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ABSTRACT

This document suggests components for a sound disaster plan for libraries and archives. The planning process includes four steps which are covered in this manual: educating the staff about disaster preparedness literature; planning to prevent disasters; preparing to respond to an emergency and minimize its effects; and planning how to restore damaged collections. The manual is organized into two parts. The "Preparation" section covers planning for disaster preparedness and creating a disaster response team. The "Disaster Plan Manual" section includes an overview of a plan, emergency procedures, disaster response procedures, disaster recovery techniques, disaster rehabilitation, prevention and protection measures, and collection priorities. The appendices contain general rules for successful disaster recovery, drying methods for books and documents, a building survey, disaster recovery suppliers and services, and an annotated bibliography of disaster preparedness literature (30 titles). A disaster plan workbook contains worksheets intended to facilitate the completion of a disaster plan. (JLB)

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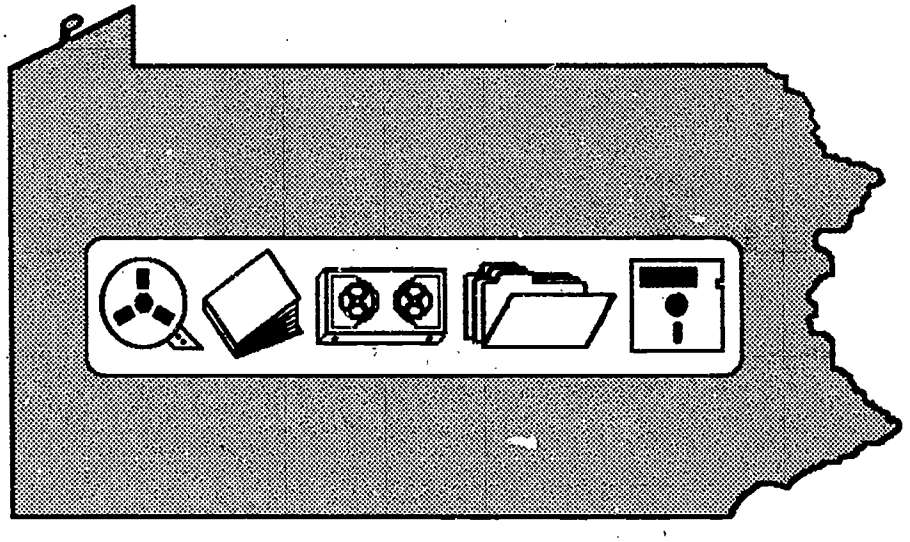
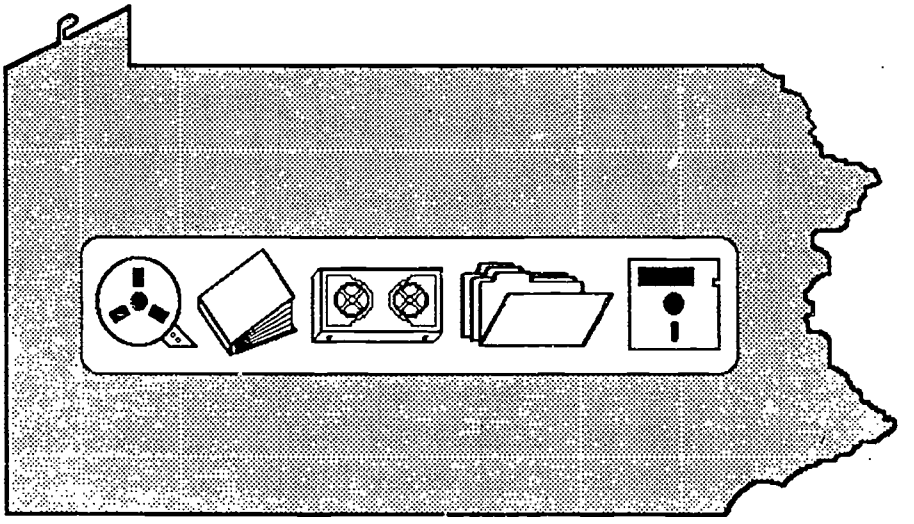
DISASTER PREPAREDNESS MANUAL AND WORKBOOK



FOR PENNSYLVANIA LIBRARIES AND ARCHIVES

Disaster Preparedness Manual and Workbook



for Pennsylvania Libraries and Archives

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PREPARATION

DISASTER PREPAREDNESS MANUAL AND WORKBOOK FOR PENNSYLVANIA LIBRARIES AND ARCHIVES

INTRODUCTION:

In an era of rising costs, reduction in staff and tight budgets why do you need to prepare for a disaster? Do you have the time to plan for such a contingency? Can you afford not to?

Perhaps you consider preservation and disaster planning topics relevant only for rare books and special collections. If your library or archives were destroyed by fire or flood, would your patrons miss the services that you provide? Would they find it difficult to obtain these services elsewhere? If your answer is "yes" to these questions, then you cannot afford not to prepare for a disaster.

Is your insurance adequate to replace your collections, should they be damaged or destroyed? Are all the books and serials in your collection still available for purchase should you need to replace damaged or destroyed materials? If your answer is "no" to these questions, then you cannot afford not to prepare for a disaster.

The very survival of your collections, your building, and even your job may depend upon your preparations to handle a disaster. Every information professional -- in small community public libraries, large urban public libraries, academic libraries, special libraries, archives, historical societies, and record centers -- needs to know how to prevent potential collection disasters from occurring, how to respond to an emergency should one occur, and where to seek help and advice if necessary.

Since the Florence flood in 1966 and the Los Angeles fire in 1986, librarians and archivists throughout the world have recognized that the unforeseeable can happen to their collections and have taken steps to prevent and prepare for emergencies.

Besides flood and fire, what else can you prepare for? Collections are susceptible to disaster from natural disasters as well as from human carelessness. Earthquakes, hurricanes, tornadoes, bomb threats, structural failures, construction-related problems, arson, and vandalism can all take their toll on collections. It is the responsibility of staff to preserve collections, incorporate ways to prevent potential disasters into policies and daily procedures, and learn how to react quickly and calmly in an emergency, should one occur.

A significant first step in responsible collection management is the production of a **DISASTER PLAN**. This *Manual and Workbook* suggests components which a sound disaster plan for collections could contain. These components have been gleaned from preservation experts, librarians, and archivists with many years of experience helping cultural institutions prepare for and recover from disasters. The planning process entails the following four steps:

1) **EDUCATING** yourself and your staff by reading disaster preparedness literature. A Bibliography is included (pp. 36-39) in this *Manual and Workbook* to assist you in identifying resources.
2) Planning to **PREVENT** disasters from occurring. Which procedures can you and your staff implement to avert potential disasters? (Detailed checklists are included as Appendices for your information.)
3) **PREPARING TO RESPOND** to an emergency and minimize its effects. Consider types of emergencies and describe appropriate responses in detail. Learn how to stabilize collections and handle wet materials.
4) Planning how to **RESTORE** collections should they be damaged or destroyed.

Knowing how to respond in a collections emergency may mean the difference between cost-effective recovery or irretrievable loss. Insurance carriers are more reluctant than ever to replace collections where:
1) Intelligent and knowledgeable efforts were not taken to prevent disaster.
2) Effective and readily available recovery methods were not employed to salvage damaged materials.

Remember that it is cheaper to plan for and prevent emergencies than recover from a disaster. It is still more cost-effective to salvage damaged materials than replace destroyed collections. This cost-effectiveness has been well documented in a number of library disasters. Similarly, writing and implementing a disaster plan requires less staff time than recovering from an emergency for which no one is prepared. DISASTER PLANNING IS THE INTELLIGENT WAY TO PROTECT COLLECTIONS AND RESOURCES.

Writing a Disaster Plan is the most important task you can undertake for the continued survival of your collections. Don't postpone this responsibility. Design your Disaster Plan based on your needs. Use this *Manual and Workbook* as your guide, and add or delete sections as appropriate for your institution. Be creative. Flesh it out. Breathe life into it. Clothe it somberly or with style. JUST DO IT TODAY. There is nothing less defensible than collections, damaged beyond recovery, because the staff did not take the time to plan ahead.

For a Disaster Plan to be successful it is important to educate all staff about the plan, keep staff informed throughout the planning process, and train staff how to use the plan. Although the plan should be widely distributed not all staff will need to maintain full copies. Sections of the plan, such as descriptions of special collections, floor maps, and lists of personnel telephone numbers, need to be maintained only by specified staff members.

A number of states have instituted disaster preparedness and recovery planning for their libraries, archives, record centers, and museums. It is time that the libraries of Pennsylvania undertake this kind of stewardship for the preservation of their collections. The Commonwealth of Pennsylvania has too many treasures that need to be carefully preserved. The State Library and PRLC invite you to become involved in statewide cooperative disaster preparedness planning.

PLANNING FOR DISASTER PREPAREDNESS

This disaster planning is intended for your collections. First priority in emergencies is always the evacuation of people. Your institution should already have a plan for people-related emergencies.

1. **Make one person responsible for completing the plan according to a timetable.** Appoint a Disaster Planning Committee representing several departments and organize task forces as required.

2. **Educate your Disaster Planning Committee and all staff within the institution.**

3. **Define scope.** Outline plan and define level of detail needed.

4. **Set realistic goals and timetable.**

5. **Set deadlines and establish clear lines for reporting.**

6. **Assess your collections and assign priorities.** This will expedite disaster recovery and avoid decision-making in crisis situations.

7. **Identify potential hazards, both internal and external.**

8. **Assess prevention and protection needs.**

9. **Consider fiscal implications.** These will affect both prevention and recovery measures.

10. **Write plan.** Use a three-ring binder for ease of updating and locating information. Ask staff knowledgeable about particular hazards, buildings, and collections to review drafts.

11. **Distribute plan.** Laminate Emergency Instructions and Procedures to post near telephones. Distribute appropriate sections of the Disaster Plan to departments and train staff in how to use the plan. List locations of full copies of the plan.

12. **Assess planning process and write report.** Include how often the plan will be updated and by whom.

You may find it beneficial to work cooperatively with local institutions who are also engaged in disaster preparedness. This will save duplication of effort through shared expertise and other resources. In addition, a cooperative regional Disaster Response Team may be formed with membership representing several institutions.

CREATING A DISASTER RESPONSE TEAM

The Disaster Response Team, which should be composed of staff members, serves the following two functions:
1) Take positive actions to PREVENT foreseeable disasters.
2) Be PREPARED TO RESPOND to unexpected emergencies.

The members of the Disaster Response Team should be selected for their abilities to provide sensible leadership in a crisis, preferably with the authority to make decisions. Additional skills can include collection prioritization, assessing damage to collections, maintaining accurate records, and/or releasing funds for salvage operations. It is also essential that Team members are educated and have a high level of enthusiasm for this project.

List names, titles, work, and home telephone numbers of Disaster Response Team members in your Disaster Plan. List responsibilities for each member of the Disaster Response Team. State clearly to whom each Team member is to report. Review lists annually and update as needed. Keep copies of the Disaster Plan and a list of the Disaster Response Team members in administrative, security, and maintenance departments. Keep a copy at the home of each Disaster Response Team member.

Appoint a Leader of the Disaster Response Team. The Team Leader may be an Administrator, Preservation Officer, Department Head, or Operations Manager. The Disaster Response Team Leader needs authority to make decisions concerning the collections, hiring additional staff, mobilizing services/supplies, and releasing funds in the event of an emergency. The Team Leader can convene annual meetings of the Team to review procedures, train members, and test procedures through drills or simulations. The Team Leader needs to maintain a high level of knowledge of disaster prevention and recovery techniques.

The Team Leader will need to serve as a liaison for members of any regional Disaster Response Team who are able to be on-site in response to an emergency.

After an emergency the Disaster Response Team needs to evaluate the effectiveness and efficiency of the response. Consider the following questions:
What did you learn from the experience?
Which activities were effective? Which were not?
Why were some responses effective and others not?
Were sufficient supplies on hand? If not, which supplies were not immediately available?
What would you do differently in the event of a similar emergency? Different emergency?

As a result of this post-disaster evaluation, it may be necessary to update and/or expand the Disaster Plan. Insert a copy of the Team's evaluation report as an appendix for future reference.

DISASTER PLAN MANUAL

DISASTER PLAN MANUAL

This Manual section is designed to provide the basic components of a sound Disaster Plan. Each component suggests the types of information to be included. The questions posed are not exhaustive, but are intended to generate discussion among your Disaster Planning Committee.

You can expect that additional questions will arise in the course of Disaster Planning Committee discussions. The more questions answered and information gathered during the planning process, the more prepared you will be in the event of an emergency.

OVERVIEW OF PLAN

A disaster plan should include a brief introduction explaining its use, instructions for updating, and personnel responsible for implementation of disaster response. Other general information should also be included to assist users in understanding the planning process and instructions.

Consider the following questions:

What would your institutional authorities need to know (in brief) about the plan?

What would staff, facilities managers, security, and fire personnel need to know?

Briefly describe why disaster plans are essential.

Describe how and where the plan has been disseminated.

Describe how the plan is to be used and how staff will be trained in its use.

State how often the plan is to be updated and by whom.

Provide an executive summary of the plan's contents and who was responsible for its creation.

Sign the introduction and date it for future reference. Add dates of plan revisions.

EMERGENCY PROCEDURES

The Emergency Procedures section should include all the information needed immediately for any staff person, no matter how untrained, to respond effectively to collection-related emergencies.

Every institution should already have in place procedures for people-related emergencies. Maintain separate plans for people-related and collection-related emergencies so that neither becomes too difficult to use. This will keep both sets of procedures relatively simple.

The emergency instruction pages should be as succinct as possible to avoid lengthy searches for information. Insert explanations or additional information as appendices.

Emergency instruction and procedure sheets should contain brief easy-to-read instructions and information that any staff member, volunteer, or student would need to know in a collections emergency. Copies of emergency information should be laminated and posted near all staff telephones and at the public service desks or areas. All staff should receive education in their use.

The following kinds of questions should be addressed in this section:

1. What is the emergency?

2. How serious is it?

3. Who should be notified in the department?

4. What expertise outside the department is needed to deal with the emergency? (fire department, police, plumbers, electricians, exterminators, facilities staff, etc.)

5. What should be done immediately in a variety of circumstances, such as structural damage, fire, or flood?

6. In what order should actions be taken?

7. If the department is closed, how are staff informed about the emergency? By whom?

8. How will basic services to users be continued?

DISASTER RESPONSE

This section should contain all the information you need for a fast and effective response to a collections emergency. It is important to plan the response and recovery sections carefully, because it is hard to think clearly in an emergency. Good preparation will also make it easier for you to implement response plans.

KEY STEPS IN DISASTER RESPONSE:

1. Assess the disaster situation
2. Convene required staff/Disaster Response Team
3. Establish a command post
4. Assess damage to collections on site
5. Agree upon priorities
6. Activate plans for response: staff, volunteers, supplies, services, and experts
7. Eliminate hazards
8. Stabilize the environment
9. Provide security
10. Train staff and volunteers
11. Initiate response activity
12. Supervise activities
13. Record all activity and take photographs
14. Provide services for people
15. Communicate
16. Organize recovery phase

There are many questions to be considered when you are compiling this Disaster Response section. You can add other concerns reflecting your particular institution and collections. Consider the following questions:

1. Assess the disaster situation:
   Who is called if the Department is closed?
   Who initiates the call? Security? Departmental staff?
   Who comes on site? Disaster Response Team Leader? Facilities manager? Security?
   Which authorities should be notified? By whom?
   How is the source of trouble dealt with? Water? Fire?
   If this is a minor emergency how is it dealt with?
   If this is a major disaster how will it be dealt with?
   If this is a major disaster how will services to the user community be provided?

2. Convene required staff/Disaster Response Team:
   Who initiates chain of telephone calls?
   Do Disaster Response Team members have telephone numbers at home?
   Where does Disaster Response Team convene?

3. Establish a command post:
   Where? Does location have telephones, office supplies, conference rooms?

4. Assess damage to collections on site:
   Who assesses damage to collections?
   How will damage be assessed? What is damaged? How badly?
   When does insurance carrier need to be notified? Immediately? Next business day?
   What if materials are covered with sewage? Mud?
   How can damage to non-paper media be assessed?
   How will wet carpet, furnishings, computers, etc. be handled? By whom?
   What will be done with damaged materials? Leave, or pack and remove? Where? How?

5. Agree upon priorities:
   Who assigns priorities? Which priorities must be addressed?
   Are collection priorities identified in the Disaster Plan?

6. Activate plans for response: staff, volunteers, supplies, services, and experts.
   Who activates plans for supplies, services, equipment?
   How will they be paid? Special funds? Rush purchase system?
   Where are deliveries to be made?
   What kinds of supplies should be on hand?

7. Eliminate hazards:
   Who checks for hazards? Who eliminates hazards? How?
   Who gives permission to re-enter the department? Fire department? Security?

8. Stabilize the environment:
   How will the environment be monitored? By whom?
   What equipment is available to measure environmental factors?

9. Provide security:
   What level of security is needed? Who provides security?

10. Train staff and volunteers:
   Who trains staff and volunteers? Who organizes recovery teams?
   What if additional volunteers are needed?
   Which type of personnel concerns need to be addressed? Physical limitations? Allergies?

11. Initiate response activity:
   Which recovery methods can be utilized?
   Which technologies are available?

12. Supervise activities:
   Who supervises the operations?
   Who are assigned as team leaders?

13. Record all activity and take photographs:
   Who records activity?
   How will affected materials be documented? By call number, shelf location, or title?

14. Provide services for people:
   What kind of services will be needed? Available?
      (food, drink, rest rooms, rest areas, dry clothes, etc.)
   Who can provide these services? Internally? Contractors?

15. Communicate:
   How will internal communication be handled? External?
   How will communication be handled within the response team? With the institution?
   Who will be responsible for external communication? With the news media?

16. Organize recovery phase:
   Who organizes disaster recovery?

DISASTER RECOVERY

In this section you should include information about recovery techniques and methods available. This could include techniques such as vacuum freeze-drying, vacuum thermal-drying, and dehumidification. Five methods for drying books and documents are described in Appendix D for your information. Ensure that you include recovery instructions for all types of materials in your collections. The following basic questions related to recovery should also be addressed by the plan:

What are the insurance carrier's requirements for reporting activities?
Which treatment methods will the insurance carrier approve for funding?
Who locally, regionally, and/or nationally can we contact for advice?
Which personnel are available? For how long?
What kind of training will recovery personnel need?
How will activities be organized?
How can essential services be continued?

KEY STEPS FOR DISASTER RECOVERY:

1. Remove standing water and contaminants if necessary
2. Initiate cleaning procedures if necessary
3. Protect undamaged collections
4. Select appropriate recovery techniques
5. Select drying method(s)
6. Remove and pack wet materials unless drying by dehumidification
7. Remove, clean, and pack contaminated materials
8. Record information about all removed materials
9. Stabilize damaged collections
10. Stabilize and/or repair damaged building
11. Initiate recovery procedures

1. Remove standing water and contaminants if necessary:
   How? By whom?
   What equipment will be needed? What is available?
   What kind of contaminants are present? Mud? Sewage? Chemicals?
   What kind of hazards do these contaminants present?

2. Initiate cleaning procedures if necessary:
   Where are local supplies located?
   Who trains staff and volunteers in correct cleaning techniques?
   Which media needs special attention? Electronic? Magnetic? Photographic?
   How can mud-encrusted collections be cleaned? Contaminated collections?
   Should wrappers, archival boxes etc. be discarded? Who decides?

3. Protect undamaged collections:
   Which priorities need to be addressed?
   Cover with tarpaulins? Location?
   Remove undamaged materials? Where to? How? By whom?

4. Select appropriate recovery techniques:
   Which techniques are available?
   Which are most suitable? Who decides?

5. Select drying method(s):
   Are materials damp around the edges? Moderately wet? Thoroughly soaked?
   Are materials bound?
   Is there coated (shiny) paper in the collections?
   Are there leather and/or vellum bindings in the collections?
   Are there water-soluble inks or pigments in the collections?
   Which kind(s) of media are damaged?

6. Remove and pack wet materials unless drying by dehumidification:
   Which drying methods are appropriate? Available? Who to contact?
   What can be salvaged?
   What can be discarded?
   Is there coated (shiny) paper in the collections? Film-based media?
   Can highly susceptible media be accessed promptly (before they are unsalvageable)?
   Do materials need to be separated for different treatments?
   How should materials be packed for least handling and most effective treatment?
   How can materials be packed? Training and supervision needed.
   How can materials be transported out of buildings with no elevator or electricity?
   Where can packed materials be stored for transport off the premises?

7. Remove, clean, and pack contaminated materials:
   How can contaminated materials be identified?
   Will contaminated materials need different drying methods?
   Who cleans contaminated materials? How? Training and supervision needed.

8. Record information about all removed materials:
   Who maintains records?
   How will activity and collection data be recorded?
   Can a laptop (portable) computer or tape recorder be used for record-keeping?

9. Stabilize damaged collections:
   What options are available for stabilization?
   Which resources and supplies are available?

10. Stabilize and/or repair damaged building:
   Who will be responsible for building repair?
   How can this be achieved quickly?

11. Initiate recovery procedures:
   Which recovery procedures are appropriate?
   Who initiates these procedures?
   Who will be in charge of the long term recovery effort?

DISASTER REHABILITATION

Once materials are dried they must still be sorted, repaired, rebound or boxed, and returned to the shelves in order. Additionally, they may require new security tags and shelf labels. If the disaster has been a large one, sorting and rehabilitation may take a long time. Any plans made ahead of time for staff, training, or space will help economize the use of resources.

Rehabilitation needs after a major disaster may include:

- Hiring and training personnel
- Smoke removal and deodorization
- Fumigation
- Air purification
- Sorting collections
- Reprocessing and copying photographic media
- Cleaning phonodiscs
- Rehabilitate paper-based materials through activities such as:
  - Cleaning
  - Repairing
  - Binding or rebinding
  - Rehousing, e.g. boxes, pamphlet binders, or folders
  - Labeling
  - Changing records manually or online for shelf-list and catalog
- Reshelve or refile materials

The following questions concerning rehabilitation should be considered:

How will rehabilitation be financed?
Where will activities be housed?
How will these activities be managed?
Who will carry out rehabilitation activities?
Who will train and supervise rehabilitation staff?
Which external services may be required?
Who will ensure procedures are completed?
Who will provide basic services to users?
Which other departments in library/archives may be affected?
(inter-library loan, circulation, technical processing, stack maintenance staff, etc.)

PREVENTION AND PROTECTION MEASURES

In order to prepare adequately to PREVENT disasters and PROTECT your collections there are three elements you must take into consideration: 1) physical structure of the building; 2) substance of your collections; and 3) salvage and treatment priorities for your collections.

1) Physical Structure of Building

Prevention activities should begin with a **Condition Survey** of the building or complex. You should conduct both internal and external surveys of your facility. Perhaps the operations manager or maintenance supervisor can accompany you on this inspection. In your survey, you should identify potential hazards to the building structure, suggest ways to remedy them, and recommend how this could be done within a given time frame. Does the roof leak, but there are no funds currently available to replace it? Plan ahead to include roofing on next year's budget, but also suggest other ways to protect collections that are in jeopardy from heavy rains. Perhaps a temporary repair of the worst area of the roof will suffice, or maintaining a stock of plastic tarpaulins to cover the book stacks most at risk in the event of heavy rain.

You will also need to understand fire/smoke detection, suppression systems, security systems, and good housekeeping measures. Institute routine maintenance procedures such as cleaning gutters, trimming trees, removing trash, dusting shelves. Handle small maintenance problems immediately before they become serious. Problems such as cracked windows, leaking toilets, and dripping pipes should be reported and repaired immediately before they become major problems.

Insist on regular (quarterly) safety checks of fire alarms, smoke detectors, sprinkler systems, fire extinguishers, Heating, Ventilation, and Air Conditioning (HVAC) systems, flashlights, and other equipment. If smoke alarms are not present, see that they are installed immediately. If your HVAC system is primitive, try to reduce the light and heat in the stack areas by installing dimmer switches, adding ultra-violet (U-V) filters to fluorescent lights, and/or placing shades on your windows.

Complete your survey and share it with your institutional administration, then add it as an appendix to your Disaster Plan. Make realistic suggestions for the corrections of potential hazards. Your administration is more likely to listen to your recommendations if they believe that you are knowledgeable about these issues. Sample survey forms are included in the Workbook section of this *Manual and Workbook*.

2) Substance of Collections

The second aspect of prevention is to complete a **Collection Survey**. Consider the types of materials in your collections. They may include bound volumes, flat paper documents, maps, photographs, microfilm, and videotapes. Keep in mind that the proper storage of materials will help to minimize the effects of disasters. When tightly shelved books are exposed to water, they will swell and become wedged on the shelf. As part of the Collection Survey record the location of various media and types of materials in your collections. Your most valuable or fragile items should not be stored under water pipes or in damp basements. Insert the completed Collection Survey as an appendix to your Disaster Plan.

3) Salvage and Treatment Priorities

The final aspect of prevention is to establish **Collection Priorities** for salvage and treatment. If a disaster is extensive and response time limited, the pre-selection of collections for removal will enable staff to respond rapidly. If there is a disaster and you can only save some of the collection(s) -- which will you choose? Items selected for first consideration are usually materials of prime research value or of significant monetary value. Since it may be necessary to recreate an entire collection, the finding aids and shelf-list often receive top priority. An alternative solution is to reproduce the shelf-list and store it off-site. If your department is automated, it is equally important to ensure that backup copies of your online catalog and other electronic data are stored off-site. Your Collection Priorities list should be available for all staff and included as an appendix to your Disaster Plan.

All staff should be familiar with the Disaster Plan and be trained to respond to any emergency. This includes knowing how to use a fire extinguisher and memorizing the location of emergency supplies. Utilize institutional fire drills to reinforce use of collection Disaster Plans. Create a diagram of the facility with floor plans for collection areas, and insert as an appendix to your Disaster Plan.

ADDITIONAL PREVENTION CONSIDERATIONS

Mold

A collection is highly susceptible to mold when high temperature, high humidity, and poor air circulation are present. The only effective prevention measure for mold is to control the environment. If you suspect an outbreak isolate the affected materials (to minimize the spread of mold) by sealing them in plastic bags if there is a small number. Quarantine the collection area if there is a large infestation by stopping any reshelving of materials and limiting access until the problem can be dealt with. Contact conservators, specializing in the type of material affected, for verification and ask for treatment recommendations. Also contact companies specializing in the fumigation of library and archival collections. After fumigation a controlled environment is critical to prevent recurrent mold outbreaks.

Pests

Insects and rodents are attracted to paper, leather, vellum, and adhesives. Insects seem to pose less of a problem in non-paper collections. Good housekeeping practices are essential to prevent pest infestations, including the elimination of food and drink from collection areas. If you suspect an infestation isolate the affected material(s) by sealing them in plastic bags. Contact exterminators for identification of the problem and to discuss appropriate treatments.

COLLECTION PRIORITIES

This section should reflect the collection priority decisions made during disaster planning discussions. At a glance these priorities will inform the staff member, fire department, or other authorities which parts of your collections are to be protected or salvaged first, in the event of an emergency. Setting priorities is an essential component of the planning process. Collection priority decisions you make in advance will be more deliberate than any decisions your Disaster Response Team could make in a crisis situation, thus minimizing damage to irreplaceable materials.

Setting collection priorities may be the hardest part of the planning process for your Disaster Planning Committee. However, don't abandon the planning process due to any difficulties you experience with this section. Complete the remainder of the Disaster Plan, and insert collection priorities upon completion.

Who should be involved in the assignment of collection priorities? Include all departments involved in collection management, such as acquisitions, bibliographers, circulation, technical processing, and reference staff. Remember that disaster recovery experts will salvage materials in order of worst damage to least damage if you haven't assigned collection priorities in advance.

Priority decisions may be based upon a number of considerations including the following:

1. Monetary value
2. Irreplaceable resource
3. Other copies or editions
4. Availability of other formats
5. Alternative local collections or services for users
6. Essential for maintaining basic services
7. Extent to which collection is used
8. Scholarly resource
9. Breadth or depth of collections
10. Fragility of the media, such as film-based or magnetic media
11. Value to the nation, state, or region
12. Liability of housing collections for another institution
13. Salvageability of the item
14. Length of exposure to adverse conditions

Examples of a priority list might include:

1. The card catalog, shelf-list and backup of online systems
2. The reference collection, section _____ and _____
3. The rare book collection
4. The genealogy collection

ADDITIONAL INFORMATION

Include in this section all the detailed information you have gathered during the planning process including:

- Names and telephone numbers of consultants, services, equipment, companies you might need to call on. Request their permission for inclusion in your Disaster Plan. Work cooperatively with local institutions to avoid duplication of effort.

- List regional resources such as Pennsylvania Emergency Management Association (PEMA emergency equipment is available for use except in an area-wide disaster). Check local regulations for contacting PEMA.

- Names and telephone numbers of local libraries. Note any institutions with which you have established cooperative arrangements to loan staff, supplies, or services in an emergency.

- List of disaster supplies with locations and/or suppliers.

- Floor plans of the facility with your priorities marked clearly. Identify collections with particular recovery needs, such as film-based media, microformats, magnetic media, etc. Identify types of media within these collections for salvage priorities, such as wet collodion photographs, motion picture film, diazo microfilm etc.

- Quick reference ideas or information.

- Evaluation reports from emergencies in your own institution.

- Relevant forms, lists, or ideas from other institutions.

- Training and education details.

REFERENCES

Include useful bibliographies on the subject of disaster preparedness. Researching and compiling a collection of relevant literature will enable you to retrieve information quickly in the event of an emergency. A Bibliography is included (pp. 36-39) to assist you in identifying a variety of resources concerning different aspects of disaster preparedness.

Include citations for the variety of media and types of materials in your collections.

Include Internet and other electronic sources of information and/or discussion available in your institution, such as:

1. **Conservation OnLine** (CoOL databases) Wide Area Information Server (WAIS)
CoOL is dedicated to providing Internet access to a full text database of conservation information. The databases cover a wide spectrum of topics relevant to those involved with the conservation of library, archives, and museum materials. Current databases (August 1993) include:
1) archives of Conservation DistList
2) conservation information
3) e-mail directory
4) lexical and classification material
5) bibliographies
6) citations
7) full text of the Western Association for Art Conservation (WAAC) Newsletter.

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2. **Conservation DistList** (Cons_DistList) List Server
Online forum for quick dissemination/discussion. Topics include queries and answers about technical issues, attempts to clear up rumors, and announcements. Participants include book conservators, preservation administrators, curators, and conservation scientists.

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3. **EXLIBRIS** List Server
A news and discussion group for the purpose of discussing matters related to rare book and manuscript librarianship, including special collections and related issues.

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SUBSCRIBE EXLIBRIS your_full_name, institution_name

APPENDICES

APPENDICES

The appendices in this section have been gathered and compiled to provide general information of interest to all types of institutions. Text for the Appendix Section has been contributed by Sally Buchanan, Elizabeth Swan, and the Historical Society of Western Pennsylvania. Sources used in the compilation of appendices are included in the Bibliography (pp. 36-39).

Detailed instructions are provided for the recovery of wet materials because 90% of all disasters in libraries and archives involve water. For example: fires may result in the activation of institutional sprinkler systems in addition to the use of hoses by the fire department. Similarly, construction-related emergencies and structural collapse may result in burst water pipes.

The appendices in this section are intended to be used as a basis for further research to locate information specific to your institution and collections. Identify and research regional resources in cooperation w.'h local institutions to avoid duplication of effort. Refer to the Manual section (p. 14) for suggestions of additional information to collect and insert in your Disaster Plan.

APPENDIX A

GENERAL RULES FOR SUCCESSFUL DISASTER RECOVERY

1. Think creatively and avoid making uninformed decisions. Make use of any planning you have undertaken.

2. Stabilize collections as soon as possible.

3. Provide as ideal an environment for all collections exposed to disaster as possible.

4. Protect materials which have not been affected by the disaster to prevent additional damage.

5. Select the recovery method(s) best suited to the collections and extent of the damage.

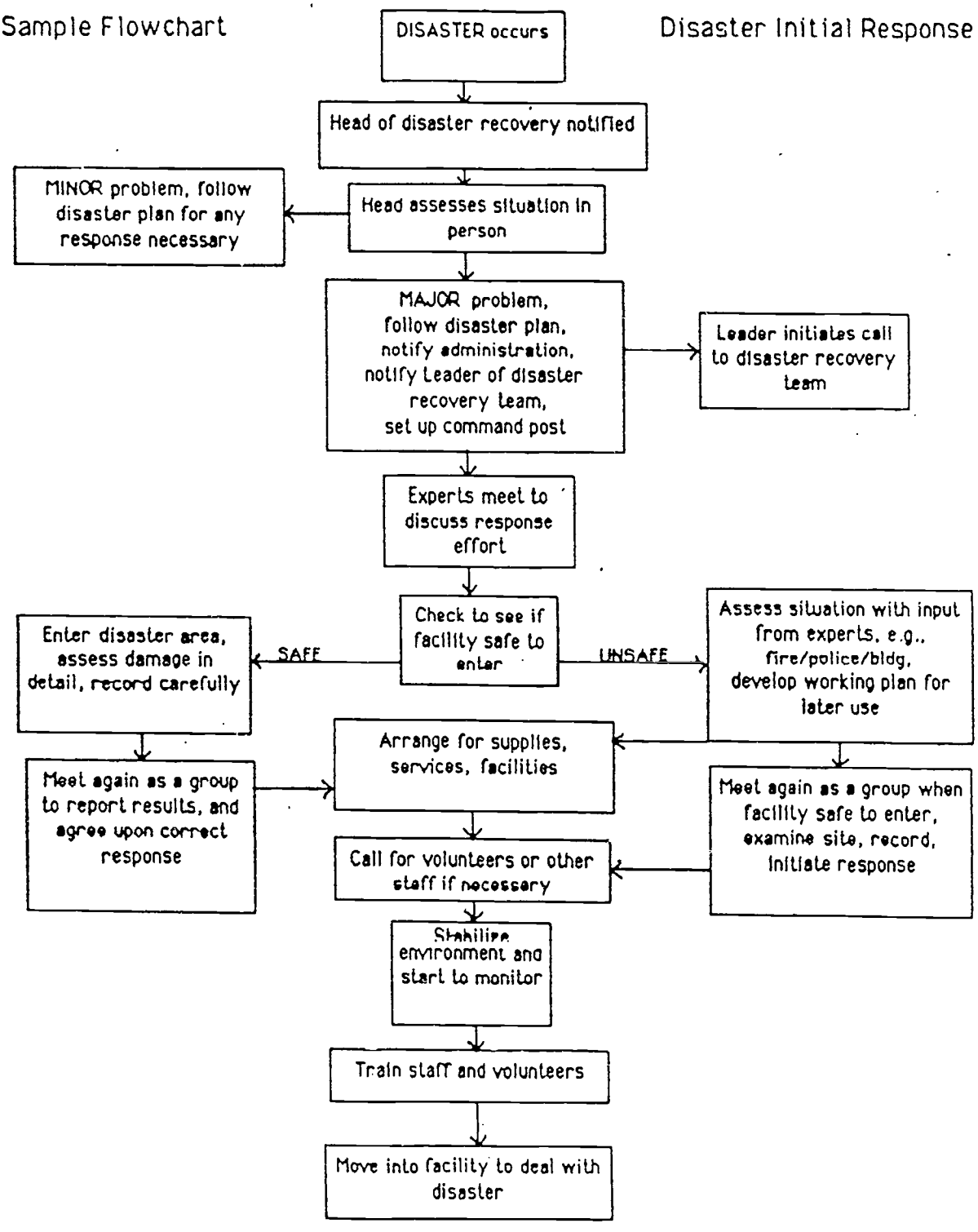
6. Reduce the effects of the disaster on the materials as much as possible.

7. Avoid damaging materials irreversibly during handling, cleaning, packing, or other recovery procedures.

8. Prevent future problems which may result from the disaster or its aftermath.

APPENDIX B

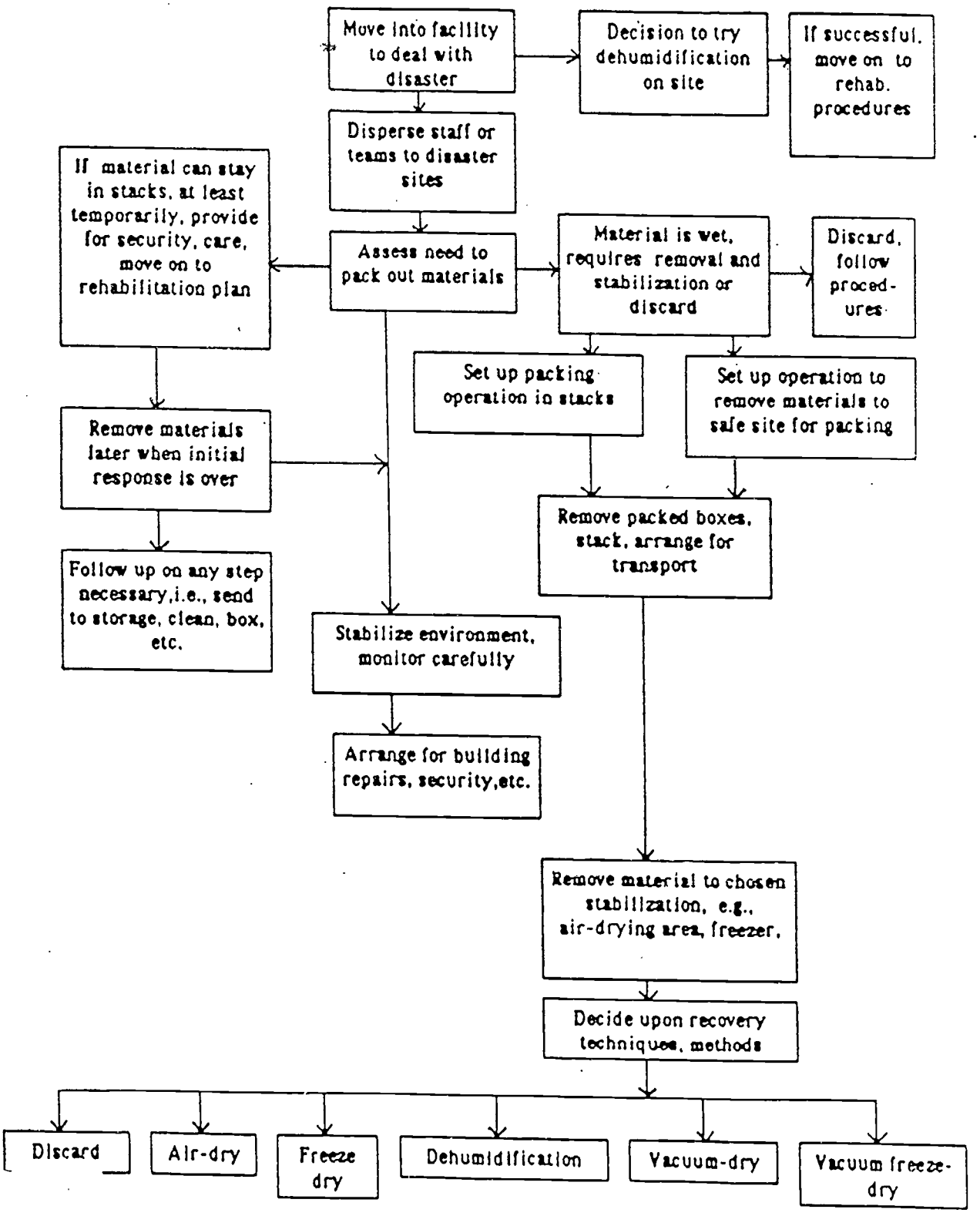
Sample Flowchart



APPENDIX B

Sample Flowchart

Disaster Response, On Site



APPENDIX C

SALVAGE OF WATER-DAMAGED ARCHIVAL COLLECTIONS

From Walsh, Betty. Salvage of Water-damaged Archival Collections. *Western Association for Art Conservation Newsletter*, May 1988, 10 (2). Reprinted with permission for the *Disaster Preparedness Manual and Workbook for Pennsylvania Libraries and Archives*.

SALVAGE AT A GLANCE

Material	Priority	Handling Precautions	Packing Method	Drying Method
Paper				
Manuscripts, documents and small drawings	Freeze or dry within 48 hours	Don't separate single sheets	Interleave between folders and pack in milk crates or cartons	Air, vacuum, or freeze dry
Watercolors, and other soluble media	Immediately freeze or dry	Do not blot	Interleave between folders and pack in milk crates or cartons	Air or freeze dry
Maps; oversize prints and manuscripts	Freeze or dry within 48 hours	Don't separate single sheets	Pack in map drawers, bread trays, flat boxes or poly covered plywood	Air, vacuum, or freeze dry
Coated papers	Immediately pack, then freeze or dry within 48 hours		Keep wet in containers lined with garbage bags	Freeze dry only
Framed prints and drawings	Freeze or dry within 48 hours		Unframe if possible, then pack as for manuscripts or maps above	Once unframed and unmatted, air or freeze dry
Books				
Books and pamphlets	Freeze or dry within 48 hours	Do not open or close, do not separate covers	Separate with freezer paper, pack spine down in milk crate or cardboard box	Air, vacuum, or freeze dry
Leather and vellum bindings	Immediately freeze	As above	As above	Air or freeze dry
Books and periodicals with coated papers	Immediately pack. Freeze or dry within 48 hours	As above	Keep wet; pack spine down in containers lined with garbage bags	Freeze dry only
Paintings				
Paintings	Immediately dry	Drain and carry horizontally	Face up without touching paint layer	Air dry. See instructions
Floppy Diskettes				
Floppy Diskettes	Immediately pack	Do not touch diskette surface with bare hands	Contact supplier for best method	Contact supplier for best drying method

Sound & Video Recordings

Discs	Dry within 48 hours. Freezing is untested; if it is necessary freeze at above 0 F (-18 C)	Hold disks by their edges. Avoid shocks	Pack vertically in ethafoam-padded plastic crates	Air dry
Sound and videotapes	Freezing is untested; if it is necessary, freeze at above -10 C		Pack vertically into plastic crates or cardboard cartons. Don't put any heavy weight on the sides of reels or cassettes	Air dry

Photographs

Wet Collodion photographs (ambrotypes, tintypes, pannotypes, wet collodion negatives)	Recovery rate is low. Immediately dry	Handle with care -- glass supports or glazing	Horizontally in padded container	Air dry face up. Never freeze
Daguerreotypes	Immediately dry	Handle with care -- usually cased behind glass	Horizontally in padded container	Air dry face up
Nitrates with soluble emulsions	Immediately freeze	Do not blot		Air dry; test freeze drying
Prints, negatives, and transparencies	Freeze or dry within 72 hours. Salvage order: 1) color photographs, 2) prints, 3) negatives and transparencies	Do not touch emulsions with bare hands	Keep in cold water. Pack in containers lined with garbage bags	Order of preference: 1) air dry, 2) thaw and air dry, 3) freeze dry. Do not vacuum dry
Motion Pictures	Rewash and dry within 72 hours		Fill film cans with cold water and pack in plastic pails or cardboard cartons lined with garbage bags	Arrange for film processor to rewash and dry
Microfilm rolls	Rewash and dry within 72 hours	Do not remove from boxes; hold cartons together with rubber bands	Fill boxes with water, and pack (in blocks of 5) in a cardboard box lined with garbage bags	Arrange for a microfilm processor to rewash and dry
Aperture cards	Freeze or dry within 48 hours		Keep wet inside a container lined with garbage bags	Air dry
Jacketed Microfilm	Freeze or dry within 72 hours		Keep wet inside a container lined with garbage bags	Air dry
Diazo fiche	Last		In drawers or cartons	Air dry

Betty Walsh, Conservator, Provincial Archives of British Columbia

western association
waac
for art conservation

APPENDIX D

DRYING METHODS FOR BOOKS AND DOCUMENTS

There are currently five ways to dry wet books and documents. All have undergone at least a minimal level of testing under emergency conditions, and several methods have been used extensively. These five options are described to assist you in making the best choice under the circumstances: cause of damage, level of damage, number of materials involved, rarity/scarcity, personnel available, budget available, and drying services available. It is important to remember that no drying method restores materials. The condition of materials will not be improved during any drying process. Advice from a conservator or preservation administrator experienced in disaster recovery is advisable before you make the final selection of methods. If you need time to make critical decisions or remove large numbers of materials from the disaster site, books and documents should be frozen to reduce physical distortion and biological contamination. Book and paper conservators should always be consulted about the drying of rare or unique materials.

Air-Drying

Air-drying may still be the most frequently used method of drying wet books and documents, but it is not always the most appropriate. Air-drying is most suitable for small numbers of damp or slightly wet books or documents. Because air-drying requires no special equipment, it is often seen as an inexpensive method. However, air-drying is extremely labor-intensive if carried out properly, occupies considerable space, and usually results in badly distorted bindings and textblocks unless the damage is superficial. ***It is seldom, if ever, successful for drying bound coated (shiny) paper.*** Before commencing air-drying, ensure that your recovery personnel understand the correct procedures for air-drying books and documents.

Dehumidification

Dehumidification is the newest method to gain credibility in the library and archival world, although it has been used for many years to dry buildings and holds of ships. Large commercial dehumidifiers are brought into the facility with all collections, equipment, and furnishings left in place. Temperature and humidity can be controlled to customer specifications. Dehumidification must be initiated before swelling becomes a problem, or mold appears, i.e. within 24 hours of the emergency. This method is successful for drying damp to moderately wet books/documents, equipment, and furnishings. ***Dehumidification is not successful for drying bound, coated paper.*** Dehumidification has the advantage of drying the materials in place on the shelves or in storage boxes, eliminating the time and expense of removing materials to a freezer or vacuum chamber. The size of the facility is limited only by the amount of equipment available, and the expertise of the operators. Select a company with experience in drying library or archival collections.

Freezer Drying

Books and documents which are damp or moderately wet may be dried successfully in a self-defrosting blast freezer if left there long enough. Materials should be placed in the freezer as soon as possible after water damage has occurred. Books will dry best if their bindings are supported firmly to inhibit initial swelling. The equipment should have the capacity to freeze very quickly, and temperatures must be -10° to -40° F. to reduce distortion and facilitate drying. Documents may be placed in the freezer in stacks or spread out for faster drying. In very large commercial freezers documents may be left in their storage boxes, although this will slow the drying process. You can expect this drying method to take from several weeks to several months depending on the freezer temperature and extent of water damage. ***Coated paper may adhere with this technique.***

DRYING METHODS FOR BOOKS AND DOCUMENTS: CONT.

Vacuum Thermal-Drying*

Books and documents may be dried in a vacuum thermal-drying chamber, into which materials are placed either wet or frozen. The vacuum is drawn, heat introduced, and materials are dried either in cycles of freezing/thawing or slightly above 32° F. This means the materials stay wet, not frozen, while they dry. It is a very acceptable manner of drying wet records if distortion is not a problem, but it often ***produces extreme distortion in bound volumes, and causes adhesion of coated paper. Water-soluble inks or pigments will also be affected.*** For large numbers of materials vacuum thermal-drying is easier and usually more cost-effective than air-drying. You should expect extensive rebinding or recasing for bound volumes. Vacuum thermal-drying is a good solution for unbound materials which have suffered extensive water damage.

Vacuum Freeze-Drying*

Books and records are placed in a vacuum chamber either wet or frozen. The vacuum is drawn, a source of low heat is introduced, and collections are ***dried at temperatures below 32° F remaining frozen until dry***. A physical process known as sublimation takes place in which ice crystals vaporize without melting. As a result, there is no additional swelling or distortion beyond that incurred before materials were placed in the chamber. Coated paper will dry well if it has been frozen or placed into the chamber within 6-8 hours, if not, coated paper may be unsalvageable. The vacuum freeze-drying process requires sophisticated equipment and is especially suitable for large numbers of very wet books and documents, as well as for coated paper. Rare and unique materials can be dried successfully with this method, but ***leather and vellum bindings may not survive.*** Water soluble inks and pigments will not be damaged further. Although this method may initially appear to be more expensive due to the equipment required, the results are often so satisfactory that additional funds for rebinding or recasing are not necessary. Vacuum freeze-drying also lifts mud, dirt, and soot to the surface, making cleaning less time-consuming.

* The terms "vacuum thermal-drying" and "vacuum freeze-drying" have been developed by a preservation administrator for use in library and archival disaster recovery. The various industries employing vacuum drying methods have their own terminology, or use these terms in a different way. It is important to understand how each vacuum drying process operates so you can: 1) request the correct method; and 2) ask specific questions of the potential commercial firm (such as whether the materials remain wet or frozen). There are companies with extensive experience in drying library and archival materials using either or both vacuum drying methods.

AIR-DRYING WET BOOKS

Wet books may be air-dried successfully if you follow guidelines suggested by preservation experts. Air-drying is most suitable for books that are damp or water-damaged only around the edges. The pages of books printed on coated (shiny) paper stick together very quickly and must receive special attention immediately. If the number of volumes is more than 100, if the books are wet all the way through, or if there are many books with coated paper, you are advised to use an alternative drying method. Once books are wet they will suffer structural distortion and develop mildew within 48-72 hours. Books will never look the same as they did before water damage, regardless of the drying process used, so prevention is always best. If damage occurs, the steps outlined below will assist you to achieve satisfactory results from air-drying. It is important to remember that longer drying periods produce greater distortion. Remember also that wet paper is very fragile and easily torn or damaged.

Equipment needed: flat surface for drying, fans, extension cords, and a supply of plain, white paper towels or the paper used for printing newspapers (newsprint).

1. Secure a clean, dry environment where the temperature and humidity are as low as possible. For best results, the temperature must be below 70° F. and the relative humidity below 50%, or mildew will develop and distortion will be extreme.
2. Provide fans (or a strong natural breeze) in the drying area to keep air circulating well at all times. This will accelerate drying and discourage the growth of mildew or mold. If books are dried outside, do not expose them to direct sunlight as it will accelerate swelling and encourage mildew by creating a warm humid internal environment. ***Fans should be left on all the time until books are dry.***
3. Place books on a flat surface covered with clean, dry newsprint if possible. Tables, planks on bricks or cement blocks, bleacher seats, and even floors have been used successfully. Dyes in book cloth may bleed and stain the surface underneath.
4. Stand books up and fan them slightly open. Interleave volumes with newsprint (or paper towels) by placing a sheet between the text and both covers. Then place newsprint approximately twenty pages apart. If pages are stuck together, do not separate.
5. As the inserted newsprint becomes wet, remove and replace with dry newsprint. These should be placed in different locations throughout the volumes to encourage thorough drying. Whenever the newsprint is changed, turn the book upside down.
6. Unless the newsprint is stained, dry and reuse.
7. If the book has coated (shiny) paper, a dry sheet of newsprint must be placed between every page or they will stick together irretrievably.
8. When the pages feel dry in the center of the volume, remove all newsprint and allow the books to continue air-drying for several days until completely dry.
9. After drying, bound volumes may be flattened slightly by placing them under weights, such as a book press or boards weighted with concrete blocks. Care must be taken not to damage volumes.
10. If the covers are badly damaged, dirty, or distorted, the book can sometimes be rebound by a commercial bindery.

AIR-DRYING WET DOCUMENTS

Wet single-sheet documents may be air-dried successfully if you follow guidelines suggested by preservation experts. Air-drying is most suitable for small numbers of documents which are damp or water-damaged only around the edges. If there are hundreds of single pages, or if the water damage is severe, other methods of drying will be more satisfactory and cost-effective. Stacks of documents on coated (shiny) paper must be separated immediately to prevent adhesion, or they must be frozen to await a later drying decision. Care must be taken with water-soluble inks; documents with running or blurred inks should be frozen immediately to preserve the written record. You should then contact conservators for advice and assistance. If documents must be air-dried, the following steps will help you to achieve satisfactory results. Wet paper is extremely fragile and easily torn or damaged, so care must be exercised. Once wet, documents will never look the same as before. You should expect at least some distortion.

Equipment needed: flat surfaces for drying, fans, extension cords, clotheslines, clothespins, sheets of polyester film, and a supply of clean white paper towels or the paper used for printing newspapers (newsprint).

1. Secure a clean, dry environment where the temperature and humidity are as low as possible. For best results, the temperature must be below 70° F and the relative humidity below 50%, or mildew will develop and distortion will be extreme.
2. ***Keep the air moving at all times*** using fans in the drying area. This will accelerate the drying process and discourage the growth of mildew. If materials are dried outside, do not expose them to direct sunlight as it may fade inks, accelerate the aging of paper, and encourage the growth of mildew. Breezes can blow away single records; direct fans into the air and away from the drying records.
3. Single pages can be laid out on tables, floors, and other flat surfaces, protected if necessary by clean dry newsprint. Alternatively, clotheslines may be strung close together and documents laid across them for drying.
4. If documents are printed on coated paper they must be separated from one another to prevent the sheets from sticking together. Separating sheets is a tedious process which requires skill and patience (practice ahead of time will prove useful in case of an emergency). Place a piece of polyester film on top of the stack of documents. Rub the film gently down onto the top document. Slowly lift the film while peeling off the top sheet. Hang the polyester film up to dry on the clothesline using clothespins. As the sheet dries, the paper will lift itself from the surface of the film. Before the paper falls, remove it and allow the paper to finish drying on a flat surface.
5. Once dry, documents may be housed in clean folders and boxes, photocopied, or reformatted on microfilm/microfiche. Dried documents will always occupy more space than ones which have not been water-damaged.

APPENDIX G

PACKING WET MATERIALS FOR TRANSFER OFF-SITE

Freezing most paper-based materials stabilizes materials physically and chemically, to prevent further deterioration.

Most materials will need to be placed in boxes for transport to the freezer.

Training recovery staff is essential to avoid ruining materials. The condition and shape of materials after freezing will be the same as before freezing. However, because wet materials are extremely fragile trying to straighten volumes may result in greater damage.

Standard size record or book boxes are suitable for packing most materials. If using metal or plastic milk crates place cardboard between the container and contents to avoid transfer of the container's design.

Pack bound volumes spine down in box, one layer deep. Pack loosely in milk crates.

Use wax or freezer paper to separate volumes, and prevent transfer of binding designs or cloth dyes.

Keep records of box contents, average 8-12 books per box.

Stack boxes on pallets, no more than three cartons high to avoid collapse of boxes.

Use shrink wrap to keep stacks of boxes on pallets.

Code boxes to identify location of materials requiring special treatments. Milk crates are more difficult to mark for coding, although colored plastic crates may be used to create a simple coding system.

APPENDIX H

RECOVERY OF WET NON-PAPER MEDIA

FILM-BASED MEDIA

NOTE: Keep temperature and humidity as low as possible, and keep air circulating when air-drying film-based media.

Wet collodion photographs

(ambrotypes, tintypes, pannotypes, and wet collodion glass negatives)

SALVAGE: Salvage immediately.

DRYING: Air-dry immediately, emulsion side up.

NOTE: Both immersion and freezing will destroy emulsion resulting in a low recovery rate.

Daguerreotypes

DRYING: Air-dry immediately, face up.

Nitrate negatives

SALVAGE: Freeze immediately.

NOTE: Emulsions are water soluble.

Photographs

SALVAGE: Pack with fresh cold water in garbage cans or garbage bags inside boxes.

DRYING: Air-dry.

NOTE: Keep wet to prevent items from sticking together, but dry as soon as possible.

Prints, negatives, and transparencies

SALVAGE ORDER:
1. Color photographs.
2. Prints.
3. Black and white negatives and transparencies.

DRYING CHOICE:
1. Air-dry flat, emulsion side up.
2. Air-dry hung on lines: keep clips for attachment away from image area.
3. Freeze, thaw, and air-dry.
4. Vacuum freeze-dry.

NOTE: Keep photographs wet until separated from each other and from enclosures. Freeze or dry within 72 hours.

Slides

DRYING: Remove slides from cardboard mounts.
Air-dry and remount.

Motion picture film

SALVAGE: Open film can, fill with water, and replace lid.
Pack in garbage cans or garbage bags inside boxes.

DRYING: Ship to a film processor (notified in advance) for rewashing and drying.

NOTE: Black and white negative film can remain in water up to 3 days without damage. Color negative or positive film can remain in water only 48 hours without damage.

RECOVERY OF WET NON-PAPER MEDIA: CONT.

MICROFORMS

Microforms on reels

SALVAGE: Do not remove film from boxes.
Use rubber bands to keep boxes and labels together.
Fill boxes with water.
Wrap 5 boxes together with shrink wrap.
Line sturdy containers with 3 garbage bags.
Pack boxes into containers.

DRYING: Label "WET FILM" and ship to a microfilm processor (notified in advance).
If air-drying, unwind reels and loop film around clotheslines.

NOTE: Ship to film processor within 72 hours.

Microfilm strips in jackets

SALVAGE: Freeze.

DRYING: Cut jackets to remove strips.
Wash and air-dry.
Insert strips into new jackets.

Aperture cards

SALVAGE: Freeze.

Diazo microfiche

SALVAGE: If photograph has blistered, discard.
Replace with print from archive copy.
Freeze if photograph has not delaminated.

DRYING: Air-dry.

RECOVERY OF WET NON-PAPER MEDIA: CONT.

SOUND AND VIDEO RECORDINGS

Phonodiscs

SALVAGE: Transfer discs (up to 5 at a time) to boxes or milk crates.
Pad containers and interleave with ethafoam every 25 discs.

DRYING: Remove discs from sleeves and jackets.
Identify with wax crayon if label separated.
Dry labels, sleeves, and jackets as other paper materials.
If dirty, wash discs in 10% solution of Kodak Photoflo in distilled water.
Support discs vertically to air-dry.

NOTE: Handle discs by the edges and support discs vertically.
Wash shellac, acetate, and vinyl discs in separate containers.

Reel to reel tapes

DRYING: Air-dry.
Dry box as other paper materials, or replace if badly damaged.

Audio cassettes

SALVAGE: Pack vertically in boxes or milk crates.

DRYING: If no master copies, dismantle cassette.
Air-dry.
Re-record cassette.

NOTE: Do not put excessive weight on sides of reels or cassettes.
Equipment may be ruined trying to play contaminated cassettes.

Video cassettes

SALVAGE: Pack vertically in boxes or milk crates.

DRYING: Dismantle cassette.
Air-dry.

NOTE: Do not put excessive weight on sides of reels or cassettes.

RECOVERY OF WET NON-PAPER MEDIA: CONT.

COMPUTER MEDIA

Use backup copies if possible, as data may be lost even if computer media are salvaged.

NOTE: Prevention is the best form of salvage. Store backup copies off-site.
Equipment may be damaged trying to copy contaminated tapes or diskettes.

Tapes

DRYING:
Rinse tapes in cool distilled water.
Support vertically to air-dry.
Clean by winding against felt pad.
Copy tape and discard damaged original.

Diskettes

DRYING:
Cut edge of jacket with non-magnetic scissors.
Remove diskette with gloved hands.
Wash in several photo trays of distilled water.
Dry with lint-free towels.
Insert into new jacket and copy with a disk drive.

APPENDIX I

SAMPLE BUILDING SURVEY

3. GENERAL BUILDING/FACILITIES:

The 3 1/2 story brick veneer building was built in 1912 and expanded to its present size in 1920. It has been kept in good repair, and roof leaks and leaks to the basement have been repaired and corrected to prevent further problems. The central heating is difficult to control and it is frequently too hot in most of the areas. Window air conditioning units provide minimum and highly variable cooling in the reading room and the storage areas. The units are old, inefficient, and noisy. The staff is reluctant to leave the units on at night for fear of fire hazards. Consequently the temperature and humidity fluctuate widely in the summer. The humidity stays very low in the winter, although the temperature varies considerably.

The exterior of the building is kept clean with no vegetation in contact with the building. The windows and doors are all operable, including the windows in the closed stack areas. There are shades on the storage area windows that are kept closed and the windows are not opened.

The interior of the building is kept clean with no evidence of rodents, insects or mold. The building is vacuumed weekly, and the bare floors washed and polished. There are no hazardous materials. There is evidence of water damage on the ceiling in the reading room and on the stair well to the second floor, but the roof leaks have been repaired. The ceilings have not been repainted because the Historical Society will be moving in two years and this building will be sold. The public spaces are kept clean, although repairs are kept to a minimum.

The storage areas are dusty because the windows were opened for ventilation in the years when Pittsburgh was extremely smokey. The books are being cleaned as part of our conservation program and in preparation for the move to the new building in 1995.

The basement is the archival processing area and storage for collections in progress. It is presently dry and clean, although there was a problem with some water leaking in during heavy rainstorms. This has not occurred in the past year because the drainage problem has been corrected. Collections are stacked on pallets in case the problem reoccurs.

GENERAL BUILDING/FACILITIES: SUMMARY

There does not appear to be any mold, rust or cracks that suggest structural problems. Vibration occurred in the summer of 1992 when the utilities company was digging up the street in front of the building. This also caused considerable dust that seeped into the building. The electrical systems are old and inadequate.

The plumbing is also inadequate, but fortunately it is all in the basement, except for one sink, which means the upper floors are safe from water damage from interior pipes. The basement, however is vulnerable, but precautions have been taken to keep collections off of the floor and there is no danger from overhead pipes on that floor. Sewer lines may run under the floor, but all plumbing is next to the outside walls and they probably are around the periphery.

The air conditioning is unsatisfactory for the collections, although the best is being done for the next two years. The fluctuation in temperature and humidity is the most pressing problem; however, the old collections have tolerated these conditions for up to one hundred years and will be moved to a modern HVAC system in 1995. A plan for the new building is in progress.

February, 1993

APPENDIX I

Southeastern Library Network, Inc.
1438 West Peachtree Street, N.W.
Suite 200
Atlanta, Georgia 30309-2955
Telephone (404) 892-0943
Toll-Free 1-800-999-8558
FAX (404) 892-7879

CHECKLIST FOR DISASTER PREVENTION & PROTECTION

Prepared by Lisa L. Fox
(July 1991)

The inspection checklist provided on the following seven pages is designed to be used as part of an institutional disaster preparedness program. Through the periodic inspections and information-gathering activities outlined here, the staff can reduce the institution's vulnerability to disaster. Some of this information will be gathered in regular tours of the building, while other elements will be ascertained in conversations with others in the organization.

The information gathered will be used primarily in two ways. First, some conditions will be found that require repair, replacement, or other maintenance activity. For example, if drains are not flowing freely from the roof, a simple cleaning will remedy that condition. Or if fire extinguishers are missing from a critical area, they may be purchased and installed. Second, the staff will identify some conditions that are not easily remediable. The existence of such conditions will alert the institution to vulnerabilities that must be considered in the institution's disaster plan. For example, if there is no automatic fire suppression capability, it may not be immediately installed. But this vulnerability should signal the disaster preparedness team to plan carefully for other strategies that will reduce the risk of fire.

In actual use, the institution will create its own checklists based on the frequency with which each item needs to be checked. Some will need attention only once or every few years (e.g., identifying the type of roof on the structure). Others will require just annual or semi-annnual inspections, as is the case with furnace and boiler inspections. Others will merit monthly monthly or quarterly attention, such as fire extinguisher inspections and examination of the plumbing.

Many of the inspections outlined here are likely to be the duty of personnel responsible for facilities maintenance. In those cases, the repository staff need only (a) develop mechanisms for learning of remedial actions that are needed and (b) verify that the inspections are done as scheduled. Those areas not included in inspections by facilities staff should be assigned to staff in the library/archives. One individual should keep copies of the completed checklists and track progress in completing repairs and other actions noted on the forms; this may be done by the administrator responsibility for the building or by the chair of the disaster preparedness committee.

Most librarians and archivists will require some education in order to carry out a disaster disaster preparedness program. A bibliography of readings (available from the SOLINET Preservation Program) will provide a good starting point. Training programs on disaster preparedness are offered by SOLINET and other organizations throughout the country. Contact the Preservation staff at the above address for further information about these.

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
1. Outdoor hazards:			
* Railings, benches, planters, light/flag poles well anchored?	☐ yes ☐ no		
* Overhanging trees/branches trimmed?	☐ yes ☐ no		
2. Building:			
* No sign of cracks/seepage visible in exterior or interior walls?	☐ yes ☐ no		
* Compliance with seismic, fire, electrical, and other codes?	☐ yes ☐ no		
3. Roof:			
* "Sloped" or "pitched" (i.e., not flat)?	☐ yes ☐ no		
* Roof covering sound? No buckling/bubbles, leaks, cracks, standing water?	☐ yes ☐ no		
* Flashing/caulking intact?	☐ yes ☐ no		
* Equipment on roof prohibited? or (if present) properly anchored?	☐ yes ☐ no		
4. Drainage: (eaves, gutters, downspouts, scuppers, drains, interior columns)			
* Connected into sewer system? Water directed away from building footings?	☐ yes ☐ no		
* Draining freely?	☐ yes ☐ no		
* Good drainage around doors?	☐ yes ☐ no		

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
5. Windows and skylights:			
* Caulking/sealants sound?	☐ yes ☐ no		
* Trees/limbs trimmed away?	☐ yes ☐ no		
6. Fire safety:			
* Fire-resistant structure?	☐ yes ☐ no		
* Concrete flooring, with no air passages between floors?	☐ yes ☐ no		
* Concealed spaces (e.g., false ceilings) identified?	☐ yes ☐ no		
* Fire detection in all concealed spaces?	☐ yes ☐ no		
* Stairways and pipe shafts enclosed?	☐ yes ☐ no		
* Electrical wiring in good condition?	☐ yes ☐ no		
* Appliance cords in good condition?	☐ yes ☐ no		
* Appliances unplugged nightly?	☐ yes ☐ no		
* Do staff have keys to mechanical rooms and janitorial closets?	☐ yes ☐ no		
* Regular Fire Marshall visits?	☐ yes ☐ no		
* Fire Marshall visits used productively? (e.g., floor plans given to Fire Department; high-priority collection areas noted; appropriate follow-up on observed Code violations)	☐ yes ☐ no		

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
(Fire Safety, continued)			
* Detection systems: - appropriate type(s) present?	☐ yes ☐ no		
- wired to 24-hour monitoring station?	☐ yes ☐ no		
- tested regularly?	☐ yes ☐ no		
* Appropriate extinguishers present? Inspected appropriately and on schedule?	☐ yes ☐ no		
* Automatic suppression system (i.e., sprinklers, Halon) present and operating?	☐ yes ☐ no		
* Staff trained in: - sounding alarms?	☐ yes ☐ no		
- interpreting annunciator panels (if present)?	☐ yes ☐ no		
- notifying Fire Dept. and others as called for?	☐ yes ☐ no		
- using extinguishers?	☐ yes ☐ no		
- turning off power, HVAC, sprinklers, gas main?	☐ yes ☐ no		
- closing fire doors?	☐ yes ☐ no		
- overseeing evacuation?	☐ yes ☐ no		

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
7. Heating, ventilation, and air-conditioning (HVAC) system:			
* Automatic shut-off capacity in event of fire?	☐ yes ☐ no		
* Furnace/boiler inspected each fall?	☐ yes ☐ no		
* Air conditioning:			
- no leaks?	☐ yes ☐ no		
- no mold present?	☐ yes ☐ no		
- effective drainage from condensation-collecting pans?	☐ yes ☐ no		
- dehumidification capacity?	☐ yes ☐ no		
- capable of operating on exhaust to reduce smoke?	☐ yes ☐ no		
8. Stack areas:			
* Shelves well braced?	☐ yes ☐ no		
* No water sources located above collections?	☐ yes ☐ no		
* Books shelved snugly?	☐ yes ☐ no		
* Shelving 4-6" off floor?	☐ yes ☐ no		
* "Canopies" atop shelving units?	☐ yes ☐ no		
* No valuable materials in basement?	☐ yes ☐ no		
* Exits unobstructed?	☐ yes ☐ no		
* Important collections away from windows?	☐ yes ☐ no		

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
9. Protection from water damage:			
* Pipes and plumbing well supported?	☐ yes ☐ no		
* No pipe/plumbing leaks?	☐ yes ☐ no		
* Water detectors present?	☐ yes ☐ no		
* Sump pumps and back-ups present?	☐ yes ☐ no		
* Appropriate dehumidifiers available?	☐ yes ☐ no		
* No leakage/seepage through walls?	☐ yes ☐ no		
* Valuable materials stored above ground level?	☐ yes ☐ no		
* Valuable and fragile media stored in protective enclosures?	☐ yes ☐ no		
* Do staff have keys to mechanical rooms and janitorial closets?	☐ yes ☐ no		
* Do staff know location of water main and have appropriate tools (if needed) for shut-off?	☐ yes ☐ no		
10. Security:			
* Book drops (if any) located away from building or in fire-resistant enclosure?	☐ yes ☐ no		
* Building exterior well lighted?	☐ yes ☐ no		
* Locks/alarms on all windows and doors?	☐ yes ☐ no		

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
(Security, continued)			
* Intrusion detectors/alarms present and monitored 24-hours?	☐ yes ☐ no		
* Effective closing procedures to ensure building is vacant?	☐ yes ☐ no		
11. Housekeeping:			
* Cleaning supplies and other flammables stored safely?	☐ yes ☐ no		
* Trash removed nightly?	☐ yes ☐ no		
* Staff room cleaned daily and well?	☐ yes ☐ no		
* Smoking prohibited?	☐ yes ☐ no		
* Food and drink prohibited? and prohibition enforced?	☐ yes ☐ no		
* Pest management strategies in place and effective?	☐ yes ☐ no		
12. Insurance:			
* Policy up to date?	☐ yes ☐ no		
* "Acts of God" covered?	☐ yes ☐ no		
* Replacement costs specified as needed?	☐ yes ☐ no		
* Staff aware of records required for claim, and those records maintained safely?	☐ yes ☐ no		
* Duplicate shelflist, catalog, inventory, and/or back-up computer tapes for entire collection?	☐ yes ☐ no		

APPENDIX I

SOLINET: Disaster Prevention/Protection Checklist (July 1991)

Area/Item to be Inspected	Condition OK?	Action Required (Describe in detail)	Action Complete (date and initial)
13. Construction projects:			
* Responsibility for fire safety precautions clearly specified in contract?	☐ yes ☐ no		
* Fire guards used in all cutting/welding operations?	☐ yes ☐ no		
* Debris removed nightly?	☐ yes ☐ no		
* Fire-resistant partitions used?	☐ yes ☐ no		
* Extra fire extinguishers on hand?	☐ yes ☐ no		

APPENDIX J

LIST OF SUPPLIES

BASIC SUPPLIES (readily available):

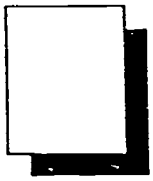
Book boxes or record storage boxes: approximately 18" x 13" x 12" or smaller
Book trucks or carts
Brooms
Buckets and mops: industrial
Camera and film
Clothes: waterproof jackets, dry socks, sweaters etc.
Clothes line: 500' length
Clothes pins or clamps
Cutters and disposable blades: Zippy cutter or utility knife (not scissors)
Disinfectant: to wipe empty shelves for mold growth prevention
Disposable tissues
Dollies or low-loading carts
Extension cords: heavy duty, 100' length
Face masks, dust masks
Fans: large, rotating
First-Aid kit
Flashlights, batteries, and bulbs
Garbage bags: plastic
Garbage cans: plastic, 50 gallon capacity
Gloves: plastic disposable, rubber
Handy-Wipes
Hard-hats
Ladders
Newsprint: unprinted sheets if available
Paper towels: uncolored to interleave for air-drying books
Pens: waterproof markers
Polyester/plastic tarpaulins
Polyester/plastic sheets: cut 12" x 15" sheets to separate and hang dry single sheet items
Rubber boots
Scissors
Shrink wrap: to wrap boxes on pallets
Tape: for sealing boxes, or holding plastic sheeting in place on bookshelves
Tools: jacks, crowbars, and hand tools
Twine/string
Vacuums: wet-dry and portable
Water hoses
Waxed paper/freezer paper: cut sheets (used in kitchens) to separate packed wet books
Writing pads and pencils

APPENDIX J

LIST OF SUPPLIES: CONT.

EQUIPMENT TO SHARE, BORROW OR RENT:

Dehumidifier: heavy-duty
Fork-lift truck
Freezer trucks
Freezers
Generator: auxiliary
Lights: incandescent or chemical light stick
Moisture meter: hygrometer or sling psychrometer
Pallet loaders
Pallets: used for warehouse storage, move with fork-lift truck
Radios: 2-way for communication, transistor for news and weather reports when power is out
Shrink wrapping equipment
Water pumps



NORTHEAST
DOCUMENT
CONSERVATION
CENTER

100 BRICKSTONE SQUARE
ANDOVER
MASSACHUSETTS
01810-1494

TEL 508 470-1010
FAX 508 475-6021

APPENDIX K

TECHNICAL LEAFLET

From *Preservation of Library and Archival Materials: A Manual*, edited by Sherelyn Ogden. Used with permission of Northeast Document Conservation Center, 100 Brickstone Square, Andover, MA 01810 for the *Disaster Preparedness Manual and Workbook for Pennsylvania Libraries and Archives.*

Emergency Management

DISASTER RECOVERY SUPPLIERS, SERVICES AND BIBLIOGRAPHY

This list is not exhaustive, nor does it constitute an endorsement of the suppliers listed. We suggest that you obtain information from a number of vendors so that you can make comparisons of cost and assess the full range of available products.

American Freeze-Dry, Inc.
411 White Horse Pike
Audubon, NJ 08106
(609) 546-0777

Vacuum freeze drying

BMS Catastrophe, Inc.
303 Arthur Street
Fort Worth, TX 76107
(800) 433-2940
(817) 332-2770

Disaster recovery services, odor removal, vacuum freeze drying

Document Reprocessors
2020 Pioneer #4
San Mateo, CA 94403
(415) 362-1290

Vacuum freeze drying

Dorlen Products
6615 West Layton Ave.
Milwaukee, WI 53220
(414) 282-4840
(800) 533-6392

Surface water detectors

Graham Magnetics, Inc.
4001 Airport Freeway
Suite 400
Bedford, TX 76021
(817) 868-5000

Disaster recovery of computer media

McDonnell Aircraft Co.
Post Office Box 516
St. Louis, MO 63166
(314) 232-0232

Freeze drying

APPENDIX K

Moisture Control Services 79 Monroe Rd. Amesbury, MA 01913 (508) 388-4900	Disaster recovery services, building dehumidification, drying services, microfilm drying services
National Fire Protection Association P.O. Box 9146 Batterymarch Park Quincy, MA 02269 (800) 344-3555	Fire prevention information and standards
Randomex, Inc. Data Recovery Division 1100 East Willow Street Signal Hill, CA 90806 (310) 595-4138 (800) RAN-DOMX	Disaster recovery of computer media
Re-Oda Chemical Engineering 100 Industrial Parkway Post Office Box 424 Chagrin Falls, OH 44022 (216) 247-4131	Smoke damage recovery
Retawmatic Corp. Box 460, Grand Central Station New York, NY 10017 no phone	Surface water detectors
Restoration Technologies, Inc. 1183 North Elsworth Ave. Villa Park, IL 60181 (800) 421-9290	Disaster recovery of electronic equipment
Solex Environmental Systems P.O. Box 460242 Houston, TX 77056 (713) 963-8600 (800) 848-0484	Disaster recovery, dehumidification, building drying services
Sterilizing Services Cumberland Industrial Park Cumberland, RI 02864 (800) 556-6462	Ethylene oxide fumigation

NEDCC: 8/92

Additional Resources:

Firedex of Pittsburgh 4030 Route 8 Allison Park PA 15101 (412) 487-3332	Disaster restoration Fire, smoke, and water damage
Video Box Office 575 Boston Post Road Orange CT 06477 (203) 878-0634	Format transfer Recovery/restoration
Protext 3515 Leland Street Bethesda MD 20815 (301) 718-1659	"Rescubes" for transport of wet materials

APPENDIX L

NATIONAL FIRE PROTECTION ASSOCIATION PUBLICATIONS

NFPA HA2-91	Fire Protection Guide to Hazardous Materials. 1991.
NFPA 10	Portable Fire Extinguishers: Installation, Use, and Maintenance. 1990.
NFPA 12	Carbon Dioxide Extinguishing Systems. 1993.
NFPA 12A	Halon 1301 Systems. 1992.
NFPA 12B	Halon 1211 Systems. 1990.
NFPA 13	Installation of Sprinkler Systems. 1991.
NFPA 14	Standpipe and Hose Systems. 1993.
NFPA 17	Dry Chemical Extinguishing Systems. 1990.
NFPA 40	Cellulose Nitrate Motion Picture Film. 1988.
NFPA 72-93	Installation, Maintenance, and Use of Signaling Systems for Central Station Service. 1993.
NFPA 101	Life Safety Code. 1991.
NFPA 232	Protection of Records. 1991.
NFPA 232AM	Archives and Record Centers. 1991.
NFPA 910	Libraries and Library Collections. 1991.
NFPA 911	Museums and Museum Collections. 1991.
NFPA EK-FPH1686	Fire Protection Handbook, 17th ed. 1991.
NFPA	Buyers' Guide. 1993.

NFPA Tel: 1-800-344-3555

Updated: July 1993

BIBLIOGRAPHY

ARMA International Guideline for Records and Information Management: Magnetic Diskettes -- Recovery Procedures. Prairie Village, KS: Association of Records Managers and Administrators, Inc., 1987.
Well-illustrated, practical instructions for salvaging water-damaged diskettes.

Babcock, Philip. Ready for the Worst. *Museum News*, May/June 1990: 50-54.
Risk management - start now to assess vulnerability and eliminate hazards.

Barton, John P. and Johanna G. Wellheiser, editors. An Ounce of Prevention: A Handbook on Disaster Contingency Planning for Archives, Libraries and Record Centers. Toronto: Toronto Area Archivists Group Education Foundation, 1985.
Practical and comprehensive manual on prevention, planning, and recovery.

Bohem, Hilda. Disaster Prevention and Disaster Preparedness. Berkeley, CA: University of California, 1978.
Suggests logical and concise organization.

Brooks, Constance, editor. Disaster Preparedness. Washington, D.C.: Association of Research Libraries, 1993.
Part of ARL series "Preservation Planning Program"; collection of published articles.

Buchanan, Sally. Disaster Planning: Preparedness and Recovery for Libraries and Archives, A RAMP Study with Guidelines. Paris: UNESCO, 1988.
Planning, prevention, protection, response, and recovery.

Buchanan, Sally. PRLC Disaster Preparedness Workbook. Pittsburgh, PA: Pittsburgh Regional Library Center, 1991.
Components of a disaster plan, including sample forms.

Buchanan, Sally. Disaster: Prevention, Preparedness and Action. *Library Trends*, Fall 1981, 30(2): 241-252.
Planning, prevention, protection, response, and recovery.

Buchanan, Sally. Resource Materials for Disaster Planning in New York Institutions. Albany, NY: New York State Office of Cultural Education and Division on Library Development and the Northeast Document Conservation Center, 1988.
Planning, prevention, response, recovery, rehabilitation, and evaluation.

Darling, Pamela W. et al. Preservation Planning Program: An Assisted Self-Study Manual for Libraries. Expanded Edition. Washington, D.C.: Association of Research Libraries, Office of Management Services, 1987.
Preparedness and response; developing a disaster plan.

DeCandido, Robert and Cheryl Shackelton. Who Ya Gonna Call? A Preservation Services Sourcebook for Libraries and Archives. New York, NY: New York Metropolitan Reference and Research Library Agency, 1992.
Directory of New York treatment and consultation sources; includes sample forms.

Disaster Planning and Recovery: an SLA Information Kit. Washington, D.C.: Special Libraries Association, 1989.
Preparing for and coping with disasters; includes a plan from a special library.

Drewes, Jeanne. Computers: Planning for Disaster. *Law Library Journal*, Winter 1989, 81: 103-116.
Protecting hardware and software; how to backup computers and optical disk systems.

Fischer, D. J. Simulation of Flood for Preparing Reproducible Water-damaged Books and Evaluation of Traditional and New Drying Processes. *Advances in Chemistry* 164, edited by John C. Williams. Washington, D.C.: American Chemical Society, 1977: 105-123.
Use of freeze-thaw-vacuum drying process for flood-damaged, mud-caked volumes.

Fortson, Judith. Disaster Planning and Recovery: A How-To-Do-It Manual for Librarians and Archivists. New York, NY: Neal-Schuman, 1992.
Includes recovery for photographs, microfilm, and tapes; covers structural damage.

Fox, Lisa A. Management Strategies for Disaster Preparedness. In: The ALA Yearbook of Library and Information Services, 14: 1-6. Chicago, IL: American Libraries Association, 1989.
Preparedness, phased implementation, and use of cooperative opportunities.

George, Susan C. and Cheryl T. Naslund. Library Disasters: a Learning Experience. *College and Research Libraries News*, April 1986: 251-257.
Water damage can strike twice, or even eight times, despite every precaution.

Gertz, Janet. After the Fall. *Conservation Administration News*, October 1992, 51: 1-2, 30.
Describes collapse of 12 ranges of shelving; recovery and rehabilitation procedures.

Ginell, William S. Making it Quake-proof. *Museum News*, May/June 1990: 60-63.
New damage-prevention techniques to protect museum objects.

Hendriks, Klaus B. and Brian Lesser. Disaster Preparedness and Recovery: Photographic Materials. *American Archivist*, Winter 1983, 46: 52-68.
Provides advice on techniques for salvaging photographic materials.

Jones, Barclay G. Litany of Losses. *Museum News*, May/June 1990: 56-58.
A reminder of past cultural disasters due to "natural elements".

Lundquist, Eric G. Salvage of Water Damaged Books, Documents, Micrographic and Magnetic Media. San Francisco, CA: Document Reprocessors, 1986.
Case histories of a major library fire and an area-wide flood.

Maines, Rachel P. and Associates. Disaster Preparedness Plan. Ithaca, NY: Rachel P. Maines and Associates, 1990.
Provides a hard-copy and computer diskette template to develop a plan.

Management Strategies for Disaster Preparedness. RTSD Pre-conference, July 8, 1988. Chicago, IL: American Libraries Association, Resources and Technical Services Division, 1988.
Three-ring binder of handouts covering all aspects of disaster preparedness.

Mathieson, David F. Hurricane Preparedness: Establishing Workable Policies for Dealing With Storm Threats. *Technology and Conservation*, Summer 1983: 28-29.
Basic and practical advice for those who live in hurricane country.

Myers, James N. and Denise D. Bedford, editors. Disasters: Prevention and Coping. Proceedings of the Conference, May 21-22, 1980. Stanford, CA: Stanford University Libraries, 1981.
Includes papers on freeze-drying; fire, insect, and water damage.

New York State Program for the Conservation and Preservation of Library Research Materials: Disaster Preparedness Planning Resource Packet. Albany, NY: The New York State Library, Division of Library Development, 1989.
Includes citations in this bibliography; lists New York institutions with disaster plans.

Nyberg, Sandra. The Invasion of the Giant Spore. Preservation Program Leaflet 5. Atlanta, GA: SOLINET, 1987.
Mold prevention, response, and recovery for paper materials.

O'Connell, Mildred. Disaster Planning: Writing and Implementing Plans for Collections-Holding Institutions. *Technology and Conservation*, Summer 1983: 18-26.
Planning and technical recovery measures.

Ogden, Sherelyn, editor. Preservation of Library and Archival Materials: A Manual. Andover, MA: Northeast Document Conservation Center, 1992.
Three-ring binder of NEDCC Technical Leaflets; includes emergency management.

Parker, Thomas A. Integrated Pest Management for Libraries. In: Preservation of Library Materials, edited by Merrily A. Smith: 103-123. IFLA Publications 40/41. Munich: K. G. Saur Verlag, 1987.
Common library pests, damage, and (non-chemical) controlling strategies.

Pedersen, Ann et al. Keeping Archives. Sydney, Australia: Australian Society of Archivists Inc., 1987.
Disaster containment with emphasis on prevention; recovery plan.

Perspectives on Natural Disaster Mitigation: Papers Presented at 1991 AIC Workshop. Washington, D.C.: Foundation of the American Institute for Conservation of Historic and Artistic Works, 1991.
Preparedness and protection from natural hazards.

Rhodes, Barbara. Hell and Highwater: A Disaster Information Sourcebook. METRO Miscellaneous Publication 35. New York, NY: New York Metropolitan Reference and Research Library Agency, 1988.
Preparedness and recovery; lists New York suppliers and services.

Rutherford, Christine. Disaster: Planning, Preparation, Prevention. *Public Libraries*, September/October 1990: 271-276.
Why planning should be initiated and factors to consider.

Schur, Susan E., compiler. A Selected Bibliography -- Disaster Prevention, Response, and Recovery: Principles and Procedures for Protecting and Preserving Historic/Cultural Properties and Collections. The Technology Organization, Inc., 1992.
33 pages of citations, primarily from 1965 to 1992.

Story, Keith O. Approaches to Pest Management in Museums. Washington, D.C.: Smithsonian Institution, Conservation Analytical Lab., 1985.

Walsh, Betty. Salvage Operations for Water Damaged Collections. *Western Association for Art Conservation Newsletter*, May 1988, 10(2).
Specific procedures for packing and removal of wet items.

Waters, Peter. Procedures for the Salvage of Water-Damaged Library Materials. Washington, D.C.: Library of Congress, Office of the Assistant Director for Preservation, 1979.
Procedures for treating wet materials; includes recovery and rehabilitation.

Wellheiser, Johanna G. Nonchemical Treatment Processes for Disinfestation of Insects and Fungi in Library Collections. London: K. G. Saur, 1992.

Wilson, J. Andrew. Fire Fighters. *Museum News*, November/December 1989: 68-72.
Introduction to types of automatic fire suppression systems available.

INDEX

INDEX

DISASTER PLAN WORKBOOK

DISASTER PLAN WORKBOOK

The following Worksheets are intended to facilitate the compilation of information for your Disaster Plan. Several resources listed in the Bibliography (pp. 36-39) include additional sample forms.

You may wish to make several photocopies of these Worksheets for wide distribution to staff. Worksheets should be disseminated to your Disaster Planning Committee and all staff knowledgeable about particular collections, buildings, and relevant procedures. Accumulation of staff responses will assist your Disaster Planning Committee to compile details for your Disaster Plan. In the course of this information gathering process you may need to redesign the Worksheets to incorporate concerns specific to your institution and collections.

OVERVIEW OF PLAN

1. Describe why a disaster plan is essential.

2. Briefly explain the purpose of the disaster plan, and how to use the plan.

3. Summarize the contents of the plan.

4. Describe distribution of the plan. Note locations of full copies of the plan.

5. Describe how staff will be trained in use of the plan.

6. Describe how frequently the plan will be updated, and by whom.

EMERGENCY PROCEDURES

INSTRUCTION SHEET: SAMPLE 1

Follow these instructions in a collection-related emergency.

FIRE

1. Call: _____ (Security? Fire Station?)
2. Assist in evacuation of the building
3. Notify: _____ (Director?)

   _____ (Superior?)

   _____ (Department Head?)

   _____ (Disaster Response Team Leader?)

WATER

1. Call: _____ (Superior?)
2. _____ (Department Head?)
3. _____ (Plumber, Facilities Staff?)
4. _____ (Disaster Response Team Leader?)

Water from above?

1. Cover collections with plastic tarpaulins stored in _____ _____

OR

2. Move books to a dry location

Water from below?

1. Move books higher on shelves

OR

2. Move books to a dry location

EMERGENCY PROCEDURES

INSTRUCTION SHEET: SAMPLE 2

Follow these instructions in a collection-related emergency.

FIRE:

Call

1. _____
2. _____
3. _____

Action

1. _____
2. _____
3. _____

WATER:

Call

1. _____
2. _____
3. _____

Action

1. _____
2. _____
3. _____

WEATHER or EARTHQUAKE:

Action

1. _____
2. _____

EMERGENCY PROCEDURES

TELEPHONE INFORMATION SHEET

In a collection-related emergency notify the following people:

		Name (in priority order)	Telephone number
Security			
Fire			
Police			
Institution Director			W H
Assistant Director			W H
Assistant Director			W H
Department Head	1.		W H
	2.		W H
	3.		W H
	4.		W H
Preservation Head			W H
Bibliographer	1.		W H
	2.		W H
Other			

Date _____

DISASTER RESPONSE

1. Who assesses the disaster situation? How? Who assesses damage to collections? How?

2. Where will a command post be established? Who will record activities?

3. How will priorities be defined? By whom?

4. Who activates staff, supplies, and services?

5. Who trains and supervises staff? Who will provide services for staff?

6. How will hazards be eliminated? By whom?

7. How will the environment be stabilized? By whom?

DISASTER RECOVERY

1. Who will undertake cleaning procedures?

2. How will undamaged collections protected? By whom?

3. Who will select recovery techniques and drying method(s)?

4. Who will train staff in recovery procedures?

5. Who will record information about transferred materials? What kind of information?

6. How will damaged buildings and/or collections be stabilized? By whom?

DISASTER REHABILITATION

1. Who will carry out rehabilitation activities?

2. Who will train and supervise rehabilitation staff?

3. How will rehabilitation be financed?

4. Where will activities be housed?

5. Who will ensure procedures are completed?

6. Who will provide basic services to users?

PREVENTION AND PROTECTION MEASURES

INTERNAL SURVEY

Internal Survey	Date	Hazard	Location
1. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

2. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

3. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

4. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

PREVENTION AND PROTECTION MEASURES

EXTERNAL SURVEY

External Survey	Date	Hazard	Location
1. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

2. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

3. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

4. _____	_____	_____	_____

Recommendation: _____

Alternative: _____

Action Completed: _____

PREVENTION AND PROTECTION MEASURES

SAMPLE 1

1. Are there smoke, fire, and water alarms? If yes, what type and where? Wired centrally?

2. Is there a fire suppression system? If yes, what type and where? Has it been tested?

3. Is there a security system? If yes, what type? Guard? Electric? Have they been tested?

4. Describe environmental monitoring devices.

5. Describe Heating, Ventilation, and Air Conditioning (HVAC) System.

6. Other protection measures? If so, what type and where?

PREVENTION AND PROTECTION MEASURES

SAMPLE 2

Inventory disaster supplies and equipment. Identify locations.

SUPPLIES	LOCATION
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

EQUIPMENT	LOCATION
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

COLLECTION PRIORITIES

The following collections/items should be protected, removed, or salvaged (as appropriate) in the event of a collection-related emergency. Maps indicating the locations of these collections/items should be included as appendices.

COLLECTION/ITEM	LOCATION
NUMBERED IN PRIORITY ORDER:	
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____