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**2020 EMERGENCY RESPONSE PLAN TEMPLATE--Background**

The Collections Emergency Response Plan Template was developed by the co-chairs of Preservation Services’ Library Collections Emergency Team (LCET) in response to Harvard libraries requesting assistance with creating or updating their emergency plans.  We used several real plans as models, selecting the roles and responsibilities that make sense for most Harvard library collections.  We also have added tasks, definitions, contacts, supplies and explanations that come from our real-world experience of past collections emergencies at Harvard.

This template does not include detailed procedures for business continuity plans, public safety and life safety, financial and insurance requirements, external communication. A thorough emergency plan should address these responsibilities, and we encourage you to work with your local emergency management team and administration to add them to your plan.

**How to Customize this Template to Draft Your Emergency Plan**

We intend this template to be customized by each library to suit its own needs.  Any of the language can be edited, including moving tasks to different roles, combining roles, or eliminating steps that are not applicable.

* *Yellow italicized* text is a placeholder and should be replaced with information specific to your library.
* [Green bracketed text] represents optional information you may include, edit or delete.
* Red underlined text indicates instructions for filling out the plan; deleted them when completed.
* Roles in small caps are further defined in the appendices.

**How to Use Your Emergency Plan**

We hope you will find that completing your plan engages your staff in creating or renewing an on-going collections emergency team. The team should meet periodically, complete training and practice drills, and maintain supplies and procedures.  The plan will be more thorough if all the following groups are included in writing and updating it: library staff, local facilities staff, security, Harvard University Operations, and LCET.  Each of these groups has important and quick decisions to make during an emergency that intersect with each other’s work. Such decisions will be more effective if everyone understands each other’s roles, responsibilities and expectations.  You may even use editing the plan as an opportunity to develop a relationship with your local emergency responders, and to get to know likely vendors who might be asked to assist with recovery operations.  They may be willing to tour your building to familiarize themselves with the space, staff, and collection needs in advance of an emergency.

After you’ve drafted your plan, we can provide additional hands-on training, facilitate practice drills and tabletops, as well as provide advice in other areas of emergency preparedness as needed. Feel free to contact either of us directly, or email [preserve\_wpc@harvard.edu](mailto:preserve_wpc@harvard.edu).

|  |  |
| --- | --- |
| *Priscilla Anderson*  Senior Preservation Librarian  Weissman Preservation Center | Lauren Telepak  Collections Conservator  Collections Care |

*LIBRARY* COLLECTIONS

EMERGENCY PLAN

*Updated date, by author*

**Collections Emergency Response updated date**

**1**

**Fire: 911**

**Crime/Evacuate: HUPD 617-495-1212**

**Env. Health & Safety: 617-495-2060**

**Employee Assistance Prog.: 877-327-4278**

***Library* Security: ###-###-####**

**Problem is noticed.**

**Call Facilities/Operations**

**###-###-####**

**###-###-####**

**2**

**Call**

**Harvard Library Collections Emergency Team (LCET)**

**617-240-2500**

**Call**

**Library Team Leader**

**###-###-####**

**###-###-####**

**3 *OR***

**Library Emergency Team**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Library Staff**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Name: ###-###-####; ###-###-####**

**Contact Library Director**

**###-###-####**

**###-###-####**

**email@harvard.edu**

**4 *&***

**Library Director contacts:**

**School/Dept Admin/LEMT**

**###-###-####**

**email@harvard.edu**

**Insurance Office**

**###-###-####**

**email@harvard.edu**

**Harvard Lib Communications**

**###-###-####**

**email@harvard.edu**

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# INTRODUCTION

The purpose of this collections emergency plan is to prepare *Library* for a local event during which its collections may be damaged. The plan consolidates all information pertaining to appropriate responses in the event of an emergency affecting collections belonging to or housed within *Library*. This plan takes into account the role of the Library Collections Emergency Team (LCET) to advise and assist with collections salvage procedures, the role of *Facilities/HU Operations* to manage building and systems recovery, and assumes the involvement of *School/Tub’s* Local Emergency Management Team (LEMT) to address issues of human safety and business continuity.

The plan:

* Defines a collections emergency.
* Establishes the *Library* Collections Emergency Team.
* Details emergency response procedures.
* Defines the roles and responsibilities of Team Members, *Facilities/HU Operations*, Security and Preservation personnel.
* Establishes a schedule for preventive and preparation activities.
* Lists collections salvage priorities for *Library* collections and administrative records.
* Provides basic collections salvage instructions.
* Identifies information resources for more detailed collections salvage instructions.

The plan is organized into five chronological stages, plus appendices:

**First Response**: Steps to be taken by the first staff member who recognizes the emergency.

***Library* Collections Emergency Team Response**: Managed by the Team Leader, the Team Response focuses on identifying and documenting the level of the emergency, activating needed personnel, communicating with appropriate groups, and identifying resources needed for recovery.

**Collections Salvage/Building Recovery**: Working with *Facilities/HU Operations*, the   
Team implements priorities identified during the Team Response; documents the movement of collections and collections salvage workflows/activities.

**Review**: The Team assesses the success of response, collections salvage, and building recovery efforts; identifies new risks and form mitigation plans.

**Mitigation/Preparation**: Working with *Facilities/HU Operations*, the Team executes mitigation plans and preparation activities (updates emergency response plan including a review of call list and priorities, maintains supplies, and trains staff in response and recovery procedures).

**Appendices**: Team Roles; Emergency Supplies and Equipment Inventory; Collections Salvage Priorities; Floor Plans; Inventory/Move Record; Emergency Response Report Form; Collections Salvage Instructions and Resource Links.

# BROAD AREAS OF RESPONSIBLITY

**During an emergency response, local administration and/or Local Emergency Management Team (LEMT) is responsible for:**

* Public safety and life safety decisions
* Security
* Facilities management
* Business continuity plan
* External communication with the press, the public, and the rest of Harvard
* Budget authority to pay for salvage supplies, recovery vendors, contractors, and staff overtime
* Insurance claim management
* Collection management to determine collection priorities and documentation protocol
* Authorization to engage LCET
* Procuring space for salvage activities and granting access to salvage team members
* Providing an on-site Recorder; recruiting local staff assistance and volunteers as needed

**LCET provides:**

* Focus on stabilizing collections and preventing further damage (response)
* Format-specific expertise in salvage of collections (planning for recovery)
* On-site support as required by the situation
* Advice on stabilization of the indoor environment (temperature, humidity, air quality)
* Advice on choice of recovery vendors
* Documentation support, if needed
* Liaison between local leadership and HL leadership, if needed
* Transition to Preservation Services staff for recovery phase

# DEFINITIONS

**Emergency**: An event that causes disruption of normal operations and continues to pose imminent threat of loss or harm.

**Collections emergency**: A threat that can cause loss or damage to library collections.

**Disaster**: A major emergency that causes harm, damage, or loss to people, buildings, collections, and other significant University assets.

**Response**: The first steps taken to prevent further damage and to plan the recovery process.

**Recovery**: The general process needed to return collections, building, and staff to normal operations.

**Collections Salvage**: The specific process of returning library collections to usable, accessible condition.

**Mitigation**: The process of reducing risks by taking preventive measures to repair or inhibit conditions that could cause damage.

Levels of Collections Emergencies

**Minor**: No building or systems damage; very small quantity of materials affected (one or a few books).

**Intermediate**: Small quantity of collections affected (<200 books) appropriate for in-house recovery; building or systems are affected; portions of the library may need to be closed for a short time.

**Major**: Large quantity of collections affected; need vendor recovery; building or systems affected; may require HL administration approval to close whole library; also applies to hazardous contamination/mold in library spaces.

**Regional**: Major damage \*and\* affects more than one Harvard Library collection; possibly won’t have access to building right away.

Acronyms

**COSTEP**: Coordinated Statewide Emergency Preparedness (Massachusetts-wide)

**EHS**: Environmental Health, & Safety (Harvard University)

**ERS**: Emergency Response and Salvage

**FEMA**: Federal Emergency Management Agency

**HUIT**: Harvard University Information Technology

**LCET**: Library Collections Emergency Team (part of Harvard Library Preservation Services)

**LEMT**: Local Emergency Management Team

**LTS**: Library Technology Services (part of HUIT)

**MEMA**:Massachusetts Emergency Management Agency

**PPE**: Personal Protective Equipment

**WAAC**: Western Area Art Conservation

# COLLECTIONS EMERGENCY FIRST RESPONSE (for Library Staff)

1. ***Make sure staff members and patrons are safe. Make a rapid assessment of the emergency situation.***

Take appropriate measures to protect the lives and health of everyone, including yourself.

* Fire: Evacuate, close doors, and pull fire alarm/call911.
* Personal threat/crime: call Harvard University Police Department at 617-49**5-1212**.
* Structural threat (e.g. bulging or sagging building components): Evacuate and call HUPD at 617-49**5-1212**.
* Electrocution risk: Look for electrical risks (live floor outlets, cords dangling in puddles, wires on metal shelving, etc.); do not step in puddles. Do not enter areas where water is knee deep (live wall outlets). Confirm with Facilities that the power is turned off.
* Bio-hazard (e.g. active mold, sewage, asbestos, chemical spill): Evacuate/isolate the area and call Environmental Health & Safety at 617-495-2060.
* Assess the damage and further risks: If none of the above threats apply, then quickly:
  + Determine the **source** of the water or other threat.
  + Identify the **location** of affected spaces and collections. Quickly investigate adjacent spaces (above, below, and sideways).
  + Estimate the **extent** of building and collections damaged or threatened.

1. ***Notify appropriate personnel based on your assessment.***
   * To turn off water supply and electricity, and to repair or prevent building damage:
2. Library Facilities Manager: *name,* *work, cell, home phone numbers*
   * If you can’t reach Library Facilities, call Harvard University Operations Center at 617-495-5560.
   * To activate collections response and recovery:

* Emergency Team Leader/Director: *name,* *work, cell, home phone numbers*
* Alternate Decision-Maker: *name,* *work, cell, home phone numbers*
* Library Collections Emergency Team (LCET): 617-240-2500
  + Public services: install directional signage and caution tape; instruct patrons to vacate the affected area

1. ***Protect the collections from further damage.***

If it is possible and safe to do so, take appropriate steps to protect the collections:

* Cover threatened collections with plastic sheeting. Catch running water with trash cans or buckets. Drape plastic over the shelf so both sides are covered; use tape to secure bottom and/or sides of plastic. Use more plastic to funnel dripping water into a trash can or bucket if needed.
* Move small amounts of collection material out of harm’s way. Photograph with a cell phone before moving. Make clear signage recording both the original and new locations. Keep unprocessed collections in order; keep orientation of AV items the same to prevent water from spreading (don’t lay down something that is standing).

***Further Information***

Website: <http://library.harvard.edu/preservation-services>/emergency-response

Contact the Weissman Preservation Center: phone 617-495-8596; email preserve\_wpc@harvard.edu

# COLLECTIONS EMERGENCY FIRST RESPONSE (Security Staff)

Consult with Security/Operations to verify or modify the following procedures, which are likely to occur during off-hours.

1. Security/HU Operations receives a remote alarm or a live report of emergency.
2. Security/HU Operations sends a Patrol/Operator to verify/investigate.
3. Security Patrol reports nature and scope of emergency to *HU Operations Center*. Patrol is not responsible for protecting the collections from further damage.
4. *HU Operations Center* notifies Facilities Manager and coordinates building response.
5. *HU Operations Center* notifies *Library* Director and/or *Library* Emergency Team Leader via FINS*.\**
6. *Library* Emergency Team Leader calls Preservation Services’ LCET at 617-240-2500, or authorizes HU Operations to call LCET.
7. *Library* Emergency Team Leader determines level of emergency, activates *Library* Collections Emergency Team (if needed), and directs collections recovery.

\*Important Note: The *Library* Director and *Library* Emergency Team Leader should submit personal contact information to the HU Operations Center ([uos\_operations@harvard.edu](mailto:uos_operations@harvard.edu)) to update the Facilities Incident Notification System (FINS) location information for the library. This contact information should be confirmed/updated annually.

# TEAM RESPONSE

The Team Leader takes the first steps in the Team Response:

* Compile damage assessments documenting the cause, extent, location, and nature of damage.
* Determine the emergency level.
* Initiate appropriate communication for the emergency level.
* If needed, activate the *Library* Collections Emergency Team (known hereinafter as the “Team”).
* Convene a Team meeting to plan the Recovery.

**Compile damage assessment and determine emergency level.**

Assessment is based on firsthand reports from the First Responder, *Facilities/HU Operations*, Security, and any other on-site staff.  Emergency Team Leader verifies the initial reports, including the amount and nature of the damage to the collections, as well as the precise type and location of affected materials. Make sure to investigate adjacent spaces (above, below and sideways) to help more accurately determine the amount and type of collections affected or at risk.  Assign an emergency level (see DEFINITIONS on *page 6*).

**Initiate communication appropriate to the emergency level.**

**For Minor Emergencies:**

* After providing advice and/or arriving on-site, Team Leader documents the emergency and follows up to ensure recovery is successful.  No further action needed.

**For Intermediate, Major and Regional Emergencies:**

* Team Leader notifies/activates the *Library* collections emergency team and LCET.
* Use the following flow chart to identify other appropriate contacts:
  + *Local Emergency Management Team (LEMT) or Academic Department Administrator: name, phone number*
  + *HL Administration: name, phone number*
  + Vendor (consult with LCET to determine appropriate vendor for the situation)



**Before Team is fully assembled, Team Members who are present focus on the following:**

* Move collections out of harm’s way; cover collections to prevent further damage.
* Contribute to detailed assessment (inform decision about whether to contact a Vendor; determine what supplies and equipment are needed for recovery).
  + Location of keys, security screw driver

Recorder documents the source, extent, nature, and location of damage to both building and collections.  If collections are being moved out of harm’s way, these moves are also documented.

## Vendors

Team Leader consults with LCET and *Facilities/HU Operations* to determine if a library disaster recovery Vendor is required and which one to call first.*A current list of approved vendors is available to those with a Harvard Key login:*

[*https://wiki.harvard.edu/confluence/display/librarypreservation/Emergency+Vendors*](https://wiki.harvard.edu/confluence/display/librarypreservation/Emergency+Vendors)

* Vendor (special & general collections):  xxx-xxx-xxxx
* Vendor (general collections):  xxx-xxx-xxxx
* Vendor (e-media): xxx-xxx-xxxx
* Vendor (audiovisual): xxx-xxx-xxxx
* Vendor (motion picture film): xxx-xxx-xxxx

Vendors will want to know these things:

* How much (linear feet) and what kind of collection material needs salvage
* How wet/moldy is the collection material?
* Are they just responsible for collections or also building/space/shelving recovery?
* Should they take collections off-site?  If it’s better/less expensive, should they work on-site?
* *Street address (suitable for GPS) and/or HUPD escort from a central location.*
* *Initial access to the building; availability of loading dock, elevator.*

Library Directorinforms decisions based on understanding of insurance policy, and authorizes expenditures for outside vendors, overtime, other budget needs.

## Emergency Response Planning Meeting

*Library* Collections Emergency Team assembles in *location* for a brief meeting to plan the response and assign roles according to who is present and what is needed. Representatives from *Facilities/HU Operations* and/or Administration should be included as appropriate.

1. **Confirm/Assign Roles (see Appendix A: Team Roles)**

* Team Leader
* [Salvage Manager]
* Recorder
* Staff Facilitator
* Conservation (Preservation Librarian, LCET)
* Team Members

1. **Make sure all Team Members are mentally/physically able to perform their functions.**

* Address and gauge human factors: stress, fears, concerns, anxiousness, exhaustion, hunger, thirst, guilt.

1. **Plan collections salvage activities:**

* Team Leader refines assessment: the types and amounts of collections affected; types of damage; source and quality of water/contaminants.
* Recorder documents the damage assessment details in writing and with photographs; determines a consistent method for recording inventory and movement of collections (item-level or in aggregate) so that materials can be tracked, kept in order, and eventually returned to original location; documents emergency supplies consumed and their source (to facilitate insurance claims and restocking); *consults with LTS or ITS staff on best way to record inventory and move tracking data electronically*.
* Team Leader reviews collections salvage priorities:
  + What are the immediate needs to prevent further damage to the most vulnerable items?
  + Think about security and collections salvage procedures for high value items
  + Salvage unique/rare items before easily replaceable ones.
  + State and document the parameters for disposing/de-accessioning unrecoverable or easily replaceable items.
* Team Leader consults Conservation experts and existing resources for collections salvage techniques appropriate for specific materials:
  + LCET: 617-240-2500
  + ERS app/WAAC newsletter link
  + See Appendix G: Collections Salvage Instructions and Resource Links
  + Environmental Health & Safety (EHS): 617-495-2060 (if there are concerns about handling collections or working in affected areas)
* Team Members undertake specific collections salvage activities:
  + Pack and move collections.
  + Isolate contaminated or moldy collections and/or spaces.
  + Clean and dry collections (on-site or off-site).
  + Work with a vendor to dry collections and/or spaces.
  + Be aware of *Facilities/HU Operations’* work to dry building spaces, restore systems, repair utilities, etc.
* Team Leader gathers information from Team Members to determine resources needed for each salvage activity that is required:
* Personnel and provisions
* Equipment
* Collections salvage supplies
* Space
* Access/security/logistics
* Transportation/movers/other vendors

# COLLECTIONS SALVAGE AND BUILDING RECOVERY

The collections salvage and building recovery phase follows the response phase, and includes the activities needed to return the collections, building, and staff to normal operations.  Collections salvage operations have the consecutive goals of first stabilizing damaged or at-risk collections, then taking whatever action is needed to return usable collections to their original locations.  Initial collections salvage operations may be carried out onsite or the collections may be transferred to a vendor’s facility. If done onsite, salvage operations may continue to impact spaces and operations for several days until the collections are stable enough to be moved or reshelved. Once collections are stabilized (i.e. frozen or dried), then salvage procedures are no longer considered urgent from a physical standpoint (i.e. mold will not grow), and the materials may be incorporated into existing repair workflows. The salvage/recovery phase is complete when the building itself and all collections are returned to usable, accessible condition.

Starting Salvage Operations:

* Team Leader consults with Conservation to determine the best salvage techniques for particular material types and arranges instruction of Team Members as needed. See Appendix G: Collections Salvage Instructions and Resource Links.
* Team members begin stabilization according to plans developed during the Response meeting.
  + Take breaks, rotate tasks, and communicate progress within the team.
  + Reevaluate and restock supplies as needed.  Equipment and space needs will likely change as time passes.
* Staff Facilitator distributes staff provisions (water, food); sets and monitors work and break schedules; facilitates access to recovery operations; monitors areas not affected by the emergency (for security purposes); tracks damage to computers and other office equipment; maintains communication equipment (charges cell phones, radios, etc.).
* Team Leader consults *Facilities/HU Operations* on the progress of drying spaces and repairing systems. Spaces holding collections may be prioritized over other spaces due to a higher risk of mold growth in paper-based materials and the difficulty of replacing collections.
* Team Leader continues to monitor physical safety and mental health of staff.
* Team Leader/ *Library* Director refines priorities to suit evolving needs of the affected collections.
* *Library* Director communicates status updates to HL/HU Administration and notifies the Risk & Audit/Insurance Office. Immediately following a regional disaster, *Library* Director communicates loss/damage information to LEMT to be transmitted to COSTEP/MEMA/FEMA, to help Cambridge/Boston qualify for government disaster assistance.
* *Library* Director works with Staff Facilitator to set up work areas to execute Business Continuity Plan, and plan alternate means of research access to collections.
* Recorder documents and photographs collections salvage procedures and workflows; provides this information to the *Library* Director as needed (such as for initial insurance claim purposes), and tracks movement of collections.

Later in the Salvage/Recovery Phase, after stabilization:

* Collection managers/conservation staff follow up on decisions needed for items in-process (i.e. in a freezer or being returned from a vendor).
* Collection managers/conservation staff arrange for further treatment/rehousing as needed once they items are returned/dried.
* Recorder completes documentation, which may include cost estimates for replacing supplies and collections to support an insurance claim.

# REVIEW

After responding to a library emergency, the Recorder documents the incident with a written report to inform future emergency preparedness. See Appendix F: EMERGENCY RESPONSE REPORT FORM. The Team Leader arranges a “post-mortem” or debrief meeting to evaluate what can be learned from the experience.  The meeting should ideally happen within a month of the event and include the *Library* Director, the *Library* collections emergency team, LCET, *Facilities/HU Operations* staff, *Academic Department* Administrator*,* HUOperations, Security, and Environmental Health & Safety (if appropriate), to review the response and collections salvage/building recovery.  A plan to mitigate risks and improve response protocols should be developed during these meetings, to set the stage for the Mitigation and Emergency Preparation phases.

Items to discuss in these meetings:

* + - Review the narrative of the event, filling in information that was unknown at the time of the event (i.e. cause of leak). Include immediate response, team response, collections salvage activities, and building recovery activities
    - Assess the performance of the communication plan (call trees, etc.).
    - Review the health and safety response, if appropriate.
    - Identify any additional supplies needed and supplies that need to be replenished.
    - Outline follow-up procedures for items being treated (by a Vendor or HL Preservation Services).
    - Create a plan for implementing lessons learned.
    - Identify outstanding risks and make a plan to mitigate them.
    - Plan for archiving reports and photographs for future reference.

# MITIGATION/PREPARATION

Maintain the *Library* Collections Emergency Plan:

* Staff Facilitatorreviews and updates contacts on a *periodic* basis.
* *Library* Directorand Team Leader submit personal contact information to the HU Operations Center ([uos\_operations@harvard.edu](mailto:uos_operations@harvard.edu)) to update the Facilities Incident Notification System (FINS) location information for the library. Confirm or update annually.
* Team members supply updated contact information to Staff Facilitator as soon as changes are made.
* *Library* Directorreviews and updates priorities on a *periodic* basis.
* Team Leader reviews and updates roles and plan instructions on a *periodic* basis.
* Team Leaderobtains approval for the plan; validates and tests the revised plan.
* Staff Facilitatordistributes the revised plan to *people and/or locations.*

Maintain supplies:

* Staff Facilitatoris responsible for checking and restocking supplies on a *periodic* basis. See Appendix B: EMERGENCY SUPLLIES AND EQUIPMENT INVENTORY
* The budget for emergency supplies is owned by *person/unit/organization.*

Train Team:

* Team Leader ensures that the team maintains response skills by participating in training exercises on a *periodic* basis.

Mitigate Risk:

* All Team members identify/communicate new risks to Team Leader.
* Team Leader checks in with *Facilities/HU Operations* periodicallyto assess new and outstanding risks, and to understand upcoming maintenance plans (new construction or repairs).
* Team Leader determines a plan to mitigate the risks (in consultation with *Library* Director, *Facilities/HU Operations*, and appropriate Team members).
* Team Leader establishes a mitigation plan with deadlines and responsibilities.
* Team Leader reports progress/completion of mitigation plan to *Library* Director.
* Recorder documents progress toward mitigation goals.

Build relationships with external service-providers:

* Team Leader and *Library* Director offer *periodic* tours to:
  + Security staff to get to know local staff and likely spots for leaks.
  + HUPD and *City* Fire Department to review access and high-security areas.
  + Emergency recovery Vendors to familiarize them with the scope of collection and building logistics.

Understand Insurance

* *Library* Director consults with the Insurance Office to determine procedures, documentation, and definitions of coverage.

# APPENDIX A: TEAM ROLES

## Team Leader

Manages the overall collections salvage efforts and oversees the allocation of space, personnel, supplies, equipment, financial support, and other resources. Directs the work of the Staff Facilitator, Recorder, and other Team members.  Is primary decision-maker for the operation, in consultation with *Library* Director. Reports progress to *Library* Director.  Delegates tasks as needed.

First Response

* Communicate with and advise first responder.
* Verify the initial assessment; determine emergency level and appropriate response.

Team Response

* Activate the appropriate communication plan for the emergency level.
* Consult with LCET to plan recovery.
* Continue the assessment to gather details about resources needed for recovery.
* Contact Vendor if needed.
* Convene Emergency Team Response Planning meeting.
* Identify needs, define goals, outline response plan.
* Assign roles & responsibilities, allocate space, and establish chain of command.
* Arrange/delegate procurement of equipment and supplies.
* Interpret established priorities and determine triage procedures.
* Oversee morale and welfare of workers.
* Monitor Team Members’ health and safety.
* Ensure Team Members are trained and are supplied with appropriate PPE.

Recovery

* Monitor progress of different collections salvage activities.
* Manage Command Center:
* Communicate with Security, HU Operations, *Academic Department* Administrator, HUIT, LCET, Environmental Health & Safety, vendors.
  + Make plans with *Facilities/HU Operations* staff to stabilize the environment.
    - Lower temperature below 65° F.  Do not turn up the heat.
    - Lower relative humidity below 60%, and ideally below 35%.
    - Move air gently in humid areas to hasten stabilization of the environment.
  + Move collections out of the way of building repair work.
  + Work with movers to bring needed equipment and supplies.
* Oversee morale and welfare of workers.
* Monitor team’s health and safety and ensure Team Members are using appropriate PPE.
* Report progress to Library Director.

Review

* Arrange and lead debrief/review meeting with library emergency team, LCET, *Facilities/HU Operations*, and Security.
* Include EH&S if appropriate.

Mitigate/Prepare

* Implement mitigation tasks and track progress toward goals.
* Maintain and update the collections emergency plan; remind Team Members to review the plan.
* Arrange ongoing team training and stay abreast of new collections salvage procedures and research.

## Library Director

Acts as chief external communications officer and liaison with HL administration. Makes high-level decisions as needed.

Response

* Communicate with administration (*Academic Department* Administrator*,* LEMT).

Recovery

* Determine space and public services availability; share this information with patrons during and after disaster via outgoing phone messages and website updates.
  + Library closing or access changes.
  + Change in schedule of HD deliveries (halt or delay).
* Communicate with the press and the public (or forward to HL Communications).
* Communicate with outside owners of collections stored on-site (loans; deposits; ILL; Borrow Direct).
* Make final decisions in cases of ambiguity or disagreement.
* State priorities if not already determined.
* Authorize budget expenditures, vendor contracts, overtime, etc.
* Communicate with Insurance Office.
* Immediately following a regional disaster, communicate loss/damage information to LEMT to be transmitted to COSTEP/MEMA/FEMA, to help Cambridge/Boston qualify for disaster assistance.

Review

* Attend debrief meeting and inform on feasibility of mitigation priorities.

Mitigate

* Advocate for mitigation resources with administration/HU Operations.

## Recorder

Documents the nature and progress of the emergency situation and maintains inventory control for materials removed from normal locations.  Trains others and delegates record-keeping tasks as needed.

Response

* Using Appendix F: EMERGENCY RESPONSE REPORT FORM, document:
  + Assessment of the damage to the collection(s): source, extent, and nature of damage.
  + Location and types of materials damaged, and estimate quantities.
  + Nature of the damage (i.e. damp, wet, moldy, burned, dusty, distorted, broken).
* Photograph the nature of the damage (to both the building and the collections).
* Determine a consistent method for recording collection inventory for materials removed.
* Assemble and train additional staff as recorders if necessary.

Recovery

* Record recovery decisions (why you did it a certain way).
* Record and photograph collections salvage procedures and workflows at all stages.
* Document emergency supplies consumed and their source (to facilitate insurance claims and restocking)
* Collect and organize all completed inventories.
* Report aggregated inventory data and disposition to Team Leader and Library Director.

Review

* Attend debrief/review meeting(s).
* Record mitigation tasks.
* Archive reports and photographs for future reference.

Mitigate/Prepare

* Document progress toward mitigation goals.

## Staff Facilitator

Focuses on staff needs and business continuity implementation.

Response:

* Attend Emergency Response meeting.

Recovery:

* Secure staff support and provisions.
* Set schedules for Team Members and volunteers; keep track of time spent; maintain a sign-in/out board for Team Members with roles and locations.
* Schedule and remind team to take breaks.
* Facilitate access to recovery operations.
* Set up work areas to execute Business Continuity Plan.
* Plan alternate means of research access to collections.
* Monitor non-disaster-affected facilities and technology.
* Track damage to computers and other office equipment.

Review

* Attend Review meeting.

Mitigation/Preparedness

* Attend Team meetings and training.

## Team Members

Execute response and recovery tasks as directed by the Team Leader.

Response:

* Move collections out of harm’s way; cover collections to prevent further damage.
* Contribute to damage assessment, documentation, and assessment of resources needed for recovery.
* Attend the Emergency Response planning meeting.

Recovery:

* Clean and dry damaged materials as directed by Team Leader and/or LCET.
* Retrieve and pack damaged materials in boxes as directed by Team Leader.
* Retrieve supplies from storage locations as directed by Staff Facilitator.
* Complete inventories and other documentation as directed by Recorder.
* Label containers and carts that are moved from one location to another as directed by Recorder.
* Facilitate access to secured spaces (monitoring doors, etc.) as directed by Staff Facilitator.
* Assist Team Leader, Recorder, and Staff Facilitator in other duties as assigned.

Review:

* Attend the review meeting.

Mitigation/Preparedness:

* Attend periodic Team meetings and training sessions.
* Review the Emergency Plan.
* Provide updates to contact information as soon as changes are made.

## Team Member Alternate

Response and Recovery

* Perform your team role, but be trained and ready to take on additional duties for the leadership role you are backing up.

Review and Mitigation

* Practice your backup role during training.

## External Roles

***Facilities/HU Operations***

Specify who is responsible for the following (if necessary, distinguish between work hours and after-hours):

* Mechanical systems (plumbing/electrical): *Name, department, phone.*
* Building repairs (envelope/shelving/carpentry): *Name, department, phone.*
* Security (providing appropriate access): *Name, department, phone.*
* Custodial/Housekeeping (mopping floors/WetVac): *Name, department, phone.*
* Operations supplies (paper towels, plastic sheeting, tables, fans): *Name, department, phone.*

**Harvard University Police Department**

* Public Safety: police intervention to stop crime
* Evacuation: HUPD can quickly clear an area or building that is unsafe.

***Library* Security**

* Public Safety: deter crime
* Collections monitoring: details walk assigned spaces; extra details may be assigned during storms or other threats
* Access: guards posted at secure doors keep the collection secure while providing access to authorized people

**Environmental Health, Safety, and Emergency Management**

* Life Safety: consult on bio-hazards (e.g. mold, asbestos, chemical spill, air-quality, water-quality, sewage, gray water)

**Employee Assistance Program**

* Mental Health: 24/7 free, confidential help for Harvard employees and their household members

**Preservation Services/Library Collections Emergency Team**

* The Library Collections Emergency Team (LCET) provides 24/7 emergency response support by phone to the Harvard University community.
* LCET offers information and advice to all callers. Direct services and on-site assistance are provided only in cases where Harvard Library collections are at-risk or affected, \*and\* local library staff permission has been obtained for such services to be performed. LCET members include preservation librarians and professional conservators.
* Direct services provided on-site during the response phase may include:
  + Consultation on assessing the emergency level, whether a vendor is required, and which vendor to call first.
  + Referrals to Harvard specialists in particular formats (film; AV; photographs; paintings; objects).
  + On-the-job training and advice on salvage methods appropriate for specific collection formats.
  + Advice to Team Leader on workflow, emergency management and communication issues.
  + Arranging delivery of specialty supplies and equipment that are held in shared caches on- and off-campus.
* LCET's role ends when the response phase ends. Post-response (i.e. salvage/recovery, in-lab treatment, follow-up on materials dried by a vendor, etc.) is then provided by Preservation Services staff with format-specific expertise (book, paper, photograph, film conservator, preservation librarian for AV etc.).
* Review and Mitigation phases should include the Preservation Liaison for the library, in addition to preservation/conservation staff who participated in the response.

**Library Collections Recovery Vendor**

This Vendor is responsible for drying/cleaning library collections.  They can also clean shelves and other storage furniture. They may perform work on-site or may take it to an off-site recovery facility.

What you need to tell a Vendor initially:

* How much material (linear feet), type of collections, and how wet it is
* Would they just be doing collections salvage or also building recovery?
* Should they work on-site or may/should they take collections away?
* How can they access the building and affected area? Is a loading dock/elevator available?

What you should ask a Vendor initially:

* How soon can you get here to do an assessment?
* Have you worked for Harvard before (i.e. already in the financial system)?
* What would you need from Harvard in order to begin work? (Contract? Verbal agreement?)
* Is your company currently fully certified and insured to do this work?

Further questions once they arrive and assess the situation:

* How long do you expect the recovery to take?
* What specific services do you recommend and how would you undertake them?
* What impact would your work have on our business continuity?
* What is out of the scope of services that you directly provide for which you would sub-contract or we need to call another vendor?
* What systems support do you need from us to do your work (power, water, space, access, security, and internet)?

**Access Services**

If a substantial amount of collections need to be moved out of harm’s way or timing is critical, Access Services’ staff who are experienced in collection management and moves may be called upon to carry out this task (as opposed to hiring a library mover). Local staff involvement is critical for record-keeping and decision-making.

**Library Technology Services and Information and Technical Services**

If a large amount of cataloged material needs to have item records updated e.g. (status change; circulation to a vendor), LTS or ITS staff may be able to help do this in an efficient manner. For special collections, libraries with Aeon may be able to utilize this system to record the movement of materials. ITS should be involved if unprocessed collections at 625 Massachusetts Ave. are affected.

**Building Recovery Vendor (aka Disaster Restoration Vendor)**

This Vendor is responsible for drying out the air, walls, floor, and furniture. Their work is coordinated by *Facilities/HU Operations*. Be aware that their work can have an unintended impact on collections (i.e. dust, vibration, heat, moving furniture) and this should be discussed and mitigated during the simultaneous recovery of building and collections. Typical activities needed to dry out a space may include:

* Removing wet ceiling tiles (wet, dirty debris can fall on uncovered collections)
* Removing wet carpet (look underneath shelving to see if hidden carpet is wet)
* Cutting holes in walls to allow air to flow (creates dust that can damage uncovered collections)
* Moving furniture to facilitate drying
* Mold prevention and remediation in the building; soot and odor removal; hazmat removal
* Installing a temporary desiccant system to accelerate drying building components such as soaked concrete (involves piping in hot, dry air)
* Replacing ceiling tiles, carpet, furniture, and repairing holes in walls (this may be a different vendor than the one who does the removals; this is generally a *Facilities/HU Operations* decision)

**Office Recovery Vendor**

This vendor is responsible for recovering office files (may include paper-based and digital) that are not library collections. Their work is coordinated by *Facilities/HU Operations.* Methods for office recovery may include some practices that are not recommended for long-term archival collections (irradiation, ozone, hydroxyl, plating, re-packing boxes).

Consult with HUIT and Digital Preservation staff about computers or digital files that need to be recovered.

# APPENDIX B: EMERGENCY SUPPLIES AND EQUIPMENT INVENTORY

Refer to Preservation Services’ online checklist for up-to-date instructions to assemble/update the stock of emergency supplies and equipment held in the library:

<http://library.harvard.edu/sites/default/files/HLPS_LibraryCollectionsEmergencyResponseSupplies.pdf>

Create two inventories of the supplies and equipment within the library, one sorted by activity and one sorted by supply location. See sample below. Include copies of the library emergency plan with your supplies.  Mark location of supplies on collection maps (re-purpose Collection Management maps if you don’t already have maps).

**SAMPLE TABLE - Sorted by Activity**

|  |  |  |  |
| --- | --- | --- | --- |
| Activity | Product and Purpose | Quantity | Location |
| First Response | Polyethylene sheeting (6 mil. thick, 100’ long; can be pre-cut to drape over shelving ranges or to cover paintings, sculptures, etc.) | 2 rolls | 3rd floor |
| Health and Safety | nitrile gloves (avoid gloves containing rubber because of potential allergic reactions) | 1 box (100) | 3rd floor |
| Health and Safety | yellow “caution tape” | 1 roll | 3rd floor |
| Health and Safety | disposable aprons (polyethylene) | 1 box (100) | sub-basement cage |

**SAMPLE TABLE - Sorted by Location**

|  |  |  |  |
| --- | --- | --- | --- |
| Activity | Product and Purpose | Quantity | Location |
| First Response | Polyethylene sheeting (6 mil. thick, 100’ long; can be pre-cut to drape over shelving ranges or to cover paintings, sculptures, etc.) | 2 rolls | 3rd floor |
| Health and Safety | nitrile gloves (avoid gloves containing rubber because of potential allergic reactions) | 1 box (100) | 3rd floor |
| Health and Safety | yellow “caution tape” | 1 roll | 3rd floor |
| Health and Safety | disposable aprons (polyethylene) | 1 box (100) | sub-basement cage |

# APPENDIX C: COLLECTIONS SALVAGE PRIORITIES

The Collections Salvage Priorities Checklist on the next page ranks *Library* materials according to value (financial and artifactual) and risk of loss if not treated immediately. The following criteria were considered in determining these priorities, and may be applied on-the-fly to refine decision-making during an emergency:

1. IRREPLACEABLE/ESSENTIAL

* Valuable/permanent papers with legal, fiduciary, evidentiary value (e.g., vital records) or materials essential to the functioning of the library
* Collection access and ownership documents such as catalogs, indexes, finding aids, acquisitions files
* Irreplaceable materials that must be retained in their original format (e.g., manuscripts or rare books with high intrinsic or artifactual value)
* Microfilm/photographic masters (should be stored off-site)

1. SIGNIFICANT CONTENT/HIGH ECONOMIC VALUE

* Materials with significant research value that are expensive-to-replace/repair (e.g., rare books)
* Materials with significant research value on high-risk media or in high-risk formats that must be stabilized immediately if they get wet (e.g. water-soluble inks, coated paper, magnetic media, lacquer disks, glass plate negatives, material with existing mold damage)
* Business continuity: high use items/collections

1. ITEMS BELONGING TO OTHER LIBRARIES

* Location(s) where this material is consistently stored: *locations*

1. SIGNIFICANT CONTENT/REPLACEABLE

* Materials that are replaceable with other originals, copies, or formats

1. EXPENDABLE

* Annual replacements and updates
* Duplicates
* Materials not central to mission of the library

Factor condition into priority-setting in the midst of a response by determining the order of removal and treatment:

* + 1. Most highly valued (most important to the institutional mission)
    2. Least damaged (to prevent further damage)
    3. Slightly damaged (low-hanging fruit, easiest to return to normal)
    4. Severely damaged (most difficult and expensive work)

COLLECTIONS SALVAGE PRIORITIES CHECKLIST

updated *date*

All collections should be evaluated for priority rating before an emergency. Whenever possible, metadata and other important materials should be backed up and stored off-site, (e.g., computer files, finding aids, contact lists, inventories of supplies and equipment).

Thinking in geographical zones, identify items/collections that are the highest priority in each room, and compare the room priorities to each other to establish building-wide priorities, in the event that the emergency affects more than one room. Mark collection priorities on floor plans (and/or on shelves).

Below are listed and described the collections/locations/formats/items as they fit the priority criteria. The list is organized by general physical location (floor, room, shelf, etc.) first, and then in priority order.

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| Location | Priority | Description |
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# APPENDIX D: FLOOR PLANS

updated *date*

Obtain and insert floor plans of all collections storage areas (both temporary and permanent). Indicate locations of emergency supplies and equipment, and if desired, high priorities for collections salvage.

# APPENDIX E: INVENTORY/MOVE RECORD



# APPENDIX F: EMERGENCY RESPONSE REPORT FORM

Archive this report in *location*.

Date discovered:

Time discovered:

Discovered by:

Weather conditions:

Source/cause of emergency:

Report date:

Report author:

Location(s) of damage:

Types of collections affected:

Quantity of items damaged (specify formats):

Types of damage (include how long items were wet before they were discovered/salvaged):

Response and recovery activities (event narrative; personnel involved; procedures):

Lessons learned:

Further risks identified:

Mitigation plan:

Location of other documentation (photographs, inventories, etc.):

# APPENDIX G: COLLECTIONS SALVAGE INSTRUCTIONS AND RESOURCE LINKS

## Emergency Assessment: Individual Item Condition

The Team Leader provides Team Members with **collection priorities;** makes decisions about the relative importance of items based on content; identifies unique and valuable items, and distinguishes them from items that are easily replaceable or difficult but not impossible to replace.  Team Members use this information in combination with the physical condition and potential threats to the item to triage the affected collections.

What is the temperature and humidity in the storage area?  Use an environmental monitor or ask Operations for their current readings.  Ask Operations to help achieve the goal of temperature below 65o F and relative humidity below 35%.  If the in-house systems cannot achieve this, consider hiring a vendor to bring in dehumidification equipment.

Use your senses. **Mold** can be smelly, powdery, brightly-colored random stains or spots.  It can cause harmful physiological reactions and is a known health hazard. Stop work immediately and leave the area if you have any of these symptoms: difficulty breathing, tickling/itching of the skin, mouth, throat, and nose. **Do not touch mold directly.** Wear gloves and other appropriate Personal Protective Equipment. See next section on Handling Mold for further instructions.

If you are confident that mold is not present, then **feel each item** to determine if the paper is wet. Wet paper is colder than dry paper. Use your fingers to find wet areas; you can’t always see a wet area, and a water stain could be old and perfectly dry. Wet paper is often buckled or distorted, caused by swelling of the paper fibers.  However, if dried unrestrained, the dried paper may retain that distortion as well.

**Wet** **books**: the wet area extends more than ¼” in from the page edges, or the gutter is damp, or the covers are saturated (even if the paper inside is dry). Wet items also include water-soluble inks and other media which can bleed and stain adjacent areas. Wet items should be frozen as soon as possible, and then be assessed by a conservator for future treatment. See Preparing Collections for Freezing.

**Damp** **books**: slightly wet around the edges, approximately ¼” into the text block, but not in the gutter. This type of damage can often be successfully air-dried in-house.

**Non-book** collections (AV, paper, e-media, artwork): consult LCET to determine triage protocols.

Dry materials that are located in **humid rooms** are also subject to mold growth if the air, carpets, walls, or ceiling tiles are allowed to remain wet for more than 48 hours. These dry materials should be moved to a dry area. Use environmental monitors in the rooms to monitor the relative humidity.

**Dry but dirty materials** that are affected by dust, smoke, or debris (but not by water or damp air) should be moved to a clean area, and then assessed by a conservator at a later point. Since the problem won’t get worse within 48 hours, this damage type is the lowest priority during collections salvage operations.

## Handling MOLD and Other Hazardous Materials

CAUTION:  Mold (wet or dry) can cause harmful physiological reactions and is a known health hazard. Stop work immediately and leave the area if you have any of these symptoms: difficulty breathing, tickling/itching of the skin, mouth, throat, and nose. Contact *Facilities/HU Operations* and/or Environmental Health, & Safety (EH&S) if you suspect that mold is affecting the room or building space (not just a few books).

Other hazards (chemical spills, asbestos, etc.): Contact EH&S before any handling. Evacuate the area if there are noxious fumes, smoke or other hazards.

Identification: Mold can be smelly, powdery, fibrous, black, white, or brightly-colored random stains or spots. From a health standpoint, it doesn’t matter whether the mold is wet/active, dry/dormant or dead; it’s all a potential health hazard.  From a collections standpoint, items with wet/active mold should be frozen or dried in a fume hood immediately.  Preservation staff use a moisture meter to measure the Equilibrium Moisture Content of the paper to determine whether the mold is likely to be active or not. For safety reasons, if you suspect mold, then treat it as if it is a health threat until it’s confirmed to be otherwise.  **Do not touch any mold directly**.

Approach: Moldy items should be isolated and then frozen until they can be dried and cleaned by conservation staff. Lower the ambient humidity. Even old mold stains (no longer fluffy or powdery) may contain dormant spores that can be activated in high humidity.

With any hazardous material use the appropriate Personal Protective Equipment (PPE).  The appropriate PPE for mold:

* Non-permeable gloves (rubber or nitrile, not cotton).
* Sleeves that cover your arms so no skin comes into contact with the mold; wash clothes with bleach immediately after working with moldy items.
* Properly fitted dust mask or respirator*.*
* Eye protection (non-vented goggles)*.*

Suspected moldy items should be individually double-bagged in zippered plastic bags, labeled with identification information and the word MOLD (make it prominent). Record the barcode/call number, original location, and new location on an inventory record. Place packages in a freezer. Use PPE while bagging.

After moving moldy items, clean carts and shelves by spraying down with ethanol and wiping with paper towels, or wiping with anti-bacterial/anti-fungal wipes (both are effective at killing mold on non-porous surfaces). Discard paper towels/wipes in double plastic trash bags. Use PPE while cleaning.

**Do not clean wet mold with a HEPA vacuum or with anti-bacterial/fungal wipes.**Mold must be dried before cleaning. Conservation staff or a vendor will do the cleaning later.

## Moving Books

* + 1. Decide on the destination (a dry room with security, ventilation, and lots of table or floor area to spread out an air-drying operation). Preview the space to make sure it is ready. Use environmental monitors in both rooms to monitor the relative humidity.
    2. If the Conservation Lab or other library-owned spaces are not big enough, work with *Facilities/HU Operations* to identify a suitable and available space that has sufficient security and a source of dry air (conference room or classroom, gym).
    3. Make sure routes are clear and secure doors are accessible only to those who need access.
    4. Enlist the help of others to lift and pack boxes, push carts, and hold doors.
    5. Gather supplies and equipment:
  + book trucks or other sturdy vehicle
  + bookends
  + cardboard cartons and garbage bags and/or plastic Rescubes
    1. Keep an inventory record of what is being moved and where. Use a hand-held barcode scanner if it is feasible and more efficient than writing on paper. Label each box (permanent marker) with a description of the contents and a unique box number.
    2. Assemble a plastic Rescube (or cardboard box lined with a plastic garbage bag) and stand it up on one short end for loading. Place books with the spine toward the bottom of the box to reduce distortion of wet bindings. Once a box is loaded, tip it into normal position to label the box and close it. If you are loading boxes to go directly to a freezer, see the section below on Preparing Collections for Freezing.
    3. If not packing in boxes, use bookends to keep books aligned. Don’t stack books on top of each other; the weight can cause books on the bottom to distort, stain, or stick. Keep items in shelf order if possible.
    4. Wet books are much heavier than dry ones, so don’t overload a cart. Use middle and bottom shelves to avoid making the cart top-heavy.
    5. Lift each end of the cart over door jambs and elevator gaps to reduce jarring bumps that could cause spills or overturn the truck.

## Preparing Collections for Freezing

Bound Volumes, individual:

1. Remove any excess liquid with paper towels. Do not squeeze the book to wring it out: this could cause the pages to stick together. Gently wipe mud or debris off the covers with a damp sponge, but don’t do this if it just spreads the dirt around and makes the problem worse.
2. Place blotters inside both covers, approximately the size of the book, or slightly larger.
3. Place pre-cut cardboard on the outside of both covers. Tie with white cotton tape (nothing colored which could stain) or rubber bands vertically and horizontally. Place the tie at the fore-edge.
4. Place the book in the freezer, lying down if possible, or standing up with bookends to hold it in place. Air space around the book is preferable, but it’s ok to load up the freezer if you have to. Don’t stack books on top of each other, though, since that could cause more damage to the binding or cause the paper to stick together.



Photo credit: Priscilla Anderson

Bound Volumes, boxed:

1. Remove any excess liquid with paper towels. Do not squeeze the book to wring it out: this could cause the pages to stick together. Gently wipe mud or debris off covers with a damp sponge, but don’t do this if it just spreads the dirt around and makes the problem worse.
2. Assemble a plastic Rescube (or cardboard box lined with a plastic garbage bag) and stand it up on one short end for loading. Wrap every other book with deli-wrap or waxed paper. Place books with the spine toward the bottom of the box to reduce distortion of wet bindings. Once a box is loaded, tip it into normal position to label the box and close it. Pad out any empty areas with non-absorbent material (bubble-wrap, etc.) to prevent items from shifting during transit.

Loose Pages:

1. As long as the items aren’t sticking to each other, it’s ok to freeze papers in their folders.
2. Place items in stacks that are 2” thick or less, inside a plastic bag, or with a plastic interleaf between stacks to facilitate later separation and drying treatment (they will be air-dried later).
3. Place stacks into the freezer lying down.

Photographs:

Caution: Archival photographs can be frozen, with the exception of glass plate negatives, daguerreotypes and other cased objects. Freezing fine art photographs should be avoided because of possible surface changes.

Plastic sleeves may be left in place during freezing.

1. Interleave with smooth, non-woven polyester sheets if possible, since sticking is more likely with photographs than with uncoated paper.
2. Place items in stacks that are 2” thick or less, inside a plastic bag, or with a plastic interleaf between stacks to facilitate later separation and drying treatment (they will be air-dried later).
3. Place stacks into the freezer lying down.

Audiovisual and Digital Media:

**Do not freeze.**

## Air-dry a Damp Book

Supplies needed:

* + Absorbent paper towels or rolls of paper
  + Fans to circulate air
  + Weights or bookends

Step-by-step instructions:

1.     Caution: Do not air-dry any **moldy** items. Double-bag and freeze instead.

2.     Open windows/doors if it’s a cool, dry day, or turn air-conditioning on cool (no heat) to dry out the air in the room.

3.     Spread absorbent paper on the table or floor space.

4.     If books are only slightly wet (<1/4” around edge and not in the gutter), stand them up, opened to a 90o angle and with the wettest end facing up. Prop open soft-cover books and pamphlets with bookends or weights.

5.     Interleave (especially if covers are damp but pages are pretty dry) with absorbent paper; check after 15 minutes and change interleaving whenever it becomes wet.

6.     Turn on a small fan to gently air-dry the items. Aim the fan above the books, not at them.

7.     Reassess after 2 hours, or sooner if there’s interleaving to change. Turn over books that are now dry on the top but still wet on the bottom. Change the absorbent paper below the books as needed. Continue to reassess every 4-8 hours for 48 hours.

8.     After a day or two, when the books are dry to the touch (slightly cool is ok), they may be brought to Conservation for pressing, to reduce permanent distortion of the paper. Not all books dry at the same rate, so some may need more time fanned out than others.

****

Photo credit: Catherine Badot-Costello

## Air-dry Unbound Documents (Loose Pages)

Supplies needed:

* + Absorbent paper towels or rolls of paper
  + Fans to circulate air
  + (optional) Sheets of polyester film to lift coated paper or support fragile papers

Step-by-step instructions:

1.     Caution: Do not air-dry any **moldy** items. Double-bag and freeze instead.

2.     Open windows/doors on a cool, dry day, or turn air-conditioning on cool (no heat) to dry out the air in the room.

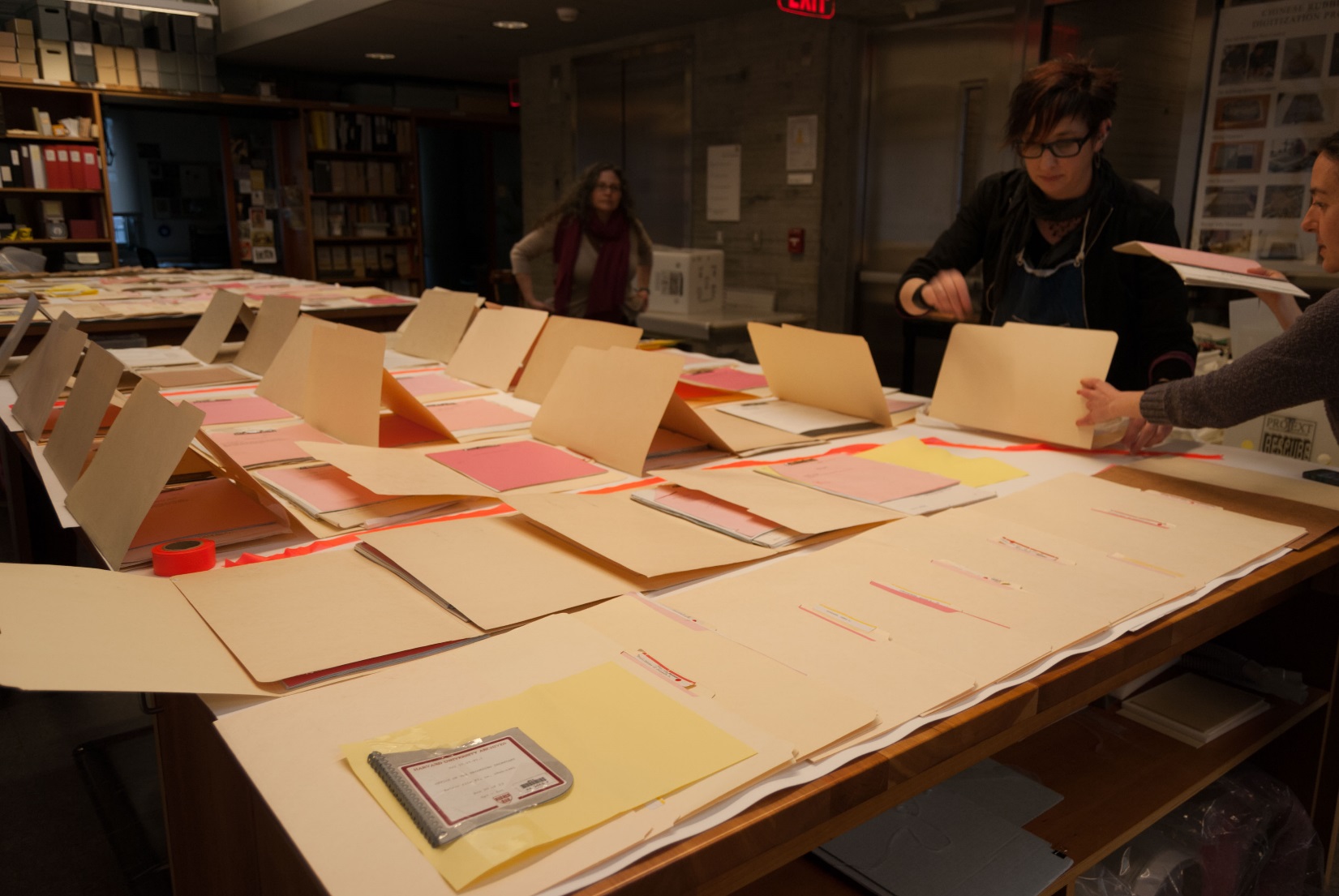
3.     If necessary, spread absorbent paper on the table or floor space.

4.     Decide whether to keep or toss folders and containers; make sure to keep identifying information with each folder or group of pages. Tear off or photocopy labels and any other identifying information.

5.     Keeping all documents in order and associated with their labels, spread them out in a line. Some overlap is usually necessary due to space limitations.

6.     Turn on a small fan to gently air-dry the items. Aim the fan above the pages, not at them. There should be no flapping of the pages in the breeze. Use glass jars as light weights.

7.     Assess frequently (every 15 minutes). Adjust the fanning position by flipping over the whole stack, keeping the order intact; or change the most exposed surface area. If tears start to develop or inks start to bleed, immediate conservation treatment is needed.



## Audiovisual Materials (film, tapes, records) and Optical Media Salvage (CDs/DVDs)

**Do not freeze.**

Consult LCET experts to assist in identification and assessment of audiovisual materials. Having this expertise is important because some AV formats may be air-dried; others must be sent to a vendor for cleaning/reprocessing; and still others might want one or the other depending on how wet they are.

## Solid State Digital Media (flash drives) and External Hard Drives Salvage

**Do not air dry or freeze**.

Double-bag in zippered plastic bag and express mail to electronic media recovery data recovery Vendor as soon as possible.

## Artwork Salvage

**Do not freeze.**

* Contact an art conservator as soon as possible. LCET (617-240-2500) has contact information for paintings and objects conservators. Or you may call the Harvard Art Museums Conservation Department (617-495-2392) or the 24-hour security station (617-495-4040) to contact the Harvard Art Museums’ emergency team.
* Unless the works of art are at risk of further damage (e.g., water is actively flowing on art), do not handle them until advised by an art conservator.
* Drape temporarily with plastic (preferably pre-cut to the right size) to prevent further water damage. Remove plastic when water stops flowing or at most within 48 hours so mold doesn’t grow.
* If paintings must be moved to prevent further damage, use the following procedure:   
  Carry the painting facing toward you, support the bottom of the frame with one hand, one vertical side with the other. Large paintings should be carried by two people, supporting the bottom and sides. Rest the paintings vertically on blocks at a slight angle against a wall. If vertical stacking is necessary, place a rigid sheet of cardboard between frames. Ideally, lean paintings back to back.

## Metal Objects Salvage

**Do not freeze.**

* Call the Harvard Art Museums Conservation Department (617-495-2392) or the 24-hour security station (617-495-4040) to contact the Harvard Art Museums’ emergency team.
* Instructions specific to **medals/medallions**: Remove wet medals from their envelopes and carefully dry with a soft cloth or paper towels, and then leave to air dry. Allow envelopes to air dry to preserve descriptions and cataloging information. Medals are less likely to suffer water damage than other materials in our collection. If left wet, iron medals are most susceptible to corrosion, next bronze, and finally, silver.

## Salvage Resource Links

**Harvard Library Preservation Services**

* <http://library.harvard.edu/preservation/emergency-preparedness>
* <http://library.harvard.edu/preservation/emergency-response>

**Smart Phone Apps**

* Emergency Response and Salvage Wheel App: <http://www.heritagepreservation.org/wheel/>
* Flashlight App

**Salvage information for many types of collections**

* Salvage at a Glance: <http://cool.conservation-us.org/waac/wn/wn19/wn19-2/wn19-207.html>
* Salvage Operations for Water Damaged Archival Collections: <http://cool.conservation-us.org/waac/wn/wn19/wn19-2/wn19-206.html>
* Library of Congress, Emergency Drying Procedures for Water Damaged Collections, 1998: <http://www.loc.gov/preservation/emergprep/dry.html>
* Northeast Document Conservation Center Preservation Leaflets: <http://www.nedcc.org/resources/leaflets.list.php>

**Books and paper salvage**

* Northeast Document Conservation Center Preservation Leaflets, “Emergency Salvage of Wet Books and Records”: <http://www.nedcc.org/free-resources/preservation-leaflets/3.-emergency-management/3.6-emergency-salvage-of-wet-books-and-records>
* Northeast Document Conservation Center Preservation Leaflets, “Emergency Salvage of Moldy Books and Paper”: <http://www.nedcc.org/free-resources/preservation-leaflets/3.-emergency-management/3.8-emergency-salvage-of-moldy-books-and-paper>
* Minnesota Historical Society, “Salvage Procedures for Wet Items: Books, Cloth or Paper Covers”: <http://www.mnhs.org/preserve/conservation/reports/book_cloth.pdf>

**Photographs Salvage**

* Conservation Center for Art and Historic Artifacts (CCAHA) online leaflet, “Disaster Recovery: Salvaging Photograph Collections: <http://www.ccaha.org/uploads/media_items/technical-bulletin-salvaging-photographs.original.pdf>

**Audiovisual materials (optical, magnetic, film) salvage**

* Iraci, Joe, Disaster Recovery of Modern Information Carriers: Compact Discs, Magnetic Tapes, and Magnetic Disks. Ottawa, Canada: Canadian Conservation Institute, 2002. Technical Bulletin 25. Hardcopy available for purchase from the Canadian Conservation Institute's online bookstore; pdf available for free download. <http://www.cci-icc.gc.ca/resources-ressources/publications/Downloads/TechnicalBulletins/Eng/TB25-DisasterRecoveryModern%20InformationCarriersCompactD.pdf>; <http://www.cci-icc.gc.ca/publications/index-eng.aspx>;
* Iraci, Joe, Remedies for Deteriorated or Damaged Modern Information Carriers. Ottawa, Canada: Canadian Conservation Institute, 2005. Technical Bulletin 27. Focus is on the results of everyday wear and tear, but some of those conditions may complicate salvage of media damaged by disaster. Covers optical discs, magnetic tapes and magnetic disks. Available for purchase from the Canadian Conservation Institute's online bookstore. <http://www.cci-icc.gc.ca/publications/index-eng.aspx>
* “Disaster Recovery for Films in Flooded Areas”, Association of Moving Image Archivists procedure developed following Hurricane Katrina in 2005, that outlines how to salvage home movies, but can also apply to any type of motion-picture film. Contains a list of labs equipped to do disaster recovery work. <http://amia.typepad.com/home_movie_recovery/>
* “Fire Affected Audio Materials”, National Film and Sound Archive of Australia. <http://www.nfsa.gov.au/site_media/uploads/file/2010/11/02/FireAffected_Audio.pdf>
* “Hurricane and Flood Recovery Advice: Magnetic Tapes Can Survive Flood Exposure”, SPEC BROS. Information sheet: <http://www.specsbros.com/h_flood.htm>

**Digital/Electronic Media Salvage**

* “Disaster Planning for Computers and Networks”:

<https://alair.ala.org/bitstream/handle/11213/258/DISASTER%20PLANNING%20FOR%20COMPUTERS%20AND%20NETWORKS%20.pdf>

**Textiles Salvage**

* “Salvaging Water Damaged Textiles”, American Institute for Conservation of Historic Works (AIC): <http://www.conservation-us.org/publications-resources/disaster-response-recovery/guides-and-information/salvaging-water-damaged-textiles>
* Minnesota Historical Society, “Salvage Procedures for Textiles and Clothing”: <http://www.mnhs.org/preserve/conservation/reports/textiles_clothing.pdf>

**Paintings Salvage**

* Emergency Treatment of Water-Damaged Paintings on Canvas - CCI Notes 10/5, Canadian Conservation Institute:

<http://www.cci-icc.gc.ca/resources-ressources/ccinotesicc/10-5-eng.aspx>