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Introduction

Scope of the Plan

This disaster and emergency preparedness plan was developed in 2011 by the Disaster Preparedness Working Group of the Albin O. Kuhn Library & Gallery. Our goal was to bring together invested participants from throughout the Library to prepare a cohesive document that would guide Library staff during health, fire, or weather-related emergencies. We sought to identify available resources, recovery procedures, campus policies and guidelines, and area recovery and supply vendors that could be utilized in an emergency situation. This document is a compilation of the available materials. When possible, established guidelines and procedures were used in place of developing local practices. Two resources in particular were used as a foundation for this document: Baltimore Academic Libraries Consortium’s Disaster Preparedness Plan (1998, rev. 2006) prepared by the BALC Disaster Preparedness Committee and the “Developing a Disaster Plan” workshop offered by Lyrasis in April 2010.

Disaster Preparedness Working Group Members
Tom Beck
Gail Blacker
Susan Graham
Steve Jones
Lindsey Loeper, chair
Kelly Shipp
LaTanya West
Distribution of the plan

The Disaster and Emergency Preparedness Plan should be distributed in multiple formats to ensure that the appropriate information is available to certain staff as needed.

1. A binder with the complete plan will be printed and placed in each department.

2. Digital copies of the complete plan will be available on:
   I:\LibDocs
   Library wiki homepage: https://wiki.umbc.edu/display/library/Home
   Library Guideline 440: https://wiki.umbc.edu/display/library/Guideline+440+-
   +Disaster+Action+Team
   Library website, Administration page: http://aok.lib.umbc.edu/admin/
   Flash drive kept with each binder and at Director’s residence
   Future: Library iPad and mdPlan

3. Each staff member will receive a telephone listing and a floorplan that includes the fire evacuation routes on their office floor.
### Review and updating of the plan

A full review of the entire Plan, including a review of the timetable and distribution methods, may be requested by the Library Executive Council when desired. Updated recovery procedures should be included as available. All other sections are recommended for review as follows:

**Every year (beginning in 2013)**
- Disaster Action Team (Guideline 440)
- Salvage Team Coordinators
- Campus and State Contacts
- Floorplans (ALL)
- Emergency Procedures (Fire) (Guideline 401)
- Emergency Procedures (Power Blackout) (Guideline 402)
- Medical Procedures for Work-Related Emergency, Injury, or Illness (Guideline 403)
- Medical Emergencies Not Related to Work (Guideline 404)
- Status of disaster supplies
- **Responsible party: Salvage Team**

**Every three years (beginning in 2015)**
- All safety procedures
- Evacuation and Building Safety Procedures
- Medical and Personal Safety Procedures
- Salvage Priorities
- Format Locations
- Disaster Supplies Location and Inventory Checklist
- Preparedness Checklist
- Disaster Response Checklist
- Training procedures [not included in version 1 of plan]
- **Responsible party: Salvage Team**

**In case of emergency event, follow-up within one month:**
- Contacts that were required during the disaster or emergency
- Procedures that were utilized
- Salvage priorities
- Disaster supplies inventory checklist
- Identify key participants and ask them to evaluate the procedures – what worked and what should be reviewed or updated? First responders, Library staff, and campus or external contacts such as the police may be questioned.
Section 1: Response

1.A: Disaster Action Team (Guideline 440)
1.B: Salvage Team
1.C: Campus and State Contacts
1.D: Pocket Plan – See Appendix 5
1.E: Floorplans – See Appendix 6
1.F: Evacuation and Building Safety Guidelines
1.G: Medical and Personal Safety Guidelines
1.H: Preparedness Checklist
1.I: Disaster Response Checklist
1.J: Disaster Supplies Locations and Inventory Checklist
1.A: Disaster Action Team (Guideline 440)
This section is duplicated from the Library Guidelines

A. Director
- Makes major decisions & calls in key personnel to assist;
- Assesses all disaster areas for immediate priority list;
- Visits sites and gets reports of progress from supervisor of area;
- Makes major decisions affecting Library and disaster operation;
- Keeps college officials informed on status of Library during salvage operation.

B. Business Manager
- Establishes and manages disaster recovery & salvage teams.
- Contacts emergency supply distributors to deliver needed materials.
- Keeps Director informed about current status of assessments made and salvaging being done.

C. Head of Collection Management
- Prepares general collection stacks and reference room for anticipated event (severe inclement weather, etc.)
- Assesses damage to general collection and reference room;
- Implements disaster procedures in stack area and supervises salvage team;
- Informs Director of situation and assists in salvage procedures;
- Determines what materials are able to be saved and which should be discarded.

D. Head of Technical Services
- Prepares technical services area for anticipated event (severe inclement weather, etc.)
- Assesses damage to technical services area;
- Implements disaster procedures and supervises salvage team;
- Informs Director of situation and assists in salvage procedures.

E. Chief Curator (Special Collections)
- Prepares Special Collections and Gallery for anticipated event (severe inclement weather, etc.)
- Assesses damage to Special Collections and Gallery
- Supervises, informs disaster team workers of situation and assessed damages.
- Informs Director of situation and assists salvage procedures.
- Should be called in for all disasters as Recovery Specialist.

F. Information Technology Librarian
- Prepares Library electronic equipment for anticipated event (severe inclement weather, etc.)
- Assesses damage to electronic equipment and computers;
- Serves as main contact with DOIT;
- Implements disaster procedures for recovery of equipment and data;
- Informs Director of situation and assists in salvage procedures.

G. Head of Serials
- Prepares serials, media, and circulation for anticipated event (severe inclement weather, etc.)
• Assesses damage to serials, media, and circulation;
• Implements disaster procedures in stack area and supervises salvage team;
• Informs Director of situation and assists in salvage procedures;
• Determines what materials are able to be saved and which should be discarded.

Suggested review timetable: once a year

F:adm/pm/551 rev. 9/6/06 LW (wrt changes in personnel) [Proposed changes submitted October 10, 2011]

see also: Baltimore Academic Libraries Consortium Disaster Preparedness Plan which may supersede some of the provisions in this guideline.

1.B: Salvage Team

The Salvage Team is formed by Library volunteers as part of on-going Library service. It should not be ad hoc for each emergency. The Salvage Team will prepare and conduct recovery procedures training for team members and any interested staff.

Manager (in consultation with the Disaster Action Team)
• assembles salvage recovery team
• arranges for purchase of supplies
• plans recovery training for Library volunteers
• works with Disaster Action Team to carry out salvage procedures

Recorder
• works with Manager and Disaster Action Team to make record of the salvage effort

Coordinators (for each area)
• inventories material removed
• labels boxes for identification
• directs packers

Packers (for each area)
• pack salvaged material in boxes or crates for removal from area
• assists Manager and Coordinators, with the Disaster Action Team, in carrying out recovery procedures as needed
# 1.C: Campus and State Contacts

All initial emergency contact should be with Campus Police x5555.

For non-emergency and follow-up contact, use the following information:

<table>
<thead>
<tr>
<th>Contact</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMBC Campus Police</td>
<td>X5-5555 410-455-5555</td>
</tr>
<tr>
<td>Library Security Desk</td>
<td>X5-2331</td>
</tr>
<tr>
<td>Patrick Dawson</td>
<td>X5-2356 Home: 443-979-7604 Cell: 805-705-7090</td>
</tr>
<tr>
<td>Library Information Technology Services</td>
<td>X5-3040</td>
</tr>
<tr>
<td>UMBC Public Information Officer</td>
<td>410-455-2065</td>
</tr>
<tr>
<td>UMBC Environmental Safety and Health</td>
<td>410-455-2918</td>
</tr>
<tr>
<td>UMBC University Health Services</td>
<td>410-455-2542</td>
</tr>
<tr>
<td>UMBC Counseling Center</td>
<td>410-455-2472</td>
</tr>
<tr>
<td>UMBC Facilities Management</td>
<td>410-455-2550</td>
</tr>
<tr>
<td>Poison Control</td>
<td>1-800-222-1222</td>
</tr>
<tr>
<td>Baltimore County Health Department</td>
<td>410-887-3740</td>
</tr>
<tr>
<td>Howard County Health Department</td>
<td>410-313-2333</td>
</tr>
<tr>
<td>Baltimore City Health Department</td>
<td>410-396-4398</td>
</tr>
<tr>
<td>FEMA</td>
<td>1-800-621-FEMA (3362)</td>
</tr>
<tr>
<td>State of Maryland Insurance</td>
<td>1-800-942-0162</td>
</tr>
<tr>
<td>(Property form is online at <a href="http://www.umbc.edu/safety/">http://www.umbc.edu/safety/</a>)</td>
<td></td>
</tr>
<tr>
<td>Maryland State Archives</td>
<td>410-260-6400</td>
</tr>
<tr>
<td>Maryland Archaeological Conservation Laboratory</td>
<td>410-586-8501</td>
</tr>
<tr>
<td>Lyrasis</td>
<td>1-800-999-8558 <a href="mailto:disaster@lyrasis.org">disaster@lyrasis.org</a></td>
</tr>
</tbody>
</table>
1.D: Pocket Plan - See Appendix 5

1.E: Floorplans

Emergency exits and fire extinguishers – See Appendix 6

Formats and salvage priorities – See Appendix 6
1.F: Evacuation and Building Safety Guidelines
All guidelines below are from the Library Guidelines.

Guideline 401 - Emergency Procedures (Fire)
https://spaces.umbc.edu/display/library/Guideline+401+-+Emergency+Procedures+%28Fire%29

- Unless we are clearly notified (usually by PA announcement) that Physical Plant staff are maintenance testing the alarms, if building fire alarms sound, all staff and users must evacuate the building immediately.
- Staff and library users should leave by the nearest fire exit. All fire exits are clearly marked. Break glass or depress panic bar to operate the door.
- Do not use elevators.
- As you leave, urge users to follow you to the exit.
  **Note the position of any disabled users who are to wait for emergency personnel assistance in fire stair landings. Inform police or fire department personnel who will evacuate these users.
- After getting out of the building, remain by the exit at an appropriate safe distance.
- Prevent users from removing library materials
- Await further instructions from fire department or police personnel.
- There are special procedures for operation of the Special Collection fire alarm system. Special Collections and Security staff should refer to these procedures. Other staff should simply notify the Special Collections and Security staff upon exiting the Special Collections area.

references: D. Dietsch 6/91
 guideline issued 5/6/91, revised 9/30/97

Guideline 402 - Emergency Procedures (Power Blackout)

Modern library operations (materials, electronic equipment and catalogs...) and the characteristics of this building make the Library particularly vulnerable to power failure. Complete power failure or blackout interrupts services and – if the blackout occurs after dark – we evacuate users for the duration of the blackout. Use judgment as to whether to permit users to stay inside, (24-hour study space, the atrium) especially in inclement weather. Our foremost concern in this emergency is for safety of persons and then of library assets.
Report emergencies to Campus Police (x55555) and outages to Physical Plant (x52550).

I. Decision Process When Ranking Librarians are Not Present.
Sound reactions and decisions require good information.
1. Security officer or others in Circulation should call Physical Plant (x52550, x53220, or x52201) to determine cause and extent of power failure and predicted restoration time. Also, tell Physical Plant of any persons trapped in elevators.
2. Call Library Director or alternate (see list, Appendix A) for advice and decision re closing library.
3. Notify Public Safety (x53133) of library status (either temporarily evacuating, or closing, or still awaiting decision to close) and also of persons trapped in elevators.
4. If Library Administration is open and has not otherwise been informed, call to make sure they are aware of the situation. [x52356]

II. Daylight or Partial Blackout: If there is enough light perform these steps:
1. All staff should gather at the security desk with their units' emergency flashlights to receive further instructions. In this situation, all staff are expected to assist the security officer or alternate who will need help to check bags (see section "Exit Control" below), guide users, check elevators for any persons trapped, and patrol stacks to find problems.
2. Do not force users to leave library areas which receive adequate window lighting (e.g., Phase III tower) unless the Director or ranking Librarian in charge determines that the entire building must be closed due to safety or security concerns. Assume that the building will remain open until a decision is made.
3. Announce to users: "At this time the building will remain open and library users are welcome to stay. However, we advise that you avoid using the elevators until power is restored. If you wish to leave, please use the main exit on the first floor." Post notices over elevator buttons: "Please do not use elevators during power outage." Be sure to remove these notices when power is restored.
4. Because the book theft detection units do not have power, the security officer or alternate must carefully inspect all bags, briefcases, purses, etc. Library materials cannot be removed from the building unless it can be verified that they were properly charged out.

III. Closing
Very seldom will an indefinite temporary evacuation turn into a complete closing. In the past, Physical Plant staff have restored power within an hour or so, enabling resumption of services.
If the Director of the Library or alternate decides to close the building for the day/night:
1. Staff should return to work areas, secure them for closing, and then return to the security desk to provide assistance.
2. At this time, and not before, all supervisors should telephone their next shift of staff and student assistants and tell them not to report to work.
3. Circulation staff will draw up and post explanatory signs on each of the entrance doors.
4. Reference staff should change "hours open" phone message and, if possible, add a web page announcement to the Library home page.
5. Security officer should follow standard closing procedure, setting security systems, lowering grill (manually, if power to the grill is off), etc.
6. Staff should understand that this evacuation of users is a temporary indefinite interruption of services pending further decision by appropriate administrators (for example, Library Director or alternate, or a campus police officer).
IMPORTANT: If the security grill cannot be lowered manually, users must be cleared from the Atrium and the exterior entry doors to the Atrium must be locked at the time the building is closed.

A. Announcements for Evacuation
   1. The security officer or designee should immediately announce the situation, e.g.: "The library/campus has suffered a power failure and we must evacuate the building. Carefully make your way to the main exit on the first floor." If the PA system is not working, these announcements are made by walking through the entire building.
   2. Additional announcements if needed and as appropriate.
   3. Announce decision to close for day/night or to reopen.

B. Exit Control
   1. Immediately after decision to close, the security officer or alternate should be stationed at the security gate to the Library and explain the situation to persons seeking entry. While it is preferred that additional persons not enter and add to the existing security burden, if they wish to enter the building for safety sake (e.g., darkness, weather), staff may admit them as long as they agree to remain in the Atrium.
   2. Advise users to leave the building via the main exit. Because the book theft detection units do not have power, the security officer or alternate must carefully inspect all bags, briefcases, purses, etc. Library materials cannot be removed from the building unless it can be verified that they were properly charged out.
   3. Inform those exiting the building at night that they may wish to use the campus telephone in the building lounge to call Public Safety for escort service. Do not allow users to use the security desk telephone -- that line must be kept open for incoming/outgoing calls regarding the blackout or other emergency.
   4. Users may wish to re-enter the bookstacks or other areas to retrieve books, coats, etc. Please help insofar as possible, but remind them we cannot have users wandering in a darkened building. *Do not loan flashlights to users;* accompany them instead. Be alert for users trying to use matches to light their way; open flames are a fire hazard and should be extinguished.
   5. All staff should gather at the security desk with their units' emergency flashlights to receive further instructions. In this situation, all staff are expected to assist the security officer or alternate who will need help to check bags, guide users, gather information, make announcements and patrol stacks to find problems.
   6. Before leaving staff should:
      a) Instruct users to leave the building carefully by the main exit, leading the way if necessary.
      b) Check elevators to see if they are working; if not, check for anybody trapped as follows: check at each floor in Phases 1, 2, and 3 by tapping on doors and asking if anyone is in the elevator; calm anyone who is trapped and assure them you will report this to security staff. Security officer or alternate should immediately call the physical plant and campus police to inform them of the problem and get information from them regarding what their plans are for dealing with it; call them again periodically to check on progress if none is seen on site.
      c) Patrol building to find and note the location of any disabled users who need assistance in evacuating and inform the security officer or designee who will coordinate evacuation of these users.
d) Be alert to obstructions in aisles and, if possible, move them aside (e.g., kickstools, booktrucks or chairs).
e) If emergency power is out, walk each floor and public stairway with a flashlight to assist users out.

7. Allow users to wait in the Atrium for a time on the reasonable expectation that power will be restored fairly soon.

C. Follow-up Measures
Whether the Library reopened following a temporary evacuation or closed for the remainder of the day/night after a power blackout, certain steps must be taken to ensure full recovery:

1. If not already done, Security officer or alternate notifies the Director or alternate who will notify all staff.
2. All staff return emergency flashlights to units and recharge.
3. Unit heads or designees to examine condition of unit equipment, reporting problems or damage, if any, to Director or designee.
4. Director or alternate evaluates Library response to blackout in consultation with other appropriate staff.

Guideline revised 2/5/99, 1/6/04

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The Halon System in Special Collections
If the HALON System alarm sounds:
1. If you hear a single beep from the Halon system:
   - Investigate the problem
     - by looking for signs of smoke or fire
     - if there is no evidence of fire or burning, disable and silence the alarm:
   - Go to the Halon System panel
   - Flip switches to “Disable” in every zone!
   - Push the “Trouble Silence” button on the right hand side

If there is fire, EVACUATE the premises immediately

2. If you hear a double beep:
   You have 30 seconds to disable the system or evacuate immediately

What is the Halon System?
Halon 1301 (CBrF3. Bromotrifluoromethane) is the relatively innocuous, invisible gas now widely used to suppress fires in rare book rooms. The action of the gas is virtually instantaneous in quenching a fire, and there are no residues whatsoever. Because it is not immediately harmful to persons in a room charge with the 5 or 6 percent of atmospheric concentration needed to defeat fire, Halon 1301 is the only agent approved by the National Fire Protection Association for totally flooding occupied space.

Because Halon 1301 is expensive, it is customary to protect against unwanted discharge of the system by cross-zoning detectors on separate circuits. Two well-separated sensors have to be triggered to release the agent and flood the area. An audible alarm is sounded, and a short delay is programmed into the system. In this way, the system can be aborted in the
event that the problem is only a nuisance fire that can be readily managed with hand-held equipment.

The flooding system discharges all at once and with considerable velocity; therefore, fragile items must not be placed close to discharge nozzles. Confinement of the gas is essential to its function by preventing dilution, so doors and windows of the protected area must be closed to ensure effective action of the gas.

One pound of Halon 1301 produces a 6 percent concentration in the air in a space of 40 cubic feet. It is customary to figure a generous safety factor into the system, but the concentration should be no more than 7 percent maximum.

In the event of a fire, an alarm is sounded when the first detector senses heat or smoke. At this point fans or blowers are shut down, the magnetic door holders release doors to close, and the occupants of the room (if any) make a quick search for the source of heat or smoke that was picked up by the detector. If another detector on the alternate circuit is activated, the system is primed to discharge in 15 seconds. The delay allows a further search for the fire and permits the occupants the option of aborting the system if there is no fire. A wastebasket fire or fire in a copy machine can be quenched with a hand-held extinguisher, an alternative that would save the very substantial expense of dumping the Halon 1301. The system does not discriminate between a smoking copy machine and a true fire emergency, and releases the entire agent noisily and in milliseconds.
1.G: Medical and Personal Safety Procedures
All guidelines below are from the Library Guidelines.

Guideline 403 - Medical Procedures for Work-Related Emergency, Injury, or Illness
https://spaces.umbc.edu/display/library/Guideline+403+-+Medical+Procedures+for+Work-Related+Emergency%2C+Injury%2C+or+Illness

SCOPE: This guideline sets forth the procedures established by the University to handle health problems arising from work performed by paid and unpaid employees regardless of employment status (all staff, student assistants, and volunteers, etc. are included). Work-related health problems covered by this guideline include repetitive motion injury or occupational disease, as well as on-the-job injury caused in a specific work accident or injury incurred while on campus grounds (e.g., while a staff member is walking to work from their car).

A. Procedure to receive medical attention
Refer to the Office of Environmental Safety and Health's website for University required procedures following work-related injuries.

B. Reporting Requirements: Use forms and current instructions available at Office of Environmental Safety and Health's web site. In addition to the instructions on this web site, copies of all forms must be sent to the Library Administrative Offices.

1. Injured employee must complete Employee's Report of Injury Form and submit to the Office of Environmental Safety and Health, with copies to the Library Administrative Offices and to the supervisor within 24 hours of injury.
2. Injured employee must complete an Authorization for Treatment Form, available from the Office of Environmental Safety and Health, to facilitate medical attention.
3. Supervisor must prepare Supervisor's Accident Investigation Form and submit to the Office of Environmental Safety and Health, with a copy to the Library Administrative Offices within 24 hours of injury.
4. Have any witness(es) to the accident complete an Accident Witness Statement Form and submit to the Office of Environmental Safety and Health, with a copy to the Library Administrative Offices with 24 hours of incident.
5. Library Director or designee will assemble and forward all reports via fax (x51166) to the UMBC Office of Environmental Safety and Health. Copy kept in file = "work-related injuries."

C. Workplace Safety
- Supervisors are responsible for continuous review of unit working conditions and procedures in order to provide a safe and efficient workplace.
- Supervisors should orient/train employees as to proper safety procedures and ensure familiarity of all employees with this Library guideline and any changes/updates to it. Supervisors should periodically review these with all employees to ensure ongoing awareness and preparedness in event of an emergency.
Work-Related Injury Procedures


UNIVERSITY PERSONNEL PROCEDURES:
1. When a faculty, staff or paid student employee has incurred a work-related injury, the injured person may be referred directly to:
   University Health Services (UHS) Hours: Monday-Thursday,
   Erickson Hall 8:30 a.m.-6:00 p.m.
   Center Road Fridays, 8:30 a.m.-5 p.m.
   (410) 455-2542 No on-site x-ray capabilities

When University Health Services are not open, employees may be referred to:
   Concentra Medical Center Hours: Monday, 7:00 a.m.-
   1419 Knecht Avenue Saturday, 12 noon
   Arbutus, Maryland 21227 Has x-ray capabilities
   (410) 247-9595
   or
   Occupational Medical Services (OMS) Hours: Sunday, 10 p.m.-
   4807 Benson Avenue Saturday, 1 p.m.
   Arbutus, Maryland 21227 Has x-ray capabilities
   (443) 524-2737

   These clinics specialize in work-related illnesses and injuries in addition to offering physicals, special testing and vaccinations. They are a reasonably short drive from the campus.

Authorization for Treatment forms may be obtained from the Environmental Safety and Health Office at the Facilities Management Building, Room 105.

When the above agencies are closed, injured employees may be referred to:
   St. Agnes Hospital
   900 Caton Avenue (off Wilkens Avenue)
   Baltimore, Maryland 21229
   General (410) 368-6000
   Emergency Room (410) 368-2000
TO ENSURE PROPER COVERAGE BY THE STATE HEALTH CARE PROVIDER, IT IS RECOMMENDED THAT THE INJURED EMPLOYEE BE REFERRED TO ONE OF THESE CLINICS INITIALLY, NOT TO A FAMILY PHYSICIAN OR A PRIVATE CLINIC.

2. In cases of severe work-related injuries which necessitate the use of an ambulance to transport the injured person, emergency room facilities at St. Agnes Hospital are to be utilized. Ambulance personnel are in communication with a doctor. Based on the type of injury, they may be directed to transport the patient to a particular medical facility.

3. All work-related injuries must be reported to the Office of Environmental Safety and Health, Facilities Management Building, Room 105, extension 5-2918. The following forms may be obtained from this office and are available on www.umbc.edu/safety
   a. The injured employee must complete an Employee's Report of Injury form and submit it to the Office of Environmental Safety and Health within 24 hours of the time of the injury.
   b. The employee’s supervisor or designee must complete a Supervisor's Accident Investigation form and submit it to the Office of Environmental Safety and Health within 24 hours following the injury.
   c. Witnesses should complete an Accident Witness Statement and submit it to the Office of Environmental Safety and Health.
   d. Once the forms have been completed, they are reviewed by the Office of Environmental Safety and Health. A campus Safety and Health Manager will investigate, if necessary, and notify the Injured Workers' Insurance Fund and the Office of Human Resources of the circumstances of the injury.

STUDENT/VISITOR PROCEDURES:
1. In instances where a visitor is injured, the visitor should contact the most convenient emergency medical center, such as the University Health Services or St. Agnes Hospital. A student who is injured while on campus should contact University Health Services.
2. The student or visitor must complete a State of Maryland General Liability Loss Report form, which may be obtained from the Office of Environmental Safety and Health, Facilities Management Building, Room 105, extension 5-2918. The injured person should complete the Loss, Injured/Property Damaged and Witnesses sections of the form and return the form, along with any additional medical documentation, to the Office of Environmental Safety and Health, Facilities Management Building. This does not constitute a claim by a third party. A claim for damages must be filed with the State Treasurer’s Office under the Maryland Tort Claims Act in order to be eligible for recovery if the State is held liable. Procedures for filing a claim may be obtained from the Office of Environmental Safety and Health. This form may be obtained from this office and is available on www.umbc.edu/safety

While UMBC has a low incidence of accidents on campus, it is important that everyone be aware of the proper procedures should one occur. Following these procedures will aid the injured party and will also enable us to identify and correct safety hazards on campus. Please make additional copies for your staff as needed. Should you have any questions or need additional information regarding this process, please contact the Office of Environmental Safety and Health, at extension 5-2918.
DIRECTIONS TO CONCENTRA, OCCUPATIONAL MEDICAL SERVICE (OMS), AND UNIVERSITY HEALTH SERVICES ARE ON THE REVERSE SIDE.

DIRECTIONS FROM UMBC TO CONCENTRA MEDICAL CENTER,
1419 Knecht Avenue
From Hilltop Circle to Poplar Avenue to Sulphur Spring Road. Turn left on Sulphur Spring Road. Drive under the overpass. Pass the Post Office on your right. Immediately get into the left lane. Turn left on Benson Avenue. Turn left on Knecht Avenue. Concentra is on the left.

DIRECTIONS FROM UMBC TO OCCUPATIONAL MEDICAL SERVICE (OMS)
4807 Benson Avenue
From Hilltop Circle to Poplar Avenue to Sulphur Spring Road. Turn left on Sulphur Spring Road. Drive under the overpass. Pass the Post Office on the right. Immediately get into the left lane. Turn left on Benson Avenue. OMS is on the right.

DIRECTIONS TO UNIVERSITY HEALTH SERVICES
Located in the Lobby of Erickson Hall on Center Road.
[End Work-Related Injury Procedures]

Guideline 404 - Medical Emergencies Not Related to Work
https://spaces.umbc.edu/display/library/Guideline+404+-+Medical+Emergencies+Not+Related+to+Work

1. If ambulance is needed:
   Call UMBC Public Safety x 53133 to request ambulance.
   **Be sure to convey urgency commensurate with severity of medical condition.**
2. If ambulance is not needed or is refused; do not transport the person yourself. (You would incur significant liability to yourself and UMBC.)
   o refer UMBC students to UMBC Student Health Services, which has staff on call around the clock call (UMBC Police for on-call referral #’s).
   o refer visiting, non-UMBC affiliated persons to their own health care provider(s).
   o refer employees to their own health care provider(s) if the injury or illness is not work-related. See guideline 403 for work-related medical procedures. Notify employee's supervisor and Library Director.

NOTE: If the emergency or illness is caused by an injury sustained in the building or while on campus, you must instruct the student or visitor to obtain and complete a "ACORD General Liability Loss Notice" (available from the UMBC Office of Environmental Safety and Health, FM Building, Rm. 105, ext. 5-2918) and return it as soon as possible to the Office of Risk Management, UMBC.
At no time should staff say to an injured party anything to the effect of: "don't worry, the Library/the University/the State will pay for medical treatment." The injured/ill party is responsible for paying their medical expenses. The injured party may file a claim with the State Treasurer's Office. That office may or may not reimburse or cover medical expenses associated with injury to a visitor or student. The State's insurance claims board has disallowed certain claims (e.g., for injuries for which the University bears no apparent fault). Information on How to File a Claim may be obtained from the UMBC Office of Environmental Safety and Health (ext. 5-2918).

Staff should take full notes on the injury, including at least: the date and time of injury, exact place, name of injured, name(s) of any witness(es) (and their contact information, if possible), and apparent nature and extent of injury (use "Incident Report" form which is available at Security Desk). Forward this report to the Library Director as soon as possible.

References:
UMBC Office of Environmental Safety and Health web pages:
http://www.umbc.edu/hr/P&P/vironoffice.htm
September, 2006 memo from Robert C. Nielsen
[End Guideline 404]

First aid kits

UMBC's Environmental Safety and Health department does not require that individual departments stock or maintain a first aid kit for employees. Department’s may decide to purchase first aid supplies during their annual supply order. The minimum contents for a first aid kit according to American National Standard (ANSI) Z308.1-1978 (updated by ANSI in 2003) are listed below:

<table>
<thead>
<tr>
<th>Performance Requirement Section</th>
<th>Item and Minimum Size or Volume</th>
<th>Minimum Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 5.1.1.1</td>
<td>Absorbent Compress, 32 s. in (206 sq. cm.), with no side smaller than 4 in. (10 cm)</td>
<td>1</td>
</tr>
<tr>
<td>Item 5.1.1.2</td>
<td>Adhesive Bandages, 1 x 3 in. (2.5 x 7.5 cm)</td>
<td>16</td>
</tr>
<tr>
<td>Item 5.1.1.3</td>
<td>Adhesive Tape, 3/8 in x 5 yd. (457.2 cm) total</td>
<td>1</td>
</tr>
<tr>
<td>Item 5.1.1.4</td>
<td>Antiseptic, 0.14 fl. oz. (0.5 g) application</td>
<td>10</td>
</tr>
<tr>
<td>Item 5.1.1.5</td>
<td>Burn Treatment, 1/32 oz. (0.9 g) application</td>
<td>6</td>
</tr>
<tr>
<td>Item 5.1.1.6</td>
<td>Medical Exam Gloves</td>
<td>2 Pair</td>
</tr>
<tr>
<td>Item 5.1.1.7</td>
<td>Sterile Pad, 3 x 3 in. (7.5 x 7.5 cm)</td>
<td>4</td>
</tr>
<tr>
<td>Item 5.1.1.8</td>
<td>Triangular Bandage, 40 x 40 x 56 in. (101 x 101 x 142 cm)</td>
<td>1</td>
</tr>
</tbody>
</table>
1.H: Preparedness Checklist

With some disaster scenarios, such as a hurricane, there may be at least a few hours advance notice before Library staff and resources are in danger. When advance notice is provided, following the procedures below can assist with minimizing damages to the Library’s staff, building, equipment, and collections.

1. Assemble meeting of Disaster Action Team and Salvage Team to review situation and disaster plan procedures.
2. The Disaster Action Team should identify potential hazards in their respective areas.
3. Check that the telephone listing is up to date. This includes Library staff and other campus and state resources.
4. Make sure that all fire exits are clear and free of obstacles/debris.
5. Make sure that all floor plans are up-to-date and note any changes that may have occurred; this includes new construction or the location of a new collection.
6. Review Library and campus emergency evacuation procedures with all staff on duty, including student assistants. UMBC’s campus emergency evacuation policy is available at: http://www.umbc.edu/facultystaff/snowpolicy.html (add as appendix to disaster plan?)
7. Reacquaint probable first responders (Director, Circulation and/or Security staff) with location of disaster plan resources. Probable first responders should take a copy of the disaster plan home with them so that they will have access to the information if the building is unsafe to enter.
8. Review available disaster supplies; if some supplies are not available, place an order as time permits. Put disaster supplies, such as plastic sheeting and fans, in an easy-to-access location and notify probable first responders of the location. Set up tables for drying of wet materials.
9. Make sure all materials are moved off of the floor. Highly valued collections may be moved from the basement or first floor to a higher level. Materials that are in problem areas, particularly those by windows, should be covered in plastic sheeting.
10. Turn off and unplug all electronic equipment
11. Back up sensitive data (such as PastPerfect, Special Collections external hard drive)
1.I: Disaster Response Checklist

This checklist should be followed before taking any additional action in salvaging materials. Safety should be the primary concern until appropriate measures can be taken to secure the area.

1. Once the damage has been discovered, call Campus Police to post security outside the library to prevent theft or entry of unauthorized personnel before necessary precautions have been taken to prevent injury. Contact the Library Director and the Disaster Action Team.
2. Proceed into the disaster area with caution. If there are any doubts as to safety of the area, have Physical Plant check them out with an electrician.
3. If there is standing water in the building, have an electrician inspect the building before attempting to re-enter.
4. If power is out, provide an alternate power source to operate air conditioners, fans, and lights.
5. Restore climate control conditions as soon as possible. Physical Plant should be called immediately to lower the temperature and humidity of the area affected. Keep fans and air-conditioning on at night, except when a fungicidal fogging operation is in process, because a constant flow of air in necessary to reduce the threat of mold.
6. If there are no operating air conditioners and humidity and temperatures are lower outside than inside, open windows and set up fans to create a flow of air. The warmer and more humid it is outdoors, the greater the damage of mold growth. Attend to security if the room is opened.
7. If the disaster has removed part of the library’s roof, cover the books promptly with salvage covers or plastic sheets to limit damage.
8. The Director, along with department head, should assess the damage as to type and amount. Upon this assessment will rest the decisions as to recovery procedures.
9. An assigned member of the Disaster Action Team shall begin telephoning for necessary supplies and facilities.
10. Teams of appropriate persons (staff, students, and/or volunteers) should be formed to carry out the necessary removal of materials.
11. Call a conservator immediately. It is essential to act quickly.
12. Brief each worker carefully before salvage operations begin, giving full information on the dangers of proceeding except as directed. Emphasize the seriousness of timing and the priorities and aims of the whole operation. Instruct workers on means of recognizing manuscripts, materials with water-soluble components, leather and vellum bindings, materials printed on coated paper stock, and photographic materials.
13. Do not allow workers to attempt restoration on any items on site. (This was a common error in the first 10 days after the Florence flood, when rare and valuable leather- and vellum-bound volumes were subjected to scrubbing and processing to remove mud. This resulted in driving mud into the interstices of leather, vellum, cloth, and paper, causes extensive damage to the volumes, and made the later work of restoration more difficult, time consuming, and extremely costly.)
14. If materials have fallen on the floor, remove these first, preferably to air-conditioned space, in order to clear a path for further salvage operations.
15. Next, remove the most important of valuable materials in order of priority, to include irreplaceable inventory lists and accession files. Per cubic inch, it probably has the highest replacement cost of any artifact in the library.
16. Keep a list of all materials removed from their shelves for air dying or freezing.
17. Identify materials wrapped and boxed for freezing on the outside of their packages. Use soft pencils for making notes on slips of paper but do not attempt to write on wet paper or other artifacts.

18. **Under no circumstances should newly dried materials be packed in boxes and left without attention for more than a few days.**
19. Inform the Business Office, for insurance purposes, of the incident at the earliest moment possible. Assess the damage carefully and logically, with the direct assistance of persons who know the materials and values involved. Take pictures.
20. Publicize the disaster in order to mobilize goodwill, services, and volunteer help from the community.

**After the Fact**
After materials have been removed from affected areas, and treatment is underway, there are still decisions to be made and work to be done. Especially important are those steps taken to prevent further damage to holdings by mold infestation.

1. Repair and sterilize the stack areas before returning materials.
2. Decide what drying method will be used for frozen materials. If books are to be thawed and then dried by traditional methods, allow 36 to 48 hours for a carton of books to thaw.
3. Defrost only the number of books that can be handled promptly. Books may be safely refrozen, however, as often as necessary.
4. Decide which (dried) books can be replaced (with duplicate copies or by microfilm) instead of being restored.
5. Continue site inspection for at least one year to check for the growth of mold.
6. Evaluate Disaster Plan (see review timeline)
1.J: Disaster Supplies Locations and Inventory Checklist

**REACTPAK recovery barrels**

- For use for immediate response in an emergency.
- Label supplies and the barrel and seal.
- Check barrels and supplies and check flashlight batteries twice a year (when the time changes). Replace batteries as needed. Store them outside the flashlights.

**Locations of barrels:** Hallway between Circulation and Special Collections

**Contents**

Each REACTPAK includes:

- 8 disposable aprons
- 8 pairs disposable vinyl gloves
- 2 pairs slip-on stretchable boots with skid-resistant soles
- 2 dust masks, NIOSH/MSHA-approved for protection against dust and mists
- paper towels (folded brown sheets)
- 2 large, cellulose sponges
- cotton deck mop and handle (wooden handle breaks down to 3 pieces)
- mop bucket (includes handle, wringer, bucket)
- 2 extra-large, heavy-duty trash bags
- 25 feet barricade "CAUTION" tape
- 2 precut 4 mil polyethylene sheets (each 3'x12' to cover shorter or single-faced shelving or to use on top, as awning)
- 2 precut 4 mil polyethylene sheets (each 3'x8' to cover regular double-faced shelving)
- 100 ft. roll 2" plastic all-purpose heavy-duty tape
- tape dispenser
- water resistant flashlight
- 2 alkaline D-cell batteries
- dispenser-pack of polyethylene inner-folded deli wrap (1000 jumbo 10-3/4" x 15" sheets wrap 1000 average-size books)
- RESCUBE—the reusable polyethylene corrugated box which holds your REACT-PAK components when they arrive to you—can withstand temperatures as low as -602F, is collapsible, records-size, with breathing holes, reinforced bottom, and 3 nylon 14" cable ties
- clipboard
- pad of 8-1/2 x 11" lined paper
- 2 sharpened pencils
- package of 100 3x5 cards
- china marker pencil

**Valuable tips:** "Emergency DO'S and DON'Ts for Water Damaged Materials," "Packing DO's and DON'TS," Sources of Advice on Disaster Recovery, List of Disaster Recovery and Salvage Services.
Additional recovery supplies (by location):

Hallway between Circulation and Special Collections:
   3 REACTPAKs
   1 recovery barrel
   Plastic sheeting

Gallery closet:
   7 folding tables
   Ladder
   Sink and running water

Special Collections (room 101)
   HEPA vacuum
   Fume hood
   Respirator masks (N100 and N95)
   Lab coats
   Gloves (synthetic latex free)
   Gloves (cotton)
   Cotton swabs
   Simple Green cleaner
   Sink and running water

Serials: 7 fans (med/small), plastic sheeting

Reference (room 259): 2 fans

Interlibrary Loan/Collection Management: 1 fan, plastic sheeting

Accounting and Receiving: 1 fan

Media: 3 small fans
Section 2: Recovery Procedures

2.A: Salvage Priorities

2.B: Format Locations

2.C: Books

2.D: Manuscript, Records, and Rare Book Materials

2.E: Photographs, Slides, Films, Microforms

2.F: Art Works

2.G: Magnetic Media/Film, Optical Disks, Videos

2.H: Phonograph Records

2.I: Electronic and Magnetic Resources
2.A: Salvage Priorities

Priority 1: **Special Collections Vault Materials (room 110)**
Formats: oversized photographs, works on papers, paintings, rare books

Priority 2: **Lower Level 038**
Formats: photographs, newsprint, and foldered paper documents
  Baltimore *Sun* photographs
  *News American* photographs
  Baltimore *Sun* bound newspapers
  UMBC theses and dissertations
  University Archives
  Science Archives (ASM and CBSA)

Priority 3: **First Floor (primarily rooms 101, 103, 104, 110)**
Formats: newspapers, bound serials, art photography, photographic prints, negatives, and albums
  Digital Collections storage
  Alternative Press Center Collection (room 150C)
  Library Gallery exhibition materials
  Rotunda exhibition materials

Priority 4: **Third Floor**
Formats: foldered paper documents in boxes and file cabinets, books printed on coated stock, film and video reels and cassettes
  Administrative office files
  Folio Q section of Stacks
  Science Archives (ASM and CBSA) (room 354)

Priority 5: **Second Floor**
Formats: Audiovisual and microfilm materials
  LOCKSS computer
  Schomberg Collection (microfilm)
  Black Culture Collection (microfilm)
2.B: Format Locations

See following pages.
<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
<th>Material</th>
<th>Priority</th>
<th>Handling Precautions</th>
<th>Packing Method</th>
<th>Drying Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper Documents &amp; Manuscripts</td>
<td>1st Floor SC, Room 110, 104, Hallway, &amp;103. Basement Room 038</td>
<td>Stable media</td>
<td>Freeze or dry within 48 hours.</td>
<td>Don't separate single sheets.</td>
<td>Interleave between folders and pack in milk crates or cartons.</td>
<td>Air, vacuum, or freeze dry.</td>
</tr>
<tr>
<td></td>
<td>1st Floor SC, Room 110, 104, Hallway, &amp;103. Basement Room 038</td>
<td>Soluble inks (felt pens, colored pens, ball point pens)</td>
<td>Immediately freeze or dry.</td>
<td>Do not blot.</td>
<td>Interleave between folders and pack in milk crates or cartons.</td>
<td>Air or freeze dry.</td>
</tr>
<tr>
<td>Maps &amp; Plans</td>
<td>1st Floor SC. Reference. Lower Level.</td>
<td>Stable media</td>
<td>Freeze or dry within 48 hours.</td>
<td>Use extra caution if folded or rolled.</td>
<td>Pack in map drawers, bread trays, flat boxes, on heavy cardboard or poly covered plywood.</td>
<td>Air or freeze dry.</td>
</tr>
<tr>
<td></td>
<td>1st Floor SC Hallway, Room 103. Lower Level.</td>
<td>Soluble media Maps and plans by photoreproductive processes, Hand colored maps</td>
<td>Immediately freeze or dry.</td>
<td>Do not blot.</td>
<td>Interleave between folders and pack as above.</td>
<td>Air or freeze dry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drafting linens</td>
<td>Immediately freeze or dry.</td>
<td>Avoid pressure - inks can smear away.</td>
<td>Pack like maps in containers lined with plastic.</td>
<td>Air or freeze dry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maps on coated papers</td>
<td>Immediately freeze or dry.</td>
<td></td>
<td>Pack like maps in containers lined with plastic.</td>
<td>Freeze drying preferred.</td>
</tr>
<tr>
<td>Books</td>
<td>1st Floor SC Room 104</td>
<td>Leather and vellum bindings</td>
<td>Immediately dry; or freeze if many books.</td>
<td>Do not open or close, do not separate covers.</td>
<td>Separate with freezer paper, pack spine down in milk crate or cardboard box 1 layer deep.</td>
<td>Air dry.</td>
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</tr>
<tr>
<td>Books and pamphlets</td>
<td>1st Floor SC Room 104</td>
<td>Books and periodicals with coated papers</td>
<td>Immediately freeze or dry.</td>
<td>Do not open or close, do not separate covers.</td>
<td>Keep wet; pack spine down in containers lined with garbage bags.</td>
<td>Freeze drying preferred. Air dry by fanning pages and interleaving.</td>
</tr>
<tr>
<td>Parchment &amp; Vellum Manuscripts</td>
<td>1st Floor SC Room 104</td>
<td>Interleave between folders. Pack oversize materials flat.</td>
<td>Air or freeze dry. Do not freeze dry gilded or illuminated manuscripts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Works of Art on Paper</td>
<td>1st Floor SC Room 104, 103, Vault. Basement Room 038. 2nd Floor Room 217.</td>
<td>Prints and drawings with stable media</td>
<td>Freeze or dry within 48 hours.</td>
<td>Don't separate single sheets.</td>
<td>Interleave between folders and pack in milk crates or cartons.</td>
<td>Air, vacuum, or freeze dry.</td>
</tr>
<tr>
<td>Works of Art on Paper cont’d</td>
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<tr>
<td><strong>1<strong><strong>st Floor SC Room 104, 103, Vault. Basement Room 038. 2</strong></strong>nd Floor Room 217.</strong></td>
<td><strong>Oversize prints and drawings</strong></td>
<td>Freeze or dry within 48 hours.</td>
<td>Use extra caution if folded or rolled.</td>
<td>Pack in map drawers, bread trays, flat boxes, on heavy cardboard or poly covered plywood.</td>
<td>Damp - air or freeze dry. Wet - freeze drying preferred.</td>
<td></td>
</tr>
<tr>
<td><strong>1<strong><strong>st Floor SC Room 104, 103, Vault. Basement Room 038. 2</strong></strong>nd Floor Room 217.</strong></td>
<td><strong>Framed prints and drawings</strong></td>
<td>Freeze or dry within 48 hours.</td>
<td>Handle with care - glass.</td>
<td>Unframe if possible, then pack as above.</td>
<td>Once unframed and unmatted, air or freeze dry.</td>
<td></td>
</tr>
<tr>
<td><strong>1<strong><strong>st Floor SC Room 104, 103, Vault. Basement Room 038. 2</strong></strong>nd Floor Room 217.</strong></td>
<td><strong>Soluble Media</strong> Watercolors, soluble inks, and hand colored prints</td>
<td>Immediately freeze or dry.</td>
<td>Do not blot.</td>
<td>Interleave between folders and pack in milk crates or cartons.</td>
<td>Air or freeze dry.</td>
<td></td>
</tr>
<tr>
<td><strong>1<strong><strong>st Floor SC Room 104, 103, Vault. Basement Room 038. 2</strong></strong>nd Floor Room 217.</strong></td>
<td><strong>Coated papers</strong> (e.g., posters)</td>
<td>Immediately freeze or dry.</td>
<td></td>
<td>Keep wet in containers lined with garbage bags.</td>
<td>Freeze drying preferred. Air dry by separating pages and interleaving.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paintings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1****st Floor SC Vault</strong></td>
</tr>
</tbody>
</table>

<p>| Computer Media |</p>
<table>
<thead>
<tr>
<th><strong>Tapes</strong></th>
<th>Immediately rinse off tapes soaked by dirty water. Dry within 48 hours if paper boxes and labels; otherwise, tapes can stay wet for several days. Do not freeze.</th>
<th>Do not touch magnetic media with bare hands.</th>
<th>Keep tapes wet in plastic bags.</th>
<th>Air dry or test vacuum drying without heat.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Floppy Disks</strong></td>
<td>Immediately pack. Do not freeze.</td>
<td>Do not touch disk surface with bare hands.</td>
<td>Keep wet. Pack vertically in plastic bags or tubs of cold water.</td>
<td>Air dry.</td>
</tr>
<tr>
<td><strong>Compact Discs &amp; CD ROMs</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1st Floor SC 110, 2nd Floor Media, 2nd floor Serials</td>
<td>Immediately dry discs. Dry paper enclosures within 48 hours.</td>
<td>Do not scratch the surface.</td>
<td>Pack vertically in crates or cardboard cartons.</td>
<td>Air dry.</td>
</tr>
<tr>
<td><strong>Sound &amp; Video Recordings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Floor Media; 1st Floor SC Hallway</td>
<td><strong>Sound and Videotapes</strong></td>
<td>Immediately rinse off tapes soaked by dirty water.</td>
<td>Do not touch magnetic media with bare hands.</td>
<td>Keep tapes wet in plastic bags.</td>
</tr>
<tr>
<td></td>
<td><strong>Shellac and Acetate Discs</strong></td>
<td>Immediately dry. Dry enclosures within 48 hours.</td>
<td>Discs are very fragile. Hold discs by their edges. Avoid shocks.</td>
<td>Pack vertically in ethafoam-padded crates.</td>
</tr>
</tbody>
</table>
### Sound & Video Recordings cont’d

| Vinyl Discs | Dry within 48 hours. Freezing is untested; if it is necessary, freeze at above -18° C (0° F). Freeze or dry enclosures within 48 hours. | Hold discs by their edges. Avoid shocks. | Pack vertically in ethafoam-padded crates. | Air dry, preferably with a record cleaning machine. |

### Black & White Prints

| 1st Floor, SC Room 104 | Albumen prints | Freeze or dry within 48 hours. | Do not touch binder with bare hands. | Interleave between groups of photographs. | Air dry; thaw and air dry. |
| Matte and glossy collodion prints | Freeze or dry within 48 hours. | Avoid abrasion. Do not touch binder with bare hands. | | | Air dry; thaw and air dry; or freeze dry. |
| Silver gelatin printing out and developing out papers | Freeze or dry within 48 hours. | Do not touch emulsion with bare hands. | Keep wet. Pack in plastic bags inside boxes. | 1) Air dry, 2) thaw and air dry, 3) freeze dry. |
| Carbon prints and Woodburytypes | Immediately freeze or dry. | Handle carefully - swelling of binder. | Horizontally. | Air dry or thaw and air dry. |
| Photomechanical prints (e.g., collotypes, photogravures) Cyanotypes | Freeze or dry within 48 hours. | Do not separate single sheets. | Interleave every 2" and pack in boxes or crates. | Air dry or freeze dry. |
### Color Photographs

| 1st Floor, SC Room 104 | **Dye transfer prints** | Package to prevent damage - recovery rate is poor. Immediately dry. | Do not touch emulsion. | Transport horizontally. | Air dry face up. |

| 1st Floor, SC Room 104 | **Chromogenic prints and negatives** | Freeze or dry within 48 hours. | Do not touch binder with bare hands. | Keep wet. Pack in plastic bags inside boxes. | Order of preference: 1) Air dry, 2) thaw and air dry, 3) freeze dry. Do not vacuum dry. |

### Cased Photographs

| 1st Floor, SC Room 104 | **Ambrotypes** | Recovery rate is low. Immediately dry. | Handle with care - glass supports and extremely fragile binder. | Horizontally in a padded container. | Air dry face up. |

| 1st Floor, SC Room 104 | **Pannotypes** | Immediately dry. | Handle with care - fragile surface, cover glass. | Horizontally in a padded container. | Air dry face up. Never freeze. |


### Negatives

<p>| 1st Floor, SC Room 104 | <strong>Wet collodion glass plates</strong> | Recovery rate is low. Immediately dry. | Handle with care - glass supports | Horizontally in a padded container. | Air dry face up. Never freeze. |</p>
<table>
<thead>
<tr>
<th>1st Floor, SC Room 103 (filing cabinets)</th>
<th><strong>Gelatin dry plate glass negatives</strong></th>
<th>Freeze or dry within 48 hours.</th>
<th>Handle with care - glass.</th>
<th>Keep wet. Pack in plastic bags, vertically in a padded container.</th>
<th>Air drying preferred; or thaw and air dry; freeze dry.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negatives cont’d</strong></td>
<td><strong>Deteriorated nitrates with soluble binders</strong></td>
<td>Immediately freeze or dry. Recovery rate may be low.</td>
<td>Do not blot.</td>
<td>Horizontally.</td>
<td>Air dry; thaw and air dry; test freeze drying.</td>
</tr>
<tr>
<td>1st Floor, SC Room 104</td>
<td><strong>Deteriorated acetates</strong></td>
<td>Immediately freeze or dry. Recovery rate is low.</td>
<td>Handle carefully - swelling of emulsion.</td>
<td>Horizontally.</td>
<td>Air dry; thaw and air dry; test freeze drying.</td>
</tr>
<tr>
<td>1st Floor, SC Room 104</td>
<td><strong>Polyester based film, nitrates and acetates in good condition</strong></td>
<td>Freeze or dry within 48 hours.</td>
<td>Do not touch emulsion with bare hands.</td>
<td>Keep wet. Pack in small plastic bags inside boxes.</td>
<td>Order of preference: 1) Air dry, 2) thaw and air dry, 3) freeze dry. Do not vacuum dry.</td>
</tr>
<tr>
<td>1st Floor, SC Room 104</td>
<td><strong>Lantern slides, silver gelatin</strong></td>
<td>Freeze or dry within 48 hours.</td>
<td>Handle with care - loose binding tapes and glass.</td>
<td>Vertically in a padded container.</td>
<td>Air drying preferred; thaw, and air dry.</td>
</tr>
<tr>
<td><strong>Transparencies</strong></td>
<td><strong>Color Transparencies</strong></td>
<td>---</td>
<td>---</td>
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<tr>
<td>Location</td>
<td>Type</td>
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<tr>
<td>1st Floor, SC Room 104</td>
<td>Additive color transparencies (most are glass) Autochromes, Agfacolor, Dufaycolor</td>
<td>Package to prevent damage - recovery rate is very poor. Immediately dry. Handle with care - loose binding tapes and glass. Horizontally in a padded container. Air dry. Never Freeze.</td>
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</tr>
<tr>
<td>1st Floor, SC Room 104</td>
<td>Chromogenic color transparencies, Mounted color slides and sheet films</td>
<td>Freeze or dry within 48 hours. Handle by mounts or edges. Keep wet. Pack in plastic bags inside box. Order of preference: 1) Air dry in mounts if possible, 2) thaw and air dry, 3) freeze dry. Do not vacuum dry.</td>
<td></td>
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</tr>
<tr>
<td>1st Floor SC 110, Vault.</td>
<td>Motion Pictures</td>
<td>Rewash and dry within 48 hours. Keep wet. Pack in plastic pails or cardboard cartons lined with garbage bags. Arrange with a film processor to rewash and dry.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Serials, 2nd floor and Lower Level.</td>
<td>Microforms</td>
<td>Microfilm rolls Rewash and dry within 48 hours. Do not remove from boxes; hold carton together with rubber bands. Keep wet. Pack (in blocks of 5) in a cardboard box lined with garbage bags. Arrange with a microfilm processor to rewash and dry.</td>
<td></td>
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<tr>
<td></td>
<td>Aperture cards</td>
<td>Freeze or dry within 48 hours. Keep wet. Pack in plastic bags inside boxes. Air dry, or thaw and air dry.</td>
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</tr>
<tr>
<td>Serials 2nd floor and Lower Level.</td>
<td><strong>Jacketed microfilm</strong></td>
<td>Freeze or dry within 48 hours.</td>
<td>Keep wet. Pack in plastic bags inside pail or box.</td>
<td>Air dry, or freeze, thaw and air dry.</td>
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<tr>
<td></td>
<td><strong>Diaz and vesicular microfiche</strong></td>
<td>Freeze or dry within 48 hours.</td>
<td>Interleave between envelopes and pack in milk crates or cartons.</td>
<td>Air dry, or freeze, thaw and air dry.</td>
<td></td>
</tr>
</tbody>
</table>
2.C: Books

Water Damage

There are five ways to dry wet books and paper records. It is important to remember that no drying method restores materials. They will never be in better condition than they are when drying begins. If time must be taken to make critical decisions, books and records should be frozen to reduce physical distortion and biological contamination.

1. Air Drying

Air drying is the oldest and most common method of dealing with wet books. It is most suitable for small numbers of damp or slightly wet books and documents. It is seen as inexpensive, but is extremely labor-intensive and can occupy a great deal of space and result in badly distorted bindings. It is seldom successful for drying bound coated paper.

If materials are not completely soaking wet, and the decision is to air dry materials, then use the following procedures:

Load materials onto book trucks or pack into plastic milk crates
1) Handle one item at a time.
2) Use both hands whenever possible.
3) Pick up or remove items so that other items are not damaged.
4) Do not press water out of a wet item. If a book is soaking wet, its condition will be so fragile that it should only be handled enough to put it in a carton.
5) Do not stack wet books when packing them in cartons. The weight may damage the ones on the bottom. Instead, place them in an upright position or, if absolutely necessary, spine down.
6) If possible, record the call numbers of the first and last book being packed in each carton or truck. Masking tape can be used for labeling.

Prepare drying area
1) Select an area for drying materials. Preferred areas should have large amounts of available table space. Floors in hallways, etc., may also be used for drying books.
2) Bring in dehumidifiers, place in strategic (and out of the way) locations and turn up to high. Designate a person to check and empty dehumidifiers.
3) If possible, lower temperature to the coolest feasible level.
4) Bring in fans and place them in strategic (and out of the way) locations. Use appropriate speed (usually low or moderate) for moving air over materials for maximum drying.
5) Arrange tables for convenient drying and access to library materials. Cover tables with plastic sheeting, then with paper to absorb water. Change paper regularly (otherwise the books will reabsorb the water).

6) If the air-drying area is self-contained and full of books, it may be necessary to fumigate the entire room.

Move books
When milk crates and book trucks arrive at the drying site(s) the following are recommended:
1) Lift materials carefully and place on tables and/or floors.
2) Keep related materials together whenever possible.
3) Place books with firm bindings on their tail or head edges and open them so the leaves fan and evaporation can begin.
4) Place soft-cover items with spines down and open them in the middle.
5) For items that can stand alone without much sagging, turn leaves systematically to accelerate drying.
6) If water drains away from very wet items, mop up excess water.

2. Dehumidification
This method has been used for many years to dry out buildings and holds of ships. Large commercial dehumidifiers are brought to the facility with all collections and equipment left in place. Temperature and humidity can be carefully controlled to user specifications. The technique is successful as long as the process is initiated before swelling and adhesion have taken place. This method has the advantage of leaving the materials in place on the shelves, eliminating the costly step of removal.

3. Freezer Drying
Books and records that are only damp may be dried successfully in a self-defrosting blast freezer if left there long enough. Materials should be placed in the freezer as soon as possible after water damage. Books will dry best if their bindings are supported firmly to inhibit initial swelling. Freezing must happen quickly and temperatures must be below -10 to -40 degrees Fahrenheit to reduce distortion. Expect this method to take from several weeks to several months. Coated paper may adhere with this method.

4. Vacuum Thermal Drying
Books and records may be dried in a vacuum thermal-drying chamber. The vacuum is drawn, heat is introduced, and the materials are dried above 32 degrees Fahrenheit. This means that the materials stay wet while they dry. Thus, books often become distorted, but loose papers can be dried more successfully.

5. Vacuum Freeze Drying
Frozen or wet materials are dried at temperatures below 32 degrees Fahrenheit, thus eliminating further distortion. The physical process known as sublimation takes place: ice crystals vaporize without melting. Rare and unique materials can be dried successfully, but leathers and vellums may not survive. Although this method is more costly, the cost of rebinding is reduced and mud or soot is lifted to the surface, making cleaning less time-consuming.
If materials are soaking, dripping wet, they cannot be air-dried successfully. Freeze instead. If the decision is to freeze-dry library materials, the options are:
   a. Ship immediately to freeze-dry facilities.
   b. Transport materials to local freezers.
   c. Rent refrigerated trucks to transport materials to temporary freezer storage facilities.
   d. Leave materials where they are and have the freeze-dry company carry them out.

If materials are packed for freeze-drying, use the following procedures:
   a. Follow all procedures listed above for air-drying to the point of packing items for transport.
   b. Wrap individual items in freezer paper, shiny side toward books, before placing in plastic milk crates.

**Fire Damage**

If there is fire damage, the odor is reduced by freezing the books. There are special sponges for cleaning soot-damaged materials.

**Mold**

To combat mold, DON’T ALLOW IT TO DEVELOP! Maintain moderate temperature and humidity (70 – 72 degrees Fahrenheit and 55% or lower RH). Circulate air and dust regularly.

If mold is discovered, check to see if it is active (soft, fuzzy, smears easily) or dormant (powdery, easy to wipe). If it is active and affects only a single book, consider withdrawing the book from the collection. If it is dormant, do the following:

For wet material:
   Air-dry or freeze, or
   Brush off spores outdoors and (if possible) with a fan blowing the spores away.

For dry material:
   Brush off spores outdoors and (if possible) with a fan blowing the spores away, or
   Vacuum using a triple-action filtration vacuum.

Fumigation is no longer recommended for mold because fumigants are toxic to people, the residue remains on the object, and fumigation does not prevent the mold from returning.

Always wear gloves and, if possible, coveralls or a lab coat. Wash hands after handling any object with mold or that is suspected to have mold.

If mold is discovered in large portions of the collection, do not attempt to clean up without first consulting a mycologist to determine if toxic molds are present.
Before books are returned to the shelves, the shelves should be disinfected and the mold situation monitored for a period of time.

**Supplies:**
- Dehumidifiers
- Fans
- Plastic Sheeting
- Paper, plain (unprinted) newsprint or absorbent paper towels
- Freezer Paper
- Milk Crates or Cartons
- Book Trucks
- Labeling Supplies: masking tape, waterproof felt-tip pens
- Rubber Gloves
- Sponges for cleaning soot
- Disinfectant for cleaning shelves

### 2.D: Manuscript, Records, and Rare Book Materials

**Criteria for High-Priority Water Damage Prevention**
- High Value (historic, monetary)
- Irreplaceable (manuscript or autograph materials)
- Fragile (difficult or impossible to recover). Vellum covers, leaves of documents, books with covers that have “red-dot” and other significantly deteriorated leather (from after 1820), coated paper (e.g., art books, glossy magazines or books with photographic reproductions, particularly from 1890 to 1950).

**Estimating Water Absorption**

Manuscripts and books dated earlier than 1840 will absorb water to an average of 80 percent of their original weight. Some may absorb as much as 200% of their original weight. Since there is a greater concentration of proteinaceous materials receptive to water in such early books and papers, they are especially vulnerable to mold when damp. Modern books, other than those with the most brittle paper, will absorb an average of up to 60% of their original weight.

The major part of all damage to bound volumes caused by swelling from the effects of water will take place within the first four hours or so after they have been immersed. Since the paper in the text block and the cardboard cores of book bindings have a greater capacity for swelling than the covering materials used for the bindings, the text block of a soaked book usually expands so much that the spine assumes a concave shape and the fore-edge a convex shape, thus forcing the text block to become partially or completely detached from its binding. The board cores of bindings absorb a great amount of water in such circumstances and are usually the source of mold development between the board papers and flyleaves.
Leather and vellum books, especially those of the 15\textsuperscript{th}, 16\textsuperscript{th}, and 17\textsuperscript{th} centuries, can usually be restored successfully if they are dried under very carefully controlled procedures. Such materials are usually classified as rare and should be treated accordingly by not mixing them with less rare materials during preparations for salvage, stabilization, and drying. The advice of a certified book conservator may be essential in order to safely carry out the most appropriate methods. If the material is frozen, freezer paper should be used between each volume to prevent sticking.

Do not wash the following categories of items:

- Open or swollen volumes
- Vellum or parchment bindings or pages
- Leather bindings
- Fragile or brittle materials
- Materials with water soluble components (freeze these immediately)

**Manuscripts**

Manuscripts and other materials in single sheets create particularly difficult problems if they have been scattered. An indication of the approximate location in which they are found during the salvage operation may be extremely helpful at a later date. Materials should never be moved from the site in large batches or left piled on top of each other, either at the site or in adjacent temporary housing, since the excessive weight of water-affected books and paper records can lead to severe physical damage.

**Archival Box Files**

Archival box files fare better than book material because their boxes are made of porous board stock that can be expected to absorb most of the water, protecting the contents. Each box should be carefully inspected and the box replaced if it is water-saturated. Failure to do so will increase the risk of physical damage as boxes may collapse from pressure during recovery, shipment, and cold storage. Papers that have adhered together should be frozen. Often the freeze drying will allow the papers to be separated without damage.

**Coated Papers**

Coated papers are the most vulnerable to complete loss and should not be permitted to begin drying until each volume can be dealt with under carefully controlled conditions. The period between removal and freezing is critical. It may be necessary to re-wet them with clean cold water until they can be frozen. Coated papers must be separated immediately to prevent blocking. If sheets can be separated, they can usually be air dried successfully with some cockling. Cockled pages can be photocopied to retain intellectual content if the original does not need to be kept.

**Manuscripts, Documents and Small Drawings**

Freeze or dry within 48 hours. Don’t separate single sheets. Interleave between folders and pack in milk crates or cartons. Air, vacuum, or freeze dry. Air dry flat in small piles (1/2 inch) or individually if possible. Change blotting paper beneath the materials before it becomes soaked.
Vellum, Parchment, Leather
Handle wet vellum, parchment, and leather very carefully. Always use a support such as cardboard to handle this material. Do not open or close. Do not separate covers.

Wet vellum, parchment, and leather should be air dried where possible. A combination of tension and pressure drying may be required to dry this material successfully. Slow and gentle blotting of saturated areas can enhance drying.

When freezing is necessary, vellum, parchment, and leather items should be separated with freezer paper during packing.

Fire Damage
- Fire damaged books should be handled as little as possible during the retrieval and recovery process.
- All fire damaged material should be assumed to be fragile and handled as little as possible prior to treatment.
- Wrap fire damaged books in clean unprinted paper or freezer paper and place between cardboard sheets for protection. Clearly label all packages.
- Burned and wet books should be frozen for later treatment.

Mold
- Do not wipe mold from wet (or dry) books.
- Wet moldy books should be frozen, then vacuum freeze dried and fumigated before cleaning.
- People with a history of allergies or respiratory illness should not handle or clean moldy items.

Supplies:
Supplies that are to be used specifically for archival (including rare book or manuscript) collections:
milk crates or cartons
white blotters (free of dyes)
flat boxes or covered plywood
freezer paper
silica gel
polyethylene bags and/or sheeting
dehumidifier
vacuum fitted with a HEPA filter
thermohygrograph or sling psychrometer
labels for milk crates
waterproof/grounded heavy-duty extension cords
absorbent paper towels or plain newsprint paper
plastic sheeting rolls, 3-5 mil thick plastic
recording supplies (including pad of paper, index cards, ballpoint and waterproof felt-tip pens)
crepe bandages for wrapping vellum books
2.E: Photographs, Slides, Films, Microforms
Because of the number of photographic processes and their wide variety, responsible advice for the emergency salvage of wet photographs is difficult to provide.

Minimize immersion time - photographs need to be dried as soon as possible or frozen.

Problems occurring from immersion - images separate from mounts, emulsions can dissolve away or stick together, staining can occur. Mold begins to grow within 48 hours at 60%RH and 70F. Mold causes permanent staining.

Prints should be salvaged first: exceptions include deteriorated nitrate and safety films, which are extremely susceptible to water damage.

Processes that should be salvaged first: ambrotypes, tintypes, collodion wet plate negatives, gelatin dry plate negatives, lantern slides, deteriorated nitrate or safety films, autochromes, carbonprints, woodbury types, deteriorated or unhardened gelatin print, color materials. These will not survive any immersion.

Processes more stable in water: Daguerreotypes, salted paper prints, albumen prints, collodion prints, platinum prints, cyanotypes.

Air-Drying Photographs
1. Separate photographs - if photos are stuck together, freeze (see below).
2. Drain off excess water.
3. Place face up on absorbent material (paper towels).
4. Curled photographs can be flattened later.

To Freeze Photographs
1. Place photographs in small plastic bags, several to a bag.
2. Interweave photographs with non-woven polyester material or wax paper (makes it easier to separate).

Drying Frozen Photographs
1. Thaw, then air dry - as a group of photos dries, peel apart, place face up on absorbent material.
2. Vacuum thermal drying (frozen material is thawed and dried in a vacuum) is not recommended for photographs. Gelatin photographs will have a tendency to severely mottle and stick together.
3. Photographs can be vacuum freeze dried (no thawing occurs); however, this process is best used with informational rather than artistic photographs. Gelatin photographs may mottle but won’t stick together.
4. Wet collodion glass plates must never be freeze dried, they won’t survive. Also true for ambrotypes, collodion lantern slides, and tintypes.
5. Dried or frozen photographs are reasonably stable. They can be stored until a conservator can be consulted.
**Digital Output Prints**

Ink-jet and other digital output prints are extremely sensitive to moisture, high humidity, smoke, and other risks. Since they cannot be restored after a disaster, avoidance of risk before a disaster is the best treatment.

Storage in sleeves and folders inside sturdy archival boxes diminishes risk. Placing the boxes on neither the top nor bottom shelves of a range also diminishes risk.

If flooding occurs, remove boxes from standing water as soon as possible to avoid bleeding of the dyes and loss of image sharpness. Even if a box is not wet, remove it to an area where humidity is closer to normal levels. Elevated humidity can also cause dyes to bleed. Do not open boxes until they have acclimated.

**Emergency Salvage for Slides**

Slides should be rinsed and dipped in “photo-flo” slide cleaner and air dried by hanging on a line or propped on edge. Slides should be removed from frames for drying, then remounted. Slides mounted between glass must be removed from the glass or they won’t dry.

**Salvaging Wet Motion Pictures**

If only outside of container is wet, dry and relabel. If the film is wet, fill the can with cold water and replace the lid. Pack into plastic pails filled with cold water or cardboard box lined with garbage bags. Ship to film processor for rewashing and drying.

**Salvaging Microforms**

If the microfilm is still boxed, do not remove from box. Rubberband boxes, wrap five cartons of film into a block with plastic wrap. Pack the blocks into a heavy-duty cardboard box lined with three garbage bags; tie each bag separately. Ship to microfilm processor.

Do not allow them to dry out. If deemed necessary, the manufacturer should be called and consulted. Once it has become wet, silver halide microfilm should be immersed in clean water until treatment is possible. If it becomes dry, the emulsion may separate from the carrier. Also, the film will stick together and solidify. It can remain in cool water, in a plastic container, for several days. If diazo or vesicular film has been wet, it can be dried with a soft, lint-free cloth.

In the event of fire, microfilm exposed to the heat of a fire may have faded. Vesicular film may start to fade at 120°F; diazo and silver halide, at 140°F. Microfilm should not be stored in fire-resistant safes or cabinets of the type with insulation which, when heated, releases moisture, this causing steam build-up. This can cause melting or stripping of the emulsion.

Pack and Freeze: Aperture cards, microfilm strips in jackets, diazo microfiche.

**Drying**

- Aperture cards - remove film chips from mounts. Wash chips and dry them binder side up on absorbent material. Remount.
- Microfilm strips in jackets - cut the strips from the jackets. Wash and dry the film and insert new jacket.
- Diazo and vesicular microfiche - remove from enclosures. Inspect diazo films for blistering and delamination. If damaged, replace. Wash all damaged microfiche in cool, clear water. Dry on absorbent material or hang dry on line.

Information provided by Northeast Document Conservation Center, Andover, Massachusetts 01810-1494  508-470-1010

2.F: Art Works

Sculpture
Planning is imperative in displaying sculpture. Think about how the sculpture will be removed in case of emergency. Wheeled pedestals or dollies, as well as an escape route without stairs, will be needed. Therefore, displays should be limited to the first floor. Besides dollies, fireproof blankets and a crane should also be kept on the premises. Coating the sculpture with a protective wax seals its pores and helps preserve it. Sculptures should be cleaned and coated every year. Most importantly, the artist must record, photograph, and insure all works of art. Before starting on any conservation, the artist, if possible, should be contacted.

Sculpture and fire
- Wood sculptures must be removed first, and are usually quite heavy.
- Plastic sculptures have no chance of survival unless removed in the early stages of the fire. Because of their light weight, they can usually be carried. Keep in mind that plastics emit toxic fumes while burning.
- Sculptures made of copper or other soft metals (lead, tin) may suffer substantial damage depending on how long they are exposed to the fire.
- Bronze, steel, and iron sculptures will suffer surface damage, but can withstand heat fairly well, though they will develop a patina. Bronze melts at 1700 F and steel and iron above 2000 F. They may also be damaged by falling objects, or by falling to the ground if their pedestal is destroyed. Therefore, removal may be advisable.
- Stone sculptures will crack under heat and their surfaces will be affected (depending on the kind of stone). They are also extremely heavy, so wheeled pedestals and a short escape route without stairs are advisable.

Sculpture and water
- Sculptures located in seaside towns are very prone to damage from the chlorides in ocean water. They should be cleaned and coated with protective wax every year.
- Plastics and stone do well in water.
- Bronze will not be affected much, although long exposure will create a surface patina.
- Steel and iron will rust from exposure to water. Salvage these sculptures by sand blasting or cleaning with chemical solutions.

Sculpture and dust
Dust carries pollutants such as sulfates and nitrates, which when mixed with water from humidity or rain, turn into sulfuric and nitric acids. These acids are very abrasive to metals and stone and will eat away at untreated material, leaving pits in the copper, bronze, marble or stone sculptures, and ultimately consuming a metal sculpture right through to its hollow core. To protect these sculptures, clean and coat them with butchers wax every year to seal their surfaces.

- Stone and plastic can be washed.
- Bronze, wood, and steel can be dusted with a dry cloth and chemicals.

**Sculpture and earthquakes**

- Sculptures placed on pedestals filled with sand will sink into the pedestal instead of falling off.
- Sculptures can be bolted to their pedestals or affixed with a wax called quake wax.
- Very tall sculptures are better off being placed in a Plexiglas covering instead of being bolted down.
- Sculptures in storage should be placed in boxes and covered with plastic wrap. Ideally, every sculpture should be stored on its own dolly.

**Paintings**

Separate the merely wet paintings from those with structural damage. Structural damage includes tears in the canvas, flaking, lifting, and dissolving of paint and ground layers. Consult a conservator for these paintings.

The treatment of items of high monetary, historic, or sentimental value should only be performed in consultation with a conservator.

**Paintings under glass**

Remove the backing material from the frame. If the item is not stuck to the glass, carefully remove it from the frame and air dry. If the object appears to be stuck to the glass, do not attempt to remove it from the frame.

**Water damage to paintings**

Works on canvas or cloth (acrylic or oil):

1. If the painting is on an easel, transport horizontally, with the image facing upward. If unable to do this, carry painting facing you, holding sides of frame with palms of hand.
2. Use more than one person to transport the larger paintings.
3. Water damage must never be frozen. Air dry immediately.
4. Paintings should be unframed before drying, but not removed from the stretcher.
5. Structurally sound paintings should be dried flat and face down on a layer of Japanese tissue paper that is spread on a clean, padded surface. Make sure tissue paper is not wrinkled.
6. Cut blotters to the inside dimensions of the stretcher frame.
7. Cut a sheet of plywood or thick masonite to the same dimensions, or smaller to fit inside the stretcher keys.
8. Cover the back of canvas with a blotter (abut blotters end to end for a large canvas), then the board, and finally weights.

9. Change the blotter frequently until the canvas is dry. If the tissue on the face of the painting sticks to the paint layer, leave it in place.

Artworks on paper:
- Do not separate sheets that are stuck together.
- Do not blot the surface of artworks created with water soluble media.
- Interleave artworks in a folder.
- Transport artworks flat with supports or in their containers.
- Artworks should be air dried.
- If artworks have mold or saturated backings, or are stuck together or warped, it may be appropriate to freeze and vacuum freeze dry.
- To dry paintings with high or fragile impasto layers, consult a conservator.

Supplies

Photographs
Absorbent material such as unprinted newspaper, blotters
Paper towels
Clean cloths
Wax paper or non-woven polyester material
Vacuum freezer
Artist’s brush or soft cotton

Slides
Photo-file slide cleaner

Motion Pictures
Plastic pails
Cardboard cartons
Garbage bags
Labels

Microfilm
Rubber bands
Plastic wrap
Heavy-duty cardboard boxes
Garbage bags

Paintings
Blotters
Plastic sheeting
Japanese tissue paper
Plywood or masonite
Weights
2.G: Magnetic Media/Film, Optical Disks, Videos
Magnetic tape used in videos is similar in chemical composition to motion picture film and to microfilm; therefore, salvage methods are similar as well. Recovery efforts for optical disks (CD and DVD formats) are similar to those used for magnetic tapes.

Priorities: Unique items or non-commercial tapes and films should be ranked first for recovery. Older tapes/film should be treated before new tapes/film. Commercial and non-unique tapes/film should be replaced if they are water-damaged.

Water Damage
- Do not allow tape to dry out. Any sediments in the contaminating water will dry onto the tape and be more difficult to remove.
- Rinse with distilled water at room temperature. In a water disaster, videos and films can be immersed in water for several days if the water is clean.
- If water is muddy or sewage contaminated, use soapy water at room temperature to remove debris.
- Use just enough of a mild detergent (dishwashing liquid that is dye-free and perfume-free is OK) that is required to remove any oils or greases from the tapes. When wiping debris from an optical disc, wipe from the center of the disk to the edge (NOT around the disk in a circular motion).
- Dry using air drying, dehumidification, or vacuum drying. Do not use freezer drying, vacuum thermal drying, or vacuum freeze drying. Freezing of tapes can actually cause more damage. When drying an optical disk, take care not to scratch the surface with a towel.
- If a cassette has been exposed to water for an extended period of time, it may be necessary to open the cassette and check the condition of the cassette spindles and springs. If they show evidence of corrosion or rusting, they should be replaced.
- When all tapes and containers are dry, have the tapes cleaned professionally or use a special tape-cleaning machine.

Mold
- Mold is attracted to magnetic tape-based materials and videotapes. Mold should be removed by professional tape restoration firms to prevent loss of image, sound, or information.
- Properly equip recovery personnel with gloves, eye protection, dust/solvent mask with a HEPA filter, and protective smock or lab coat. Inhalation of mold spores and bodies can be a significant health risk.
- Isolate the tape from unaffected tapes.
- Keep at a humidity <50% RH and a temperature < 75 degrees Fahrenheit.
- Vacuum the mold from the tape pack or disk, avoiding direct contact. The vacuum should be fitted with a HEPA filter.
- Brush the remaining debris from the tape pack or disk.

**Fire Damage**
- Tapes that have experienced heat or fire damage can be respooled onto new tape reels if the old reels have warped or charred. Tapes in cassettes may need to be transferred to a new cassette if the cassette shell has warped.
- If the tape is “blocked” (the binder coating melted and the tape winds are stuck together), there is no way to recover it unless it has been backed up on another tape in another location.
- A slightly warped CD or DVD may still be playable, but recovery may not be possible if it is severely warped.

**Shock**
- For mild shock, re-tension the tape pack and respool to correct any shifts in the tape pack wind.
- If the tape reel or cassette has been damaged, the broken pieces should be replaced.
- In more severe forms of shock, resplicing of the tape may be required.
- A shattered CD or DVD cannot be repaired.

**Particulate Matter (Soot, Dust)**
- Soot or dust can be vacuumed from tapes, cassettes, or disks. Avoid contact with the material as much as possible.
- Soot or dust that cannot be removed by vacuuming may be wiped off with a lint-free cloth dampened with distilled water. Avoid getting a tape wet if it is not already wet.

**Magnetism**
- A tape that has been inadvertently demagnetized usually cannot be recovered with a commercial recorder. A special recorder capable of reading information from a tape with a very low signal-to-noise ratio would be required.
- Stray magnetism is not a problem for CDs or DVDs.

**Supplies:**
Dehumidifier
Distilled water
Dust/solvent mask
Eye protection
Gloves
Lab coat
Lint-free cotton cloth
Mild detergent
2.H: Phonograph Records
Not much can be done to save fire- or water-damaged phonograph records. Heat from a fire will melt the plastic quickly, and prolonged exposure to water will warp the records beyond repair. To a large extent, these materials are considered not salvageable. However, undamaged records with surface dirt can be carefully cleaned. It is best to have cleaning done by a sound conservator.

CAUTION: Always handle phonograph records by the edges and wear white cotton gloves to avoid leaving fingerprints.

Particulate Matter (Soot, Dust, Dirt)
- Wash records in a 1% non-ionic wetting agent in distilled water. Recommended are Kodak Photoflo solution or Lissapol TN450.
- Use a clean soft brush to carefully remove dirt.
- Keep vinyl, shellac, and acetate discs out of contact with water if at all possible, because they are very susceptible to damage from water. Do not attempt to wash these, but save for a conservator.
- Wash the record with distilled water and set in a rack vertically to air dry, away from strong heat sources (high heat can warp records).

Supplies:
Soft brush
Clean distilled water
Vertical drying rack (i.e. dish rack)
Rubber gloves

2.I: Electronic and Magnetic Resources
The best disaster preparation for electronic and magnetic media is to BACK UP the data contained on these media. Backups depend on your local hardware and software configurations. With electronic media it is crucial that you be prepared for a failure; the question is not if it will happen, but when it will happen.

Suggestions
- If you are connected on a network, become familiar with the network’s backup procedures. Many systems do daily backups and also have drive areas where you can do additional backups.
- If you are a stand-alone, you should back up important data frequently. Familiarize yourself with your operating system’s backup software.
- Do not keep your backups in the same place as your computer. Store them off site.
- Know your vendor contractual agreements! Who is responsible for corrupt and lost data? Who backs up tape data, etc.?
- Realize that all equipment has a life span. Try to project when disks will fail. Read your warranties and manuals. Look at consumer ratings and tests.
- Identify staff at various levels of your organization who have responsibility for systems and computer procedures.
- Train staff in backup and disaster potentials and how your institution or department deals with them.

Formats and types of damage
Electronic and magnetic media formats are being upgraded and changed continuously. The special handling instructions listed below for this material reflect current thinking. During emergencies involving this material, care should be taken to ensure that actions reflect technological change and treatments that are appropriate.

In General:
- Vacuum cleaners and other equipment with electric motors should not be used near magnetic media. Long suction hoses can be used to keep vacuum cleaners clear of this material.
- Chemical or abrasive cleaners should not be used.
- Hair dryers or other such equipment should not be used to dry these media.

Water / Mildew / Soot / Smoke / Mold
1. Magnetic Media
   - Wear gloves when handling.
   - Avoid scratching the surface.
   - Clean drive heads frequently.
   - Do not use cleaners or hair dryers on these materials.
   - Water is especially damaging to magnetic tape; the longer the exposure to water the greater the damage. Tape should be stored in water-tight containers.
   - Back up frequently.
   - Success rates for salvaging tape are low and the process is very labor-intensive. Improperly handled tape may damage playback heads.
   - Have these materials processed professionally, if possible.

2. Hard Disks
   - Hard disks may not be salvageable, depending on the nature of the damage. Recovering data from a hard disk may require the expertise of your institution’s computer systems office or a private company.
   - Back up frequently.

3. Tapes
   - The casing may protect the tape. If the tape is damaged, remove from the case.
   - Rinse in lukewarm water; leave wound on the reel.
   - Place on blotting material to dry.
   - Insert back in case; make a new copy.
   - Do not use cleaners or hair dryer (air dry).

4. Diskettes
· Remove diskette from the case and bathe in distilled water.
· Dispose of the old casing.
· Dry with a lint-free cloth.
· Insert back in a new case (a case from an old disk is fine, as long as it is dry). Make a new copy.
· Do not use cleaners or hair dryer (air dry).

5. Compact Disks
· Handle disks by the outer edges.
· On recorded side (no writing), working from the center of the disk in a straight line, wipe off with a soft, dry cloth (lint-free is preferable).
· Use distilled water if available.
· Do not use cleaners or hair dryer (air dry).

Heat and Fire
· Heat and fire are extremely damaging to electronic media.
· Assess the damage. If it is determined that the damage is not severe, follow the instructions above for water damage.
· If damage is assessed as serious, no backups exist, and data is important, a conservator or other professional should be consulted.

Electronic Disaster Resources:
In-house resources you may already have access to, or can purchase reasonably.

Programs already on your computer that can be used to help recover files, directories, etc.
   Examples: Backup - Diagnostics - Recycle bin - System information - Undelete.

Rescue Professional Computer File: Data Recovery Software. AllMicro, Inc., Clearwater, Florida. Recover lost data from physically damaged floppies and hard disks

LAN/WAN Systems. It is best to consult the person responsible for maintaining your Local Area or Wide Area Network.

Contact LITS and/or the DoIT Help desk.
Appendices

Appendix 1: Related UMBC Guidelines and Procedures
Appendix 2: Vendor Listing
Appendix 3: Selected Bibliography
Appendix 4: Additional Resources for Salvage of Specific Media
Appendix 5: Pocket Plan
Appendix 6: Floorplans
Appendix 1: Related UMBC Guidelines and Procedures

UMBC Crisis Response Plan
Prepared by the Campus Police
http://www.umbc.edu/police/
“UMBC is a community involving large numbers of individuals in a complex living/learning environment. The ability to effectively respond to an emergency or traumatic experience and bring the situation to a suitable conclusion is the responsibility of UMBC management and staff.

A traumatic experience is an event in which an individual experiences or witnesses an actual serious injury or death. When traumatic events occur in the university environment, crisis situations may create serious disruption to the campus environment.

Emergencies are unplanned events that can cause trauma, disrupt university operations, cause physical or environmental damage, or threaten the facility's financial standing or public image. Obviously, numerous events can be categorized as emergencies.

This plan provides a structure and protocols to follow when dealing with a traumatic experience or emergency response. For this planning process to be successful, one critical component is necessary for managing the university’s resources, an up-to-date workable "Crisis Response Plan". This plan will address most conceivable emergency and traumatic incidents.”

Emergency Response Planning Guide from Maryland Emergency Management Agency
http://www.umbc.edu/safety (under Forms)
“The Guide is divided into five sections.
• Section I discusses the aspects of emergency response programs.
• Section II describes general principles of emergency response planning.
• Section III highlights site-specific fire detection, alarm, public address and firefighting systems, and describes in detail the roles of key personnel.
• Section IV describes the most frequently used employee emergency response procedures.
• Section V contains site-specific information for your facility and information on conducting drills and critiquing employee performance and a pre-drill and post-drill examination for employees. Section V also includes maps of grounds, buildings and any other information crucial to your written emergency response plan.”
Appendix 2: Vendor Listing

Photographs, slides, films and microforms vendors

Cinema Arts, Inc.
207 Lincoln Green Lane
Newfoundland, PA 18445
570-676-4145
Repairs and duplicates all types of contemporary motion picture film.

Film Treat
42-44 Orchard Street – Suite 4
Long Island City, NY 11101
718-784-4040
Restoration of motion picture film.

Document Reprocessors
5611 Water Street
Middlesex, NY 14507
585-554-4500
Vacuum freeze drying.

Smolian Sound Preservation Studios
1 Wormans Mill Court #4
Frederick, MD 21701
301-694-5134
Restores most types of audio media.

Vidi Pax
30-00 Forty-Seventh Avenue, 6th Floor
Long Island City, NY 11101
800-653-8434
Recovery of videotapes from fire and water damage.

WRS Film & Video Labs
1937 North Birchwood
Cherry Hill, NJ 08003
609-424-1336
Processes, transfers, and restores all types of film, video and CD-ROMs.

Electronic and magnetic resources

American Data Recovery (offices nationwide)
Tysons Boulevard
1600 Tysons Blvd. 8th Floor
McLean, VA 22102
1-800-450-9282
http://www.adrdatarecovery.com/virginia.html
Services: Emergency Data Recovery of all operating systems and media; remote recovery; computer forensics; data conversion
Area: Maryland, DC, Virginia

Blue Lightning Computers, Inc.
301-445-3080
info@blcc.com
http://www.blcc.com
Services: Computer repair; data recovery; web page design; web server; custom programming; technical assistance.

Data and Information Solutions Corporation (DISC)
(formerly Maryland Data Recovery)
4203 Ulster Road
Beltsville, MD 20705
301-931-3282
Info@disc-recovery.com
http://www.disc-recovery.com
Services: Drive-independent spin-stand data recovery of all operating systems; removable media recovery.

Magnetic Media, Film, Disks, and Videos Cleaning and Restoration Firms:

Audio Mechanics (music and sound restoration)
http://www.audiomechanics.com/

Chace Audio Archive Services (sound and audio restoration)
http://www.chacearchive.com/

NBD International, Inc. (water- and smoke-damage recovery of videotape)
http://www.nbdint.com/

Ontrack Data Recovery (magnetic media, computer tapes, hard drives and diskettes)
http://www.ontrack.com/

Smolian Sound Studios (sound restoration, classical music archives)
http://www.soundsaver.com/

Tek Media (services and supplies for AV materials, particularly video)
http://www.rtico.com/tekmedia/

VidiPax (video, magnetic media, some film)
http://www.vidipax.com/

Gilles St. Laurent, Audio Conservator, National Library of Canada, 395 Wellington Street, Ottawa, Ontario, Canada K1A 0N4; (613-996-5423)

National Center for Film and Video Preservation at the American Film Institute
2021 North Western Avenue, Los Angeles, CA 90027; (323-856-7600)
[http://www.afi.com/about/preservation/ncfvp.aspx](http://www.afi.com/about/preservation/ncfvp.aspx)

**Local Artwork Conservators:**

Katherine G. Eirk
5523 Oak Place
Bethesda, MD 20817
Phone: 301-571-9764
*Conservator, Art on Paper Books, Paper*

Kitty Nicholson
National Archives
8601 Adelphi Road
College Park, MD 20740
Phone: 301-837-3614
Fax: 301-837-3615
E-mail: kitty.nicholson@nara.gov
*Conservator, Art on Paper Books, Paper, Photographs*

Terry Boone Wallis
Hyattsville, MD
202-707-5634
*Appraising*

James von Ruster
The Old Print Gallery
1220 31st Street, NW
Washington, DC 20007
Phone: 202-965-1818
Fax: 202-965-1869
E-mail: info@oldprintgallery.com
*Conservator, Art on Paper Books, Paper*
Appendix 3: Selected Bibliography
Provided by mdPlan

The following basic resources should be used as a starting point to explore areas of further interest in disaster planning. See also Additional Resources for Salvage of Specific Media.


Conservation OnLine Disaster preparedness and response website at: http://cool.conservation-us.org/bytopic/disasters/


Hendriks, Klaus B., & Brian Lesser, “Disaster preparedness and recovery: photographic materials,” American archivist 46, (no. 1, winter, 1983), 52-68.


Watkinson, David, and Virginia Neal. First Aid for Finds. 3rd ed. London: RESCUE and UKIC Archaeology Section. A manual for field archaeological conservation, but it has lots of good information on how to handle, pack, and process wet and waterlogged objects of many material types. Available at  http://www.oxbowbooks.com/.


Photographic preservation resources:


Smithsonian Institution. Photographic Negatives in the Juley Collection: Their Care and Preservation. Slide/Tape program, approximately 30 minutes long.


Information on the Internet:

National Archives - http://nara.gov/
National Media Lab - http://www.nml.org
Sculpture materials resources:
prepared by the BALC Disaster Preparedness Committee


Save Outdoor Sculpture!
Heritage Preservation
1012 14th Street, NW, Suite 1200
Washington, DC 20005
202-233-0800
http://www.heritagepreservation.org/PROGRAMS/SOS/sosmain.htm

Hirshhorn Conservation Lab - Mr. Lee Aks
Museum Offices: 202-633-4674
E-mail: aksl@hmsg.si.edu
Phone: 301-297-7377

International Sculpture Center
14 Fairgrounds Road, Suite B
Hamilton, NJ 08619
Phone: 609-689-1051
Fax: 609-689-1061
http://www.sculpture.org

Paintings resources:
prepared by the BALC Disaster Preparedness Committee


The American Institute for Conservation maintains a referral list of conservators who will be able to provide guidance for treating private collections.
Phone: 202-452-9545
http://aic.stanford.edu/public/select.html
The Disaster Mitigation Planning Assistance Website also maintains a searchable list of experts, services, and supplies:
http://www.matrix.msu.edu/~disaster/search.php

**Electronic materials resources:**


**Business Protection Systems**
1-800-594-3714
Disaster recovery and business continuity planning software. http://www.businessprotection.com

**CBL Data Recovery Technologies Inc.**
1-800-551-3917
Data recovery services for failed hard drives in laptops, desktop computers, data servers, raid arrays, tapes, and all other data storage and media. http://www.cbltech.com/

**Disktek Data Recovery**
1-888-839-0949
World-renowned experts at recovering data lost due to file corruption, mechanical or electrical failure, virus activity, system malfunctions, accidental erasure. http://www.disktek.com/disaster.html

**Flashback Data**
1-866-785-5700
Data recovery (emergency same-day shipping available), computer forensics, tape extraction, cloning, and remote backup services.  

McAfee, Inc.  
1-888-847-8766  
Security and intrusion prevention software for various formats (ViruScan, etc.).  

Strohl Systems Group, Inc.  
1-800-634-2016  
Business continuity software and services. Authors of LDRPS (disaster recovery planning system) and BIA Professional (business impact analysis software).  
[http://www.strohl-systems.com](http://www.strohl-systems.com)

Symantec Corporation  
1-800-441-7234  
Wide range of planning, backup, and recovery software for various formats (Norton Utilities, etc.).  
Appendix 4: Additional Resources for Salvage of Specific Media


Interactive Emergency Response and Salvage Wheel, available at [http://www.fema.gov/ehp/ers_wl.shtm](http://www.fema.gov/ehp/ers_wl.shtm). This information is from the Emergency Response and Salvage Wheel, a sliding chart designed for archives, libraries, and museums. It is also a useful tool for home or business and is available in English and Spanish versions. The Wheel was produced by the Heritage Emergency National Task Force, a public-private
partnership sponsored by FEMA and Heritage Preservation
http://www.heritagepreservation.org). For further information or to order the Wheel, call toll-free 1-888-979-2233.

Minnesota Historical Society Emergency Response web site, at
Detailed salvage instruction sheets are provided for the following types of objects:
Archaeological artifacts
Books: Cloth or Paper Covers
Books: Leather or Vellum Covers
Disaster Salvage Tip Sheet
Inorganics: Ceramics, Glass, Metals, Stone
Leather and Rawhide
Magnetic Media: Computer Diskettes
Magnetic Media: Reel-to-Reel Tapes
Microfiche
Microfilm and Motion Picture Film
Organics: Bone, Hair, Horn, Ivory, Shell
Paintings on Canvas
Paper: Coated
Paper: Framed or Matted, Preparation for Drying
Paper: Uncoated
Photographs and Transparencies
Record Albums
Scrapbooks
Textiles and Clothing
Textiles: Costume Accessories
Vellum and Parchment: Bindings and Documents
Wood

National Park Service. Conservograms. Available at
See the section on Emergency Preparedness, which includes the following:
21/1 Health and Safety Hazards Arising from Floods
21/2 An Emergency Cart for Salvaging Water-Damaged Objects
21/3 Salvage of Water-Damaged Collections: Salvage at a Glance
21/4 Salvage at a Glance, Part I: Paper Based Collections
21/5 Salvage at a Glance, Part II: Non-Paper Based Archival Collections
21/6 Salvage at a Glance, Part III: Object Collections
21/7 Salvage at a Glance, Part IV: Natural History Collections
21/8 Salvage at a Glance, Part V: Textiles

Robinson, Wendy. First Aid for Underwater Finds. London: Archetype Books. A manual for marine field archaeological conservation, but it has lots of good information on how to handle, pack, and process waterlogged objects of many material types. Available at
http://www.archetype.co.uk/.


Watkinson, David, and Virginia Neal. First Aid for Finds. 3rd ed. London: RESCUE and UKIC Archaeology Section. A manual for field archaeological conservation, but it has lots of good information on how to handle, pack, and process wet and waterlogged objects of many material types. Available at http://www.oxbowbooks.com/.

Appendix 5: Pocket Plan

In the case of life threatening emergency contact Campus Police, then the Library Director.

In the case of collections emergency, contact Facilities Management, Library Director, and/or a Disaster Action Team representative. Environmental Safety and Health should be notified as soon as possible.

<table>
<thead>
<tr>
<th>UMBC Campus Police</th>
<th>X5-5555 410-455-5555</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Security Desk</td>
<td>X5-2331</td>
</tr>
<tr>
<td>Patrick Dawson, Director</td>
<td>X5-2356 Home: 443-979-7604 Cell: 805-705-7090</td>
</tr>
</tbody>
</table>

**Disaster Action Team members**

| Shawn Parker, Business Manager | X5-2356 |
| Robin Moskal, Head of Collection Management | X5-3812 |
| Lynda Aldana, Head of Technical Services | X5-3468 |
| Tom Beck, Chief Curator | X5-3827 |
| James Stephens, Information Technology Librarian | X5-3040 |
| Joyce Tenney, Head of Serials | X5-3594 |
| UMBC Environmental Safety and Health | 410-455-2918 |
| UMBC University Health Services | 410-455-2542 |
| UMBC Counseling Center | 410-455-2472 |
| UMBC Facilities Management | 410-455-2550 |
| UMBC Public Information Officer | 410-455-2065 |
| Poison Control | 1-800-222-1222 |
| Maryland State Archives | 410-260-6400 |
| Maryland Archaeological Conservation Laboratory | 410-586-8501 |
| Lyrasis | 1-800-999-8558 disaster@lyrasis.org |
Appendix 6: Floorplans
Albin O. Kuhn Library & Gallery
Emergency exits and fire extinguishers
**Lower Level**

- **Fire extinguisher**
- **Emergency exit**
- **Emergency stairs**
  (these stairs lead directly to the exterior of the building)
Emergency exits and fire extinguishers
Second floor
Albin O. Kuhn Library & Gallery
Emergency exits and fire extinguishers
Third floor
Albin O. Kuhn Library & Gallery
Emergency exits and fire extinguishers
Fourth — Sixth floors
Albin O. Kuhn Library & Gallery
Emergency exits and fire extinguishers
**Seventh floor**

- Fire extinguisher
- Emergency exit
Books, brittle newspapers, coated papers, photographs, rare books, magnetic tape, photography equipment

Papers, Coated paper, Photographic prints, glass negatives, acetate negatives, b/w and color slides, Photography equipment, Books
Albin O. Kuhn Library & Gallery
Formats and salvage priorities
First floor

Books, coated paper, CDs,

computer equipment: copiers

Books, coated paper, CDs,
Albin O. Kuhn Library & Gallery

Formats and salvage priorities

Special Collections


Notes: Photos include: gelatin silver prints & negatives, albumen prints, carbon prints, Woodburytypes, photogravures, collotypes, cyanotypes, color prints & negatives (chromogenic), dye transfer prints, Daguerreotypes, Ambrotypes, Tintypes, transparencies (lantern glass, gelatin silver, color slides), gelatin dry plate glass negatives, polyester based film, nitrate & acetate negatives.

Albin O. Kuhn Library & Gallery
Formats and salvage priorities
Second floor

MEDIA:
CDs, DVDs, videocassettes, vinyl records, cassette tapes, magnetic tape. Computer equipment, playback machines -- dvd players, VCRs, televisions, blu-ray discs

Art and Archival materials: paper documents, photography (b/w prints, color prints, b/w & color negatives and slides of various sizes) art works on paper including friable media such as pastel & pencil and paint, paint on
Room 353: Departmental records

Room 354: Archival materials including paper documents, photographs, bound books, realia/memorabilia

Albin O. Kuhn Library & Gallery
Formats and salvage priorities
Third floor