John E. McIntyre. Planning Manual for Disaster Control in Scottish Libraries and Record Offices. Edinburgh: National Library of Scotland, 1985.
- Brooks, Connie. "Co-operative and Regional Disaster Preparedness." The Book and Paper Group Annual. 5 (1986): 139 - 145.
- Cunha, George Martin and Dorothy Grant Cunha. "Disasters". Library and Archives Conservation: 1980's and Beyond. Vol. 1. Metuchen, N.J.: Scarecrow, 1983. 2 vols. 79 - 96.
- Disaster Plan Workbook. Eds. Joan Grant et al. New York, N.Y.: The Preservation Committee, New York University Libraries, 1984.
- England, Claire and Karen Evans. Disaster Management for Libraries: Planning and Process. n.p.: The Canadian Library Association, 1988.
- Fortson, Judith. Disaster Planning and Recovery: A How-To-Do-It Manual for Librarians and Archivists. How-To-Do-It Manuals for Libraries No. 21. Series Ed. Bill Katz. New York, N.Y.: Neal-Schuman, 1992.
- Nova Scotia Museum Emergency and Disaster Preparedness Plan. Halifax, N.S.: Department of Education, Nova Scotia Museum, 1994.
- Ounce of Prevention: A Handbook on Disaster Contingency Planning for Archives, Libraries and Record Centres, An. Eds. John P. Barton and Johanna G Wellheiser. Toronto: Toronto Area Archivists Group Education Foundation. 1985.
- *Stewart, Deborah and David Tremain. Emergency and Disaster Preparedness for Museums. Rev. Ed.. Ottawa: Department of Communication, Canadian Conservation Institute, 1993.**
- Waters, Peter. Procedures for the Salvage of Water-damaged Library Materials. Washington: Library of Congress, 1975.

*** This publication contains some information on the salvage of collections other than**

books and documents.

