Appendix B

Mote Library and Archives Disaster Plan: Preparation, Aftermath, and Recovery

Introduction

This disaster plan covers both the Mote Library (2nd Floor) and the Mote Library’s special collections (Library, compact shelving, and archival room on the 3rd Floor) and will be updated every two years.

The disaster plan will:

- Cover both the Mote Library (2nd Floor) and the Mote special collections (Library, compact shelving, and archival room on the 3rd Floor).
- Be updated every two years.
- Be available online.
- Distributed to relevant staff and personnel including but not limited to:
  - Library staff and volunteers.
  - Mote’s emergency response team.
  - Mote’s Information Systems
  - Mote’s Security Department.
  - Mote’s Maintenance Department.
- Attempt to minimize damage to
  - Library staff and volunteers.
  - Collections and materials.
  - Infrastructure.
- Offer guidelines for:
  - Preparation.
  - Response.
  - Recovery.
  - Fire.
  - Hurricanes/severe weather/flood.
  - Damage to collections as a result of human activity (e.g. crime, theft, vandalism).

If a disaster occurs, this plan will be evaluated after recovery for effectiveness and updated as needed. Emergency preparedness measures for the Mote Library and its special collections include staff and volunteer familiarity with Mote Marine Laboratory’s Emergency Preparedness Plan.
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Section 1. Preparation Before a Disaster

1.1 Essential Contact Information as of 2011.

Library Director: Susan Stover (941) 388-4441 ext. 333 (office), (941) 923-1899 (home)

Mote Evacuation Control Team: Safety Committee Members (2011):
- Nate Brennan
- Greg Bryd
- Mike Collins
- Jim Culter
- Dean Dougherty
- Joyce Gaffney
- Joe Gaspard
- Krystle Harvey
- Mike Henry
- Barbara Meyer
- Jack Morris
- Sue Ryan
- Debbie Tidwell
- Chuck Traxler

MML Safety Officer: Earl Stockton (941) 302-4974 (cell), (941) 365-2345 (home)

MML Main Switchboard: (941) 388-4441

MML Hurricane and Storm Hotline: (941) 388-4334, 1-800-691-MOTE (6683), ext. 434

Fire Department: (941) 951-4211

Police Department: (941) 316-1199

Hospitals:
- Sarasota Memorial Hospital, 1700 S. Tamiami Trail, 34239, (941) 917-9000
- Doctor’s Hospital Sarasota, 5731 Bee Ridge Road, Sarasota, FL 34233, (941) 342-1100

EMS/Ambulance: 911

Poison Control Center: Toll-free hotline (1-800-222-1222) Florida Poison Information Center

Tampa General Hospital, PO Box 1289, Tampa, FL 33601

Sarasota Health Department: Sarasota County Health Department, 2200 Ringling Blvd, Sarasota, FL 34237, (941) 861-2900

Local Physician: St. Armand’s Medical Center, 500 John Ringling Blvd., Sarasota, FL, 34236, (941) 388-4408

County Disaster Preparedness: (941) 861-5508

County Evacuation Information: (941) 861-5000

Local Emergency Management Office: Sarasota Emergency Management, 1660 Ringling Blvd # 6, Sarasota, FL, 34236, (941) 951-5283

Local American Red Cross Chapter: American Red Cross, 2001 Cantu Court, Sarasota, FL 34232, (941) 379-9300

See Mote Facilities Department for the following issues:

Electric: (Mo Byron, Custom Electric)

Gas, water/sewer, and telephone: County utilities will handle downed trees immediately following a disaster

Trees: Andrews Tree Service is Mote’s arborist during long-term recovery.
Local Conservator(s):

Disaster Recovery Service/Company:
http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm

Servpro of North Sarasota: 6341 Porter Road, Suite 14, Sarasota, FL 34240,
servpro9144@verizon.net, Tel: (941) 365-4614 (http://www.servpro.com/ 1-800-SERVPRO)

Polygon Group
1-800-422-6379, Ken Jennet, Matt B., Central Florida office in Orlando: Brynn Summerlin (407) 492-1017 http://www.polygongroup.us

Document Reprocessors
1-800-437-9464, Eric Lundquist, Rochester, NY
http://www.documentreprocessors.com/books.htm

Document Restoration Services

BMS Cat
1-800-433-2940, Don Haggard, Ft. Worth, TX; FL

Midwest Freeze Dry
(847)-679-4756, Patrick B. King, Skokie, IL http://www.midwestfreezedryltd.com/

AIC-CERT (American Institute for Conservation-Collections Emergency Response Team). For 24-hour assistance, call (202) 661-8068. Less urgent questions can also be answered by emailing info@conservation-us.org.

Insurance Representative:
Mote Security:
Legal Issues:
Mote Communications/Media

Mote Financial Department
Mote Information Systems

Radio Stations (* = emergency power) AM: WSPB 1450, WAMR 1320*, WTMY 1280
Radio Stations FM: WCTQ 106.5*, WYNF 105, WKZM 104.3*, WSRZ 107.9*
Television Stations Sarasota: WWSB TV 40, SNN, Weather Cable 31
Television Stations Tampa: WFLA 8, WFTS 28, WTSP 10, WTVT 13
1.2 Vital Records and Priorities

Mote Library’s vital records are a protection and salvage priority. Emergency operating records should be easily accessible on-site such as policies and procedures, preservation plans, disaster plans, and inventories. Mote Library’s vital records include legal and financial records such as collection inventories, deeds of gift/donation forms, accession/deaccession forms, donation papers and ownership documentation for all Library and Special Collection items. Vital records may need to be duplicated and stored off-site as possible preparation measures. Vital records are essential to getting things up and running.
1.3 Supplies and Storage

A supply kit consisting of necessary items and a checklist will be kept in the front closet of the Mote Library. Additional equipment will be gathered prior to a disaster, such as tables and chairs, laptops, and other items that are normally used on a daily basis. If an item on the checklist is not suitable for storage in the front closet, the checklist will list its location. Refer to the safety setup of the salvage station for information on items such as portable restrooms, snacks for workers, drinking water, and other items that are impractical to keep in a disaster supply kit. These items will be obtained prior to recovery activities.

**Preparation/Response** items include:

1) A copy of this plan.
2) Instructional materials for staff and volunteers such as instructional wheels, booklets, and a DVD.
3) Essential contact lists, printout of vendors from state website (update every 6 months).
4) Floor plans.
6) Plastic sheeting and tarps.
7) Transport materials to move vital documents.
8) Plywood, plexiglass, rigid supports.
9) Library carts/dollies: *Stored in library and 3rd floor archives room.*
10) Generator and auto switchgear: *In place. Contact Maintenance with questions.*
11) Thermometer, hygrometer: *located in archives room on the 3rd floor.*
12) Cell phones.

**Recovery items include:**

**Command, First Aid, Documentation, and Rest Station**

1) Walkie talkies/two way radios
2) Antibacterial hand wash
3) Antimicrobial soap
4) Tape: caution, duct, and masking
5) Batteries and chargers
6) Name labels
7) Cash
8) Chairs and tables
9) Computer, printer, fax machine
10) Extension cords
11) Flashlights and emergency lights
12) Generator and Auto switchgear: *in place.*
13) Surge protector small, for computers
14) Plain copy paper
15) Office supplies- notepads, pencils, pens, labeling materials, posterboard, waterproof markers
16) Mops
17) Tape recorder
18) Eyewash and first aid kits: *in place on each floor. Check for damage prior to use after a disaster*
19) Toilet paper
20) Wet wipes
21) Scissors
22) Garbage bags
23) Snacks, non-perishable
24) Drinking water (1 gallon per person per day)
25) Cotton swabs
Salvage Station

1) Paper towels, rags, blotting paper, blank newsprint, absorbent materials
2) White cotton towels and sheets
3) Cheesecloth
4) Brushes with soft natural bristles (new paintbrushes)
5) Wet-dry vacuum
6) Vacuum with HEPA filter
7) Fans (floor and window)
8) Dehumidifiers
9) Plastic clips/clothespins/string
10) Canned air, air bulbs
11) Cameras for still and video, memory, batteries, chargers
12) Tables (portable)
13) Safety glasses
14) Rubber boots
15) Hard hats
16) Plastic aprons
17) Gloves, leather, rubber, latex
18) Tags
19) Plastic crates (milk crates)
20) Cardboard boxes
21) Bubble wrap and package paper
22) Garbage bags
23) Wax paper
24) Butcher paper
25) Sponges: regular, soot, and chemical
26) Scrub brushes
27) Water pumps
28) Wet vac
29) Mesh screening
30) Utility knives / boxcutters
31) Buckets
32) Clothesline/nylon string
33) Garden hose with spray
34) Respirators and masks (ANSI respirators- National Standards Institute, lowest particulate filter, N95, 3 microns and above will handle mold spores)
35) Wood pallets
36) Protective clothing (rubber boots, leather gloves, disposable overalls or plastic aprons)
37) Freezer bags- gallon & quart (mostly gallon)
38) Hair dryers
39) Polyethylene sheets & boxes
40) Plastic trays, photo trays, shallow dish pans
41) Distilled water
42) Cotton swabs
43) Washtubs (3-4)
44) Plexiglass plates
45) Polyester film

1.4 Education of Library and Archives Staff and Volunteers

Staff and volunteers are required to have read and be familiar with this Disaster Plan, Mote’s Emergency Preparedness Plan, both instructional wheels, the Heritage Preservation booklet, and have watched an instructional DVD on salvage techniques. These resources are located in the disaster kit on the 2nd floor in the front closet of the Library.
1.5 Responsibilities of Library and Archives Staff

Library and Archives staff should be aware of the roles they play before, during, and after a disaster. Library and Archives staff are responsible for being familiar with Mote’s Emergency Preparedness Plan and with the Mote Library Disaster Plan. This section outlines the pre- and post-disaster responsibilities of staff.

Pre-Disaster:

Staff is expected to have viewed the instructional DVD and viewed supplementary materials to prepare for a disaster. When a disaster hits, staff is responsible for securing the safety of library staff, volunteers, interns, and patrons, vital and high priority collection items, and infrastructure where possible. Prior to a disaster, a copy of Mote Marine Laboratory’s Emergency Preparedness Plan and the Mote Library Disaster Plan should be stored off-site with contact information, insurance information, inventories, and the supply kit located in the front closet of the library. If the disaster is unexpected, these items will be located in the front closet of the library.

People: Staff should follow and encourage others to follow all evacuation and safety orders of emergency personnel. Staff should provide assistance where needed to ensure everyone leaves the library safely, and should be aware of special patron needs such as disabilities or limited mobility.

Materials: Staff should cover shelving, cabinets, and storage units with plastic sheeting and waterproof tape for water, ash, or smoke disasters and remove vital and high priority records to a secure location, preferably off-site storage. Move items to water and wind resistant areas (away from lower levels and areas directly below a roof). Priority items should be moved to secure locations first, if possible.

Building: Staff should plywood windows if possible or install other hurricane preparation to windows and remove library related outdoor items that could damage building. If possible, library staff can assist maintenance in securing library and archives area.

Post-Disaster:

When returning to the site, follow all instructions by emergency personnel and the Mote personnel designated to organize overall operations. Only when designated Mote personnel and emergency management officials have cleared the area should staff return to begin triage and salvage operations.

Due to the limited staff available, the necessary roles have been combined into a two person team. The team leader (Library Director) will be responsible for contacting appropriate security, facilities, administrative, and financial personnel regarding the library and archives as well as supervising all recovery efforts. The other member of the team (the Archivist or other trained professional) is the assessment, triage, and salvage coordinator, who is also responsible for supplies, equipment, and documentation. If additional staff is available, tasks involving the supplies, equipment, and documentation may be devolved. Temporary labor may be utilized if
available at the discretion of the Library Director. The city police department of Sarasota is committed to a presence on City Island following a disaster to prevent looting. If possible, triage and salvage operations will take place either in the Mote Library or the Loomis Room.
Section 2. Response

2.1 Nature of the Disaster and Concerns

For all disasters, staff, volunteer, intern, and visitor safety is paramount and supersedes all concerns regarding collections and infrastructure. These disasters may overlap. For example, a hurricane may also bring flooding and power outages. Secondary results such as the growth of mold and pest infestations can result from interruption in the standard environmental conditions of the collections and should be considered a risk following most disasters. If salvage work is expected to take more than 48 hours, Library staff should consider calling in a disaster response company for assistance. Check with Mote Administration if insurance will cover costs such as disaster response, recovery, repair, and conservation treatments for collections and items. If not, Library Special Funds or other designated funds may be used for this purpose at the discretion of the Library Director.

Common disasters and their potential impacts on the collections are listed below.

- **Fire**
  - Soot, ash, charred or completely destroyed records, water or chemical damage from hoses and extinguishers.

- **Flood, water leak**
  - Water damage, heavy records, fragile, mold, dye transfer, rust, standing water, mud.

- **Hurricane**
  - Tornadoes, flooding, power outages, pests, mold, hazardous materials, lack of resources post-disaster, long-term difficulties acquiring equipment, supplies, and services, lack of storage space, difficulty maintaining environmental controls and organization, accessing location to salvage materials.

- **Tornado**
  - Wind damage, infrastructure damage, power outages, destroyed or displaced records, indirect disasters (flood, electrical, chemical), lack of storage space, difficulty maintaining environmental controls and organization, pests, mold, hazardous materials, lack of resources post-disaster, long-term difficulties acquiring equipment, supplies, and services, difficulty accessing location to salvage materials.

- **Human attack**
  - Misplaced, lost or stolen records, fire, hazardous materials present-explosions could disintegrate and destroy records, power outages, bomb threats, biological and chemical hazards (toxic fumes) etc.
2.2 Mote’s Guidelines

All library staff, volunteers, and interns should be familiar with Mote’s Emergency Preparedness Plan for the current year. Staff should be able to follow general procedures for a disaster and know who to report to. Staff should be familiar with the procedures for the various scenarios as well as procedures for re-entry and who to contact before, during, and after the disaster.

2.3 Policies for Staff

In the case of a hurricane, all staff should abide by Mote Marine Laboratory’s Emergency Preparedness Plan. All non-essential personnel may be required to leave the facility prior to essential personnel. Staff should leave prior to winds reaching 35mph in order to cross bridges safely. Staff should be aware that once they leave City Island, it is impossible to ascertain when they will be allowed back on the island.

In the case of a sudden evacuation:

1) When evacuation order/alarm is heard, save and/or shut down essential or hazardous operations.
2) Follow posted signs, verbal commands, and evacuation routes.
3) Assist disabled persons and those with difficulty leaving the building.
4) Progress in a calm, orderly way.
5) Move away from the building to the designated assembly area.
6) Report for head count, remain quiet, and follow instructions.
7) Do not block street or drive for emergency vehicles.
8) Do not return to the building unless instructed to do so.

In case of a small fire, staff should attempt to put the fire out. If staff cannot contain the fire, or the fire appears to be uncontrollable, staff should call the fire department and alert other staff. When the fire alarms sound, follow the procedures for evacuation. There are 2 fire extinguishers located within the Mote Library: one by the front closet (to the left of the front library entrance) and one by the back thermostat near the long table (to the left if walking toward the back table from the main library entrance). Fire extinguishers on the third floor for the archival room are located immediately to the right of the door to the office area, Room 311, and in the hallway directly opposite the door to the back stairwell. There are sprinklers in the library, which will go off automatically when smoke is detected, but not for a fire alarm.

2.4 Policies for Materials

Prior to a disaster, all electronic files should be either stored off-site with the Library Director or backed up by Mote’s Information Systems department. Valuable items should be moved away from windows, if possible, and the Library Director may choose to remove and store vital records off-site with appropriate documentation. All accession and ownership records, inventories, manuals and plans should have copies stored off-site, but some originals may also warrant off-site storage. Remaining library and archival materials and any computer equipment
not handled by IS should be covered with plastic sheeting located in the front closet on the 2nd floor. Each sheet is marked to show where it should be placed.

The archival materials housed on the third floor may be condensed onto fewer shelving units and covered with plastic sheeting. Most of the boxes are water resistant but sheeting should be done in such a way as to avoid pooling of water on shelves. Archival materials should remain in the archival room unless conditions require the materials be moved, or the Library Director deems it advisable.

If, for some reason, it does become necessary to move the archival materials out of the archival room, a grey cart is stored there that can be used to transport materials. There are three sets of archival shelving on the third floor in the archives room. One set has wheels so the shelving can be moved. Unscrew the 4 upper post and lift off the top 2 shelves and the unit will become like a cart. Archival materials can then be moved out of the room. The other shelving unit has a set of wheels-located in the library front closet. Empty the shelves and turn the shelving on its side and unscrew the 4 lower posts. Then unscrew the bottoms of the 4 lower posts and insert a metal pipe down the post from the top. This should cause the metal insert to pop out. Then insert the wheels with the plastic bumper on top. Follow instructions above to move shelving.

2.5 Infrastructure

If a disaster has rendered Mote unable to provide adequate space for triage and salvage work, an alternate off-site location should be available. Ideally, initial salvage work should take place as near to the Mote Library as possible (e.g. Loomis Room) for convenience to staff and to prevent further material damage. After triage, some records may be moved to other locations for air drying, freezing, etc. Documentation such as the item’s initial location, catalog or item information, damage, and destination should be included before moving items.
Section 3. Recovery

3.1 Safety and Setup of Secure Salvage Area

Once the area has been cleared, the Library Director may set up a base for staff and volunteers stocked with water, snacks, and equipment, as well as a salvage area within or as close to the library as possible which will serve as a base for triage and recovery activities for materials. If the Library is not able to be used for this purpose, another location will be sought where temperature and humidity can be controlled, and sufficient work space is available for air drying.

Once department heads have been allowed on-site to conduct their initial assessment, the Library Director may call in library staff. Ideally, library staff will be available to assist the Library Director. The Library Director may also accept volunteers if they are currently volunteers at Mote. Ideally, volunteers will have been trained in disaster recovery procedures (e.g. have read Mote’s Emergency Preparedness Plan, have read the Mote Library Disaster Plan, and have watched the instructional DVD). The Library Director may also accept temporary labor approved by Mote Marine Laboratory if necessitated. First responders to the Library following a disaster should have the following: a buddy, security and safety clearance, keys to access all parts of the collections, camera, and a form of communication.

*Five C’s: Clearance, Companion, Collection Access, Camera, and Communication.*

3.2 Documentation

Before proceeding, fill out a field assessment form and take photographs of the disaster area. Field Assessments take place prior to triage and salvage work. They should be conducted by library staff, if possible. Once the area has been cleared, field assessments may be completed. They are meant to give a broad idea of the nature and extent of damage to the collections and infrastructure. The field assessment will provide the groundwork for setting up a triage and salvage area, and establish what areas of the collection to focus on first, and what kind of salvage will need to take place.

As triage and salvage take place, document what activities take place and who performs what tasks. Before moving an item, note where the item is found, what the item is, and the nature and extent of the damage. Also note where the item is going. Once at the salvage station, document the proposed course of action for each item, and take pictures throughout the process.

(See Appendix F, Forms, for the Field Assessment Form, Salvage Form, and Disaster Supply Checklist.)
3.3 Insurance Information and Funding

Have the person responsible (Dena Smith, CFO) contact Mote’s insurance company before beginning salvage work. Send photographs of the disaster area and the collections if possible.

For FEMA grants: [http://www.heritagepreservation.org/federal/Index.html](http://www.heritagepreservation.org/federal/Index.html)

Contact the insurance company after the initial evaluation, take photographs before and after a disaster, and during recovery steps. Call insurance company prior to calling in an outside salvage company if library staff cannot perform salvage work. Whoever contacts the insurance company should have the following information regarding the Library available:

- Contact name/phone
- Team leader name/phone
- Cause of incident
- Kind of damage
- Where/when damage discovered
- Extent of damage
- Steps taken to prevent further damage

3.4 Media

Allow only designated Mote staff to respond to media requests regarding the disaster. Do not allow media on site while conducting initial response and triage.

3.5 Triage

Based on existing records that note collection priorities, establish priorities for salvage after a disaster based on the following: the item’s importance to the institution and collections (vital or essential records), valuable, rare or irreplaceable records, hazardous, most severely damaged records, time-sensitive damage (things that will mold quickly, bleeding dyes), and items where in-house salvage is possible.
Sort items for salvage, cleaning, disposal, or freezing to be dealt with later. If the type of damage requires professional attention, wrap items in wax paper and freeze them until a conservator can look at them. Mark boxes or areas with color coded sticker for categories, such as to be frozen for later, to be air dried, to be rinsed, no action needed, to be evaluated for deaccession/disposal, etc. Categories can be established during triage to reflect the nature and extent of the damage.

3.6 Step-by-Step Procedures for Salvaging Damaged Materials

3.6.1 Overview

**In a nutshell:** If the items can be moved safely, use carts and dollies to remove items from the disaster area to the triage and salvage area. Human chains can also be formed if feasible.

- If materials are dirty, muddy, or wet with salt water, they can be carefully rinsed (books stay closed) in distilled water. Distilled water is preferable for this purpose because it has no ions and minerals that may adversely affect damaged archival materials during cleaning.
- Damp books can be air dried if space and conditions allow by standing them with their pages fanned out.
- An electric fan can provide air circulation without blowing directly on the books and a dehumidifier in the work area will help prevent mold.
- For ‘coated’ pages such as magazines, interleaving is also an option for wet books, though it can be time consuming. Interleave a paper towel or piece of plain blotting paper every 5-25 pages depending on the size of the item to absorb moisture.
- If the item is valuable, old, wet, or too damaged to be air dried, or if air drying is not an option, books should be frozen until a conservator can look at them or until they can be dried safely. To prepare items for freezing, wrap them in wax paper so they do not stick together and pack them into milk crates so water does not pool in the box. Then freeze books at 20° F or below to deal with later. Dry ice can be used temporarily.
- For CDs, DVDs, and most film, rinse in distilled water and hang to dry on a clothesline, using a piece of wax paper to shield the item from the clothespin, or tie the items like CDs or DVDs onto the line with string.
- Air-dry photographs flat whenever possible without allowing puddles to form or damaging the wet emulsion layer. Most film and photos can be rinsed in distilled water if done carefully. Use a piece of plexiglass to support photos when rinsing and lay flat to dry without touching the emulsion layer.
- To remove mold, work outside if possible and wear an ANSI or NIOSH respirator. Active mold is fuzzy and will smear, where inactive mold is dry and powdery. Do not attempt to remove active mold, and do not touch or breathe in mold. Use a HEPA vacuum (contact Facilities Department for a vacuum with a HEPA filter) brush with the nozzle covered in small weave cheesecloth to gently remove dead mold spores. Do not attempt to handle moldy items if you have respiratory conditions.
3.6.2 Photographs

The following information was taken from the NEDCC’s preservation leaflet *Emergency Salvage of Wet Photographs* by Gary Albright.

“Photographs made by the following processes should be salvaged first: ambrotypes, tintypes, collodion wet plate negatives, gelatin dry plate negatives, lantern slides, deteriorated nitrate or safety film, autochromes, carbon prints, woodburytypes, deteriorated or unhardened gelatin prints, and color materials. Photographs made by many of these processes will not survive immersion. Photographs that are more stable in water include: daguerreotypes, salted paper prints, albumen prints, collodion prints, platinum prints, and cyanotypes.”¹

**Air Drying Photographs:** If personnel, space, and time are available, photographs can be air dried. Separate photographs from their enclosures, frames, and from each other. If they are stuck together or adhered to glass, set them aside for freezing and consultation with a conservator.

- Allow excess water to drain off the photographs. Spread the photographs out to dry, face up, laying them flat on an absorbent material such as blotters, unprinted newsprint, paper towels, or a clean cloth.
- Keep the air around the drying materials moving at all times. Fans will speed up the drying process and minimize the risk of mold growth.
- Negatives should be dried vertically. They can be hung on a line with plastic clips placed at the edges.
- Photographs may curl during drying. They can be flattened later.

**Freezing Photographs:** If immediate air drying of photographs is not possible or if photographs are stuck together, freeze them. Air drying of photographs is preferable.

- Wrap or interleave photographs with waxed paper before freezing.
- Interleave or wrap individual photographs or groups of photographs before freezing with a non-woven polyester material or waxed paper. This will make them easier to separate when they are eventually treated.

**Drying Frozen Photographs:** Frozen photographs are best dried by thawing, followed by air drying. As a stack of photographs thaws, individual photographs can be carefully peeled from the group and placed face up on a clean, absorbent surface to air dry.

- Vacuum thermal drying, where the frozen material is thawed and dried in a vacuum, is NOT recommended for photographs. Gelatin photographs undergoing this procedure have a tendency to mottle severely and stick together.
- Wet collodion glass plates must NEVER be freeze dried; they will not survive. This is also true for all similar collodion processes such as ambrotypes, collodion lantern slides, and tintypes.”¹

3.6.3 Wet Books and Paper

The following section was taken from NEDCC’s preservation leaflet *Emergency Salvage of Wet Books and Records*.

“If the water is sewage-contaminated, call in a professional recovery service immediately - *do not deal with the salvage in-house*. If the water is only contaminated by rust, mud, or salt water, rinsing wet books and records before freezing helps by removing debris that could be difficult to clean off after drying. If both trained labor and time are available for this step, set up three or four bins of clean water (preferably distilled). Holding books tightly closed, dip them gently in the water. Moving each book from bin to bin will expose them to successively cleaner water and remove much of the debris. Over time, make the last two bins the first two, replace the dirty water in the first two bins, and make these the bins for final rinses. If records are mud-covered, rinse by supporting the records on a piece of plexiglass or other rigid, inert support and rinse with a gentle stream of water from a hose or pitcher. Do not rinse if the inks are soluble; freeze immediately, mud and all.

Select the technique that will minimize physical damage (cockling of paper, warping of covers, and distortion of the binding) and bleeding of soluble inks and colorants. For example, in the case of a burst pipe, wet materials may be frozen and sent to a professional recovery company for vacuum freeze-drying, slightly wet materials may be air dried, the affected area is isolated, and the building, furnishings, and damp materials are dried by commercial dehumidification. At the same time that the environment is being stabilized, wet books and records should be sorted and then treated according to degree of wetness. Degrees of wetness can be considered with these main categories in mind:

- **Dry** materials are often overlooked in a disaster. They must be removed from the affected area if environmental conditions are not addressed immediately. Otherwise, they too will quickly become susceptible to mold growth.

- **Damp** materials are cool to the touch. Exposed to high humidity, they can sometimes be identified after the event by mold formation.

- **Slightly wet** materials exhibit staining to the textblock, binding, folder, or pages no more than one-half inch in from the edges. These areas will have been in immediate contact with water.

- **Wet** materials exhibit staining more than one-half inch in from the edges, up to saturation.

**Air drying** is the most common in-house method of dealing with water-damaged books and records. It is best suited for small numbers (less than 200) of damp or slightly wet books and documents. Because it requires no special equipment, it is often believed to be an inexpensive method of drying. However, air drying is labor intensive, occupies a great deal of space, diverts many hours of staff time to regularly monitor the process, and often results
in a distorted finished product. Due to the time required for air drying and the potential for mold growth, it is not an option for a large-scale disaster. It is also not an option for books with coated paper. The rehabilitation costs after air drying tend to be greater than other methods because most bound materials require some form of treatment, from pressing to full rebinding; documents often need flattening and rehousing. An additional consequence of air drying is the extra amount of shelf space required for collections when they are returned to the stacks. Depending upon how successfully wet materials are stabilized and dried, the amount of additional shelf space required after drying can be 20% or more.

Drying by **dehumidification** with large, commercial desiccant systems allows for drying while collections, equipment, and furnishings are left in place. Temperature and humidity are carefully controlled to specifications. This drying method has the advantage of leaving damp collections in place on the shelves and in storage containers, eliminating the costly step of removal to a freezer or vacuum chamber. It is not recommended for coated papers or water-sensitive inks and pigments. The number of items that can be treated with dehumidification is limited only by the equipment and expertise of the company called in to install it. Dehumidification is most often used in conjunction with other drying methods and for stabilizing the building and environment. Home dehumidifiers are not strong enough to reduce a building’s humidity and thus are not a viable option.

**Freeze drying**: Books and records that are damp or slightly wet may be dried quite successfully in a frost-free or blast freezer, if left there long enough. The temperature in the freezer must be maintained at or below -10° F. Books and stacks of records will dry with less distortion if they are restrained between unprinted, clean corrugated board wrapped with a strong elastic band, which will help reduce cockling. Leather and parchment/vellum bindings can be dried in this manner as well. Documents may be placed in the freezer in stacks; shorter stacks allow for faster drying. Expect this method to take from several weeks to many months, depending upon the temperature of the freezer and the extent of water damage. If items are placed in the freezer soon after becoming wet, added shelf or storage space following drying will be less than for air-dried materials. Freeze drying will cause more harm than water for some commonly held non-book materials. Do NOT freeze the following:

- Audio, video, and computer tapes – Air dry if just the outermost foot or two of tape is damp, or keep them wet until they can be sent to a professional recovery company no later than two days after salvage.
- CDs and DVDs – Air dry in a single layer; rinse first if the water was dirty or salty.
- Ambrotypes, daguerreotypes, or tintypes – Air dry in a single layer and immediately consult a photograph conservator for advice and assistance.

**Vacuum Freeze-Drying** is best suited for large numbers of wet books and records as well as for materials with water-sensitive inks and coated paper. Boxes of frozen books and records are placed in a vacuum chamber. A vacuum is pulled and a source of heat is introduced while the overall temperature remains below 32° F. The materials are dried by a process called sublimation; the water in the solid state (ice) is removed from the materials in a gaseous state without passing through the liquid state. Thus there is no additional wetting to cause
distortion beyond that incurred before the materials were frozen. If materials have been stabilized quickly after becoming wet, very little extra shelf or storage space will be required when they are dry. Although this method may initially appear to be more expensive because of the equipment required, the results are often so satisfactory that additional funds for rebinding are not necessary, and mud, dirt, and/or soot are lifted to the surface, making cleaning less time-consuming. If only a few books are dried, vacuum freeze-drying can be expensive. However, companies that offer this service are often willing to dry one client's small group of books with another client's larger group, reducing the per-book cost and making the process affordable. When dealing with commercial vendors for drying, communicate clearly from the beginning about costs, handling, and expectations.

**Vacuum Thermal-Drying IS NOT RECOMMENDED.**

**How to Air Dry Wet Records:**

Air drying is most suitable for small numbers of records that are damp or slightly wet. If there are hundreds of single pages, or if the records are wet, professional dehumidification, freezing, or vacuum freeze-drying will be cost effective and result in a better end product. As explained above, stacks of documents on coated, or shiny, paper must be frozen immediately. If they cannot be frozen, separate the sheets immediately to prevent adhesion. Again, care must be taken with water-soluble inks as well. Records with running or blurred inks should be frozen immediately to prevent further loss. After the items are frozen, contact a conservator for advice and assistance.

If air drying is selected as the preferred salvage method, use the following steps. Note that wet paper is extremely fragile and easily torn or damaged, so handle these materials gently.

- Identify a clean, dry, secure space where the temperature and humidity can be controlled. Reduce the relative humidity as low as you can to prevent mold and improve drying capabilities.
- Keep the air moving at all times using fans in the drying area. This will accelerate the drying process and discourage mold growth. Aim fans to direct the airflow parallel to the drying records. DO NOT point the fans directly at the records!
- Single leaves can be laid out on tables, floors, and other flat surfaces protected by paper towels or clean, unprinted newsprint.
- Once dry, records may be rehoused in clean folders and boxes, or they may be photocopied or reformatted in other ways. Dried records will always occupy more space than ones that have never been water damaged.

**How to Air Dry Wet Books:**

Air drying is most appropriate for books that are only damp or slightly wet. Books that are wet — and especially books that are saturated — should be frozen and vacuum freeze-dried to minimize cockling of the pages and distortion of the text block and binding. Remember that books containing coated paper should be frozen while still wet and then vacuum freeze-
dried, and books with running or blurred inks or colorant must be frozen immediately to preserve the contents.

- Identify a clean, dry, secure space where the temperature and humidity can be controlled. Reduce the relative humidity as low as you can to prevent mold and improve drying capabilities.
- Keep the air moving at all times using fans in the drying area. This will accelerate the drying process and discourage mold growth. Aim fans to direct the airflow parallel to the drying volumes. DO NOT point the fans directly at the books!
- If the book is damp or the edges of the book are only slightly wet, the book may be stood on end and fanned open slightly in a space with good air circulation, but again, do not aim fans directly at the books. To minimize distortion of the edges of the text block, place volumes in a press or press under a board with a weight just before drying is complete. Paper- or cloth-covered bricks work well for weights.
- If the book is slightly wet, interleave approximately every 16 pages, starting from the back of the book, turning pages carefully. For interleaving, use paper towels or clean, unprinted newsprint. Do not interleave too much or the spine will become concave and the volume distorted. A good rule of thumb is to insert no more than one-third of the number of text pages. Complete the interleaving by placing clean blotter paper inside the front and back covers. Close the book gently and place it flat on several sheets of absorbent paper. Change the interleaving and absorbent paper frequently. Turn the book from front to back each time it is interleaved.
- Dampness will persist for some time inside the book in the gutter, along the spine, and in the boards. Due to their thickness, the boards retain moisture much longer; mold is often found between the boards and flyleaves if the book is not allowed to dry completely. Check for mold growth frequently while books are drying.
- When books are dry but still cool to the touch, they should be closed, laid flat on a table or other horizontal surface, gently formed into their original shape, and placed in a press or held in place with a board and weight. Press overnight and set up to dry during the day and repeat until books are dry. In no case should books be returned to the shelves until thoroughly dry; otherwise mold may develop, particularly along the gutter margin.
- If you can establish an air-conditioned room capable of maintaining a constant relative humidity of 25% – 35% and temperature between 50° and 65°F, books with only wet edges can be dried successfully in approximately two weeks without interleaving. As stated earlier, exceptions are books printed on coated paper and those with water-sensitive media.”

3.6.4 Moldy Items

The following section has been taken from the NEDCC’s preservation leaflet, Emergency Salvage of Moldy Books and Paper, by Beth Lindblom Patkus.
“Reducing the humidity is essential to stopping the mold growth. Do not turn up the heat. This will not help to dry out collections and storage areas. Additional heat in the presence of moisture will cause the mold to grow faster. If collections are wet, dry or freeze them. **Mold will normally grow on wet materials in about 48 hours** (sometimes sooner). If you know you cannot get the affected material dry within 48 hours, it is best to freeze it. This will not kill the mold, but it will stop further growth until you have a chance to dry and clean the material.

Consider the health risks. A few mold species are toxic to people, and many molds are powerful sensitizers. Exposure to mold can lead to debilitating allergy even among people not prone to allergies. Everyone who works with moldy objects must be properly protected. "Quick cures" that you may have heard about (such as spraying Lysol on objects or cleaning them with bleach) may cause additional damage to items or be toxic to people; they are also often ineffective. In the past, mold-infested collections were often treated with fumigants. Ethylene oxide (ETO) will kill active mold and mold spores; other chemicals that have been used are less effective. All of these chemicals can have adverse effects on both collections and people, and none of them will keep the mold from recurring.

1. **Find out what is causing the mold growth.** You need to know what is causing the problem so that additional mold on collections not yet affected can be avoided.
   - Look first for an obvious source of moisture, such as a water leak.
   - Measure the relative humidity in the affected area. If the humidity is elevated, there might be a problem with the HVAC (heating, ventilating, and air conditioning) system, or the area might be subject to higher humidity for another reason, such as having shelves placed against an outside wall. Mold might also develop in areas with poor air circulation or in areas where there is a lot of dust and dirt that might provide a food source for mold.
   - Initiate repairs or resolve the problem as soon as possible. If the problem cannot be resolved quickly, salvage the collections and develop a strategy for frequent monitoring of the area for additional mold growth.

2. **Take steps to modify the environment so it is no longer conducive to mold growth.**
   - Mop up and/or use a wet-dry vacuum to remove any standing water. Bring in dehumidifiers, but be sure that a mechanism is in place to drain them periodically so they do not overflow. Bring in fans to circulate the air, and open the windows (unless the humidity is higher outside).
   - Reduce the relative humidity to 55% or lower. Temperature should be moderate, below 70°F. Get a monitoring instrument that can measure the relative humidity and temperature accurately, and record the measurements in a log several times a day.

3. **Implement safety precautions for staff and others working with moldy items.**
   - A mycologist should be consulted to insure that no toxic mold species are present (a local hospital or university should be able to provide a reference). If toxic molds are present, **DO NOT attempt to salvage materials yourself**.
   - If there are no toxic molds present, collections can be salvaged in-house, but everyone working with the affected materials must wear disposable plastic gloves and clothing, and use a protective mask when working with moldy objects.
Use a respirator with a HEPA (high efficiency particulate) filter; pollen dust masks available in drug and hardware stores are not adequate. If you cannot use disposable clothing, be sure to leave dirty clothes in a designated area and wash them in hot water and bleach. Respirators should be wiped periodically with rubbing or denatured alcohol.

Be aware that some people cannot wear respirators. The respirator must fit well with good contact around the nose and mouth area. In addition, they make breathing somewhat difficult and can be problematic for people with asthma or heart conditions, or people who are pregnant. It is a good idea to consult your doctor before wearing a respirator to work with moldy materials.

4. **Isolate the affected items.**
   - Quarantine items by removing them to a clean area with relative humidity below 45%, separate from the rest of the collection. Items should be transferred in sealed plastic bags to avoid transfer of mold to other items during the move, but they should not remain in the bags once in the clean area, since this will create a micro-environment that can foster further mold growth.
   - In the case of a large mold outbreak it may be impractical to move the items; in that case the area in which they are housed should be quarantined and sealed off from the rest of the building to the extent possible (remember that this includes shutting off air circulation from the affected area).

5. **Begin to dry the materials.** Your goal is to make the mold go dormant, so that it will appear dry and powdery rather than soft and fuzzy. This will allow you to remove the mold residue more easily.
   - Wet material should be dried in a cool, dry space with good air circulation. An air-conditioned space is the best for this purpose, but if that is impossible, use fans to circulate air (do not aim fans directly at objects, however, as this can damage materials and further scatter mold spores). Place paper toweling or blotter paper (do not use paper with print as it may transfer print to the wet objects) under the drying items to absorb moisture, and change this blotting material often. Air drying takes time and attention, since you must check drying materials often, and you must maintain cool, dry conditions and air circulation in the space.
   - Collections may also be dried outside in the sun (sunlight or ultraviolet light can cause some molds to become dormant). The outside humidity must be low. Be aware that the sun causes fading and other damage to paper-based collections, however. Materials should be monitored closely and left outside no more than an hour or so.
   - Special attention should be paid to framed objects (such as prints and drawings) and to the interior of the spines of books. A frame provides an ideal environment for mold; the back is dark, air does not circulate, and humidity can be trapped inside. Similarly, the interior of the spine of a book is particularly vulnerable to mold growth. Spines should be checked regularly during the drying process. Framed materials should be unframed immediately, and dried as above. If the item appears to be stuck to the glass in the frame, remove the backing materials from the frame and leave the item in the frame and attached to the glass. Place the
6. **If immediate drying is not possible, freeze the affected items.**
   - If the item is small enough, it can be placed in the freezer compartment of a home refrigerator, with freezer paper loosely wrapped around it to prevent it from sticking to other items.
   - For items that are too big for a freezer compartment or for larger numbers of items, a commercial freezer may be necessary (grocery store, university food service, commercial cold storage facility, etc.). It is a good idea to make arrangements for commercial freezer storage before an emergency arises, since there may be restrictions on storing moldy items in a freezer that normally holds foodstuffs.
   - Once time and resources are available, frozen materials can be thawed and dried in small batches, or they can be freeze-dried or vacuum freeze-dried (with the exception of photographs, which should not be freeze-dried or vacuum freeze-dried).

7. **Clean the affected items. *DO NOT* try to clean active mold (soft and fuzzy) yourself.**

   This should be done only by a conservator, who will use a vacuum aspirator to avoid further embedding the mold into the paper. The following instructions apply only to inactive (dry and powdery) mold.
   - Remove mold residue outdoors rather than in an enclosed space whenever possible. Be sure to wear protective gear (see above). If you must work indoors, use a fume hood with a filter that traps mold or in front of a fan, with the fan blowing contaminated air out a window. Close off the room from other areas of the building (including blocking the air circulation vents).
   - Vacuum the mold. Use a vacuum with a HEPA filter - this will contain the mold spores. A normal vacuum will simply exhaust the spores out into the air. You can also use a wet-dry commercial-strength vacuum if the tank is filled with a solution of a fungicide such as Lysol diluted according to the label instructions. A tube from the hose inlet should extend into the solution so that incoming spores are directed there.
   - Do not vacuum fragile items directly, since the suction can easily cause damage. Papers can be vacuumed through a plastic screen held down with weights. A brush attachment covered with cheesecloth or screening should be used for books to guard against loss of detached pieces. Boxes can be vacuumed directly. When disposing of vacuum bags or filters, seal them in plastic trash bags and remove them from the building.
   - It is also acceptable to clean off mold with a soft brush, but this must be done carefully. Once moldy material is dry and the residue appears powdery, take a soft, wide brush (such as a watercolor wash brush) and lightly brush the powdery mold off the surface of the item. This should be done outside or the mold should be brushed into a vacuum nozzle. Be careful not to rub the mold into the surface, since that will attach it permanently to paper fibers or the cover of a book.
8. **Dry and thoroughly clean the room(s) where the mold outbreak occurred.** You may do this yourself or hire a company to provide dehumidification and/or cleaning.
   - Vacuum shelves and floors with a wet-dry vacuum filled with a fungicide solution such as Lysol, then wipe them down with Lysol or a similar solution. Allow them to dry fully before returning any materials. If a musty odor lingers in the room, open containers of baking soda may help.

9. **Return materials to the affected area.** Do this *only* after the area has been thoroughly cleaned *and* the cause of the mold outbreak has been identified and dealt with.

10. **Continue to monitor conditions and take steps to avoid additional mold growth.**
   - Take daily readings of temperature and relative humidity, and be sure that the climate is moderate. It is particularly important to keep humidity below 55% to insure that mold will not reappear. Temperature should not exceed 70°F.
   - Check problem areas frequently to insure that there is no new mold growth. Be sure to examine the gutters of books near the endbands and inside the spines.
   - Clean floors with a HEPA filter vacuum rather than sweeping, since sweeping scatters dust. Vacuum shelves and the tops of unboxed, shelved books, or clean them with a magnetic wiping cloth.
   - If funds permit, install a multi-stage particulate filtration system in the building or storage area.
   - Keep windows closed to prevent active spores from entering, and prohibit live plants in collection storage or use areas, since these are also a source of spores.
   - Quarantine new acquisitions for a few days, and check them carefully for signs of mold.
   - Avoid storing collections in potentially damp areas or in locations where water accidents are possible.
   - Regularly clean the heat exchange coils, drip pan, and ductwork. Change air filters frequently.”

### 3.7 Post-Recovery

- Make sure the storage areas are free of moisture, debris, and mold before returning cleaned and salvaged items.
- Maintain disaster paperwork to show what actions were taken on the materials, for insurance purposes, and to help solve any questions that may arise from misplaced items.
- Monitor closely for mold and pests regularly for a year. Active mold is fuzzy and will smear, where inactive mold is dry and powdery. Do not touch or breathe in mold.
- Damaged records frozen after a disaster can receive conservation attention when time and resources permit. Ideally, items frozen should receive attention within 4 years. Seek help from a conservator for frozen items unless damage is minimal and you have the space to thaw and air-dry yourself.
- Watch carefully for mold and prepare to accommodate dried materials with additional shelf space.
- Be prepared to deaccession items beyond repair or usefulness where collection policy allows.
Section 4. Resources

4.1 Floor Plans, Checklists, Assessment Sheets

Copies of the following can be found in Mote Library’s disaster preparedness kit located in the front closet on the 2nd floor:

- Mote Marine Laboratory campus map
- Main Lab floor plans
- Collection Inventories
- Disaster supply checklist
- Field Guide Assessment Form
- Salvage Form
- Spiral bound *Field Guide to Emergency Response* by Heritage Preservation with DVD
- Emergency Response and Salvage (instructional) Wheel

Originals of the following can also be found in Appendix F:

- Disaster supply checklist
- Field Guide Assessment form
- Salvage form

4.2 Contact Information for Additional/supplementary Staff

Library Director: Susan Stover (941) 388-4441 ext. 333 (office), [Redacted]
Erin Mahaney, Archivist, [Redacted]
Lisa Naidoo, Research Librarian, [Redacted]
Current Volunteers

4.3 Contact Information for Recovery Vendors

Local Conservator(s): Marcela Estevez, [Redacted]. Also check the American Institute of Conservators website and the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors.
http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm

Dehumidification service: Servpro of North Sarasota: 6341 Porter Road, Suite 14, Sarasota, FL 34240, servpro9144@verizon.net, Tel: (941) 365-4614 (http://www.servpro.com/ 1-800-SERVPRO). Also check the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors.
http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm
**Freeze drying service:** Marcela Estevez, Servpro (see above contact info). Also check the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors. [http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm](http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm)
Sample Florida vendor: *Disaster Services, Inc.*, 7703 Kingspointe Parkway, Suite 900, Orlando, FL 32819 Phone: 407.351.7750, [http://www.disasterservices.com](http://www.disasterservices.com)

**Film/magnetic media restoration:** Contact Mote’s current Manager of Video Services or local conservator. Also check the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors. [http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm](http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm)

**Mycologist (mold person):** Contact Mote’s Safety Officer or local conservator.

**Refrigerator/freezer trucks, freezer space:** Check the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors. [http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm](http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm)
Sample Florida Vendor: *Burris Logistics* at
10900 Central Port Drive, Orlando, FL 32824, Phone: 407.852.7200, Fax: 407.859.6419
1110 County Line Road, Lakeland, FL 33815, Phone: 863.682.1442, Fax: 863.686.9490
4501 Dignan St., Jacksonville, FL 32254, Phone: 904.265.5990, Phone: 904.388.2240, Fax: 904.389.2199 [http://www.burrislogistics.com](http://www.burrislogistics.com)

**Architect:** Art Mead architect on call, contact Facilities with architectural needs.

**Smoke recovery:** Servpro of North Sarasota: 6341 Porter Road, Suite 14, Sarasota, FL 34240, [servpro9144@verizon.net](mailto:servpro9144@verizon.net), Tel: (941) 365-4614 ([http://www.servpro.com/](http://www.servpro.com/) 1-800-SERVPRO). Also check the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors. [http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm](http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm)

**Data recovery service:** Mote Information Systems. Also check the Florida Department of State, Division of Library and Information Services website for a current list of disaster response vendors. [http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm](http://dlis.dos.state.fl.us/DisasterRecovery/vendors.cfm)

**Security guards:**

**Temporary work/storage area:** Loomis Room