University of Delaware Library

DISASTER RESPONSE PLAN

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University of Delaware Library
DISASTER RESPONSE PLAN

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I. Introduction

The collections in libraries, archives, museums, and other cultural institutions are constantly at risk of damage or loss from events such as fires, floods, roof leaks, and plumbing or other building system failures. To reduce the chances that a disaster will occur, and to minimize damage to collections if a disaster does occur, every collection-holding institution should have a disaster preparedness and response plan. Disaster preparedness is an ongoing process that includes identifying risks and potential hazards to the collections, taking steps to eliminate or reduce those risks whenever possible, and developing and maintaining a disaster response capability to minimize damage or loss in the event of a disaster.

In addition to procedures for evacuation in case of fire or other life-threatening emergency (Library Policy 31) and those for reporting security and facility concerns, the University of Delaware Library maintains this Disaster Response Plan for responding to emergencies involving the collections. The University also has an Emergency Guide for fire, medical, and other life-threatening emergencies.

The Library's Disaster Plan is also available on the Web, at http://www2.lib.udel.edu/preservation/disasterplan.htm.

I.A. Disaster Coordinating Team and Response Team Responsibilities

The Director of Libraries oversees disaster response, and is responsible for making available the resources that are needed to recover collections or facilities damaged in a disaster.

The Coordinator, Preservation, is responsible for organizing the Library's disaster preparedness and response efforts and for maintaining and updating this Disaster Response Plan. The Coordinator, Preservation, heads the Disaster Coordinating Team, which is responsible for managing disaster response, and the Disaster Response Team, which is trained to perform salvage and recovery procedures in a disaster situation affecting collections.

The Coordinator, Preservation, is responsible for matters relating to collections; the Assistant Director for Library Administrative Services is responsible for addressing matters related to the building.

II. Emergency Response Instructions for All Staff -- See Appendix 1.

Also on the Web at http://www2.lib.udel.edu/preservation/emergencyallstaff.htm.

III. Response Procedures for the Disaster Coordinating and Response Teams

III.A. Immediate Response Steps

III.A.1. Report the Emergency

a. **FIRE** or other life-threatening emergency

- Pull the fire alarm
- Leave the building (Public Safety Officers responding are responsible for evacuation)
- Notify Public Safety by calling 911

b. **WATER**

- Monday-Friday, 8 a.m. to 5 p.m. - Notify Library Facilities at x6940
- At all other times - Notify the Circulation Desk at x2455 (they will contact Public Safety at x2222 or University Facilities at x1141)

In reporting the emergency, remain calm, and provide the following information:

- Nature and location of the problem
- When the problem started
- Your name, location, and phone number
- Stay on the phone until you have given all necessary information. Do not be the first to hang up.

III.A.2. Notify the Disaster Coordinating Team

If collections are or could be affected, notify the Disaster Coordinating Team. One person may be designated to call the others.

III.A.3. Ensure Safety

Do not enter the affected area until it has been determined that is safe to do so.

If the Fire Department is called, they will be in charge of deciding when staff may re-enter the building.

In a **Water Emergency**, potential dangers to people include **electrical shock**, and **exposure to sewage, chemicals, and mold**.

To ensure safety in a Water Emergency:

- Turn off electricity in affected areas if necessary*
- Turn off water supply if it continues to run into affected areas*
- Ensure that no chemicals, sewage, or mold present health risks
- Cordon off unsafe areas

*Library staff do not have access to electrical or water shut-offs. Public Safety should contact Facilities (for nights and weekends, Emergency Maintenance) to shut off the electricity or the water.

Contaminated Water

If you are responding to a water emergency but have not determined the source, remember that **the water could be contaminated**. If you are handling affected collections or working in the wet area, wear protective clothing. Rubber gloves, safety glasses, and protective jackets are in the Disaster Trunks located in Circulation, the Mailroom, and outside the Women's Room on the Lower Level near Preservation.

Standing Water

If there is standing water on the floor, there is a **risk of electrical shock**. Do not enter the area until the electricity has been turned off.

III.A.4. Halt Damage

Shield library materials from the source of water by:

- Covering library materials with plastic sheeting if water is coming from above
- Making a dam barrier to keep water away from materials if flooding is from below
- Moving undamaged materials to another location if they are in jeopardy from water flow or high relative humidity (RH), BUT do not separate or space out dry or damp books and leave them in the disaster site when the RH remains high (keeping them tightly together on the shelves helps to keep them from swelling)

III.A.5. Stabilize the Environment

Work with Facilities staff to:

Keep temperature below 65ºF, lower if possible, by:

- Turning down heat or turning up air conditioning
- Opening windows if outside is colder than inside

Keep relative humidity below 35% by:

- Running dehumidifiers
- Running fans to keep air circulating
- Removing water-soaked materials such as books, carpeting, and ceiling tiles
- Removing water using wet vacuums and/or mops/squeegees

Monitor the temperature and relative humidity for at least 72 hours

III.A.6. Evaluate the Extent of Damage

Identify types of materials damaged and estimate quantities, e.g.,

- Books
- Unbound paper
- Photographic materials
- Magnetic media

Identify the nature of damage, e.g., materials are:

- Damp
- Wet
- Muddy
- Smoke damaged
- Fire damaged

Sketch on the floor plan or make a list of the call numbers ranges involved. Consult Morris Library Floor Plans [Appendix 2].

III.A.7. Plan the Recovery Strategy

Determine priorities among damaged materials taking into consideration:

- Importance to the collection
- Chances for successful recovery
- Availability of replacements

Determine what recovery methods will be used, e.g.,

- Air drying
- Freeze drying
- Dehumidification
- Cleaning

Determine what resources are needed for the salvage operation:

- Labor (Disaster Response Team, Facilities, other volunteers)
- Workspace
- Supplies and equipment
- Freezer space
- Recovery services

III.A.8. Activate the Disaster Response Team

The Team leader uses the Disaster Response Team List to notify members. One person on the Team may be designated to call the others.

Team members should be told:

- The nature of the emergency
- Location of the emergency
- Where the team will gather

When Team members have gathered, the Team Leader:

- Apprises the Team of the emergency and outlines the salvage strategy
- Reviews salvage procedures
- Assigns tasks, including:
  - Retrieval of supplies
  - Documentation of damage
  - Salvage tasks
  - Communication with the media

III.B Salvage Procedures

III.B. 1. Salvage Procedures - Paper-Based Materials

III.B.1.a. Priorities and precautions

Books

Priorities

- Freeze or dry within 48 hours to avoid mold growth and minimize distortion
- Immediately freeze books with coated paper, keeping them wet until they can be frozen (unless they can be dried right away)
- Immediately freeze books with leather and vellum bindings (unless a conservator can dry them right away)
- Work first on books that have fallen on the floor, books with coated paper, and the wettest materials
- If books are wet and tightly packed on shelves, remove one or two so that they do not burst off the shelves as they swell (and incur further damage as they fall)

Handling precautions

- Do not open wet volumes, or close those that have fallen open
- Do not separate covers from text-blocks
- Handle one item at a time
- Do not press water out of wet books – the paper is too fragile when wet

Unbound paper

Priorities

- Stable media – freeze or dry within 48 hours to avoid mold growth
- Soluble inks and pigments – immediately freeze or dry
- Coated paper – immediately freeze or dry

Handling precautions

- Do not try to separate single sheets (except to air dry- see “Separating wet sheets”)
- Keep documents in order and retain documentary information
- Do not blot surfaces of documents that have soluble media

III.B.1.b. Overview of recovery methods

1) Air drying – materials are dried by spreading them out on and/or interleaving them with absorbent paper in a work space in which the temperature and relative humidity are kept below 65% F and 35% RH, and fans are used to keep air circulating.

Use for:

- Damp books and books with wetness no more than 1 inch on the edges
- Small amounts of damp or partially wet unbound paper
- Very few wet books, but only if staff are available to dry them in a controlled environment

Don't use for:

- Coated paper (unless just a few and they can be dried right away)
- Leather or vellum binding (air drying should only be done by a conservator)
- Large quantities of wet unbound paper

2) Freezing – Wet materials are stabilized by freezing to allow time to plan for recovery. Freezing is an interim step. Materials must be air dried or vacuum freeze dried after being removed from the freezer. Mold will not grow, and further distortion is halted once materials are frozen. Rapid freezing minimizes damage from ice crystals.

3) Vacuum freeze drying – After materials are frozen to prevent further distortion and mold growth, frozen materials are dried in a vacuum chamber. Materials remain frozen as water is removed. The water passes from a solid state (ice) to a vapor state.

Use for:

- Wet books and unbound paper
- Coated paper
- Soluble inks and dyes
- Large quantities of damp books or unbound paper if staff and space are not sufficient to air dry

Don't use for:

- Leather- or vellum-bound books if the bindings are important to save (these should be air dried under controlled conditions by a conservator)

4) Vacuum drying (vacuum thermal drying) – Wet or frozen materials are dried in a vacuum chamber. A vacuum is drawn, heated air is put into the chamber, and a vacuum is applied again to pull out the moisture. Books distort more than when vacuum freeze dried. A lower-cost alternative for materials of lesser value.

Use for:

- Large quantities of unbound paper without intrinsic value

Don't use for:

- Soluble inks and dyes
- Coated paper

5) Dehumidification – Materials are dried in place on shelves by large commercial dehumidifiers that are brought on site. Temperature and relative humidity in the area should be controlled. Books distort more than when vacuum freeze dried.

Use for:

- Moderately wet books
- Drying out the building

Don't use for:

- Coated paper
- Leather or vellum bindings

6) Freezer drying – Materials are put in a freezer for months. Over time moisture sublimates out of the materials.

Use for:

- A few wet books

Don't use for:

- Coated paper

III.B.1.c. Procedures for freezing

Pack materials to be frozen

Be sure that steps have been taken first to ensure safety, halt damage, and stabilize the environment.

Books

If feasible, charge books out (keep in mind that wet books should not be opened). Alternatively, mark each box with the library's name, and number each box. Use tags or masking tape to label. Make a list of each box and its contents: call number range, number of volumes, and whether materials are wet or damp.

Wrap each volume (or every other) in freezer or waxed paper (coated side in). Wrap a single sheet around, open at the fore-edge. Wrapping keeps frozen books from sticking together and keeps dyes from bleeding from one book cover to another.

Pack books spine down in milk crates or cardboard cartons lined with plastic trash bags. It is easiest to turn the box on one side, lay each book flat, spine in, then turn the box upright when it is filled. Full boxes are desirable because further distortion is inhibited, but if boxes cannot be gotten to the freezer right away, do not fill them completely (wet books will continue to swell). Pack books that have fallen open as they are (do not try to close). Lay only one open book on top of a row of packed books, with waxed paper beneath it.

Unbound paper

Place manuscript boxes in milk crates or cardboard boxes lined with plastic bags. If time permits interleave each manuscript box with freezer or waxed paper. If materials are not in boxes (wet boxes may have to be discarded) interleave every two inches of folded material with freezer or waxed paper.

Oversized unbound paper

- In drawers – sponge standing water out of map drawers. Remove drawers, then ship and freeze them stacked up with 1" x 2" wooden strips between them.
- Loose material - pack in bread trays, flat boxes, or on plywood sheets covered in polyethylene
- Rolled materials – bundle very loosely in small numbers

Transport to the loading dock

- If boxes get wet, do not stack them – the weight may crush those below
- Establish a route to the loading dock and mark the route with signs
- At the beginning transport only a few crates on trucks until a routine is established

Choose a freezing facility

Options are:

- Use local freezers
- Ship immediately to a freeze-drying company
- Rent refrigerated trucks(s)
- Hire freeze-drying company to remove materials from the disaster site

Contact the service provider needed and arrange for services. Specify quantity of materials to be frozen, and estimate arrival time. Prepare a written contract for freeze drying services in advance of sending materials, or at least before the vendor begins any treatment.

III.B.1.d. Procedures for air drying wet or damp paper-based materials

Prepare the drying site

Identify a work space for drying in which the environment can be controlled (65ºF, 35% RH, circulating air), and preferably with a large amount of table surface. If not, a floor will do.

Cover the tables or floor with plastic sheeting. Lay absorbent paper on the plastic. If using floors, delimit drying areas with tape and leave aisles for access.

Transport materials to the drying area either on trucks or packed as for freezing, depending on the quantity of materials and distance from disaster site to drying site.

Air drying procedures

Books

Coated paper - Freeze drying will give the best results for wet coated papers. If the book is partially wet, air dry by fanning open the pages and interleave between every page with waxed paper. Damp books should be stood on their heads and fanned open. Fan through the pages frequently.

Saturated books - Stand books on their heads on absorbent paper; open only the covers slightly to allow them to stand. Place absorbent paper between text block and covers. Lean two books together if they cannot stand alone, or support them with bookends. Change paper on table as soon as it becomes wet, and turn books alternately to rest on head and tail each time paper is changed. When most of the water has drained, follow procedure for partially wet books.

Partially wet books - Interleave absorbent paper every 20 leaves or so, extending beyond the head (or tail) and fore-edge. (NOTE: For partially wet books with coated paper, interleave with waxed paper.) Lay books flat. Frequent changes are better then too many interleaves, which cause further distortion. Paper towels are best but unprinted newsprint will do. Change interleaving as soon as it becomes wet (depends on conditions, so check progress). When books are only slightly damp, follow procedure for damp books.

Damp books - Stand on edge, fanned open a little bit, in a current of air (e.g., a fan). If the covers are damper than the text blocks, place absorbent paper between them. When almost but not completely dry, go to the final air drying step.

Final air drying step - When almost dry, lay books flat, place absorbent paper between covers and text block, reform them into their normal shape if possible, and place a light weight on top of each. Do not stack drying books together. Leave the weight in place until book is completely dry.

Unbound paper

Drying on a flat surface - Spread documents out on table or floor and change paper beneath as it becomes wet. Interleave stacks of paper every 25 sheets with paper towels or other absorbent paper, changing interleaving when it becomes wet.

Separating wet sheets - Place a sheet of polyester film on top of a stack of wet unbound papers. Rub gently with a bone folder – the top sheet will adhere to the film. Hang the sheets of paper with film stuck to it on a clothesline. As they dry, they will separate from the film. Or, lay the wet sheet and film on a sheet of polyester web (such as non-woven interfacing fabric). Carefully peel off the film. Lay another sheet of polyester web on top of the wet sheet. Lay these out on tables to dry.

Final air drying step - Flatten by placing between two blotters and applying even pressure with weights.

Cleaning books

If staff and time permit, books that are covered with mud or silt may be washed prior to freezing or air drying.

Cleaning precautions

- Cleaning is a secondary priority; salvage of wet material is the first
- Cleaning requires careful handling. Staff should be carefully instructed before they are set to the task of cleaning.
- Opened volumes should not be washed
- Always wear long rubber gloves. This is a wet messy process, so staff should also wear waterproof footwear.

Cleaning procedure

Hold books closed tightly enough to prevent dirt from getting into the text-block. Immerse in clean water, and gently agitate and/or dab very gently with a sponge. Brush covers only (very gently) with a small paintbrush. Do not rub. Anything that does not come off by this method should be left, and removed after drying.

For more thorough cleaning:

Set up three plastic garbage cans filled ½ to ¾ full with clean water in an area where running water is available so that water can be changed. Wash books as described above, passing books from one person to the next stationed at each trashcan, until they are clean.

III.B. 2. Salvage Procedures - Photographic Materials
(prints, cased photos, negatives, transparencies, microfilm, & motion picture film)

III.B.2.a. Priorities and precautions for photographic materials

Priorities

- Although all photographic materials are sensitive and require immediate attention, in general, prints are more vulnerable than film or negatives, color more sensitive than black and white. If negatives exist for prints, however, it may make sense to salvage only the negatives, and make new prints later (this may not be appropriate for some fine art photography)
- Color slides, negatives, and film should be treated professionally within 48 hours.
- Some historic processes are extremely vulnerable to damage from water. If not air dried immediately, recovery rate is low (see procedures below for each).

  These include:
  - Wet collodion (collodion wet plate negatives, tintypes, Ambrotypes)
  - Daguerreotypes
  - Autochromes, Dufaycolor
  - Dye transfer prints
  - Deteriorated nitrate- and acetate-base negatives and film
  - Carbon prints and Woodburytypes

Precautions

- If possible, seek the assistance of professionals for salvage and recovery of photographic materials because of the variety of processes and their sensitivity in general
- Do not allow wet photographic materials (both prints and films) to dry in contact with one another – the emulsions will soften and stick to adjacent surfaces, and may be impossible to separate – see below for procedures for keeping them wet until recovery can begin.
- Do not touch the emulsion side of photographic materials

III.B.2.b. Procedures for salvaging photographic materials

General

Consult a professional if possible, but in general, the preferred recovery method for photographic materials is air drying, with the exception of microfilm and motion picture films. Film on long rolls can be handled more easily by reprocessing in mechanized processing machines by a professional processing lab. See procedures below for air drying for specific materials.

For materials that cannot be air dried immediately, and for microfilms and motion picture films, keep them wet and cool by sealing them while wet in plastic bags and immerse the bags in cold water in clean plastic pails. Add ice to the water to keep it cool, especially when shipping them for treatment. Arrange for treatment as soon as possible. For black and white, emulsions separate in 3 days. For color, color layers separate, and dyes fade, in 2 days.

If neither air drying nor arranging for treatment within the time limits above are possible, freeze materials as quickly as possible (quick freezing as in a blast freezer results in smaller (less damaging) ice crystals).

Procedures for drying prints

- Unframe and unmat prints, and keep identifying information with them.
- If prints have been exposed to dirty or salt water clean them by immersing them in cool clean water.
- Cover drying surface with absorbent paper, lay prints face up, and change paper when it becomes wet.

Special considerations for the following prints:

- Unmounted albumen prints – to prevent them from curling, dry with weights on the edges or under lightly weighted polyester web and blotters.
- Carbon prints and Woodburytypes – the binders swell considerably, so dry these as quickly as possible.
- Dye transfer prints – Dyes migrate so dry these as quickly as possible. If transporting them keep them horizontal.

Procedures for drying cased photographs (Daguerreotypes, Ambrotypes, tintypes in cases)

Air dry cased photographs as soon as possible. Do not immerse in water and do not freeze.

If water has gotten inside the case, dismantle and air dry all parts:

- Remove the assembly from the case
- Fold back the preserver frame
- If there is sealing tape, cut it and take the assembly apart
- Lay photographs face up with components beside them on absorbent paper, and change it as it becomes wet.

Procedures for drying negatives and transparencies

Roll film negatives – Dry emulsion side up on absorbent paper as it becomes wet, or hang carefully on a line with plastic clips

Sheet film negatives and transparencies – These have a gelatin layer on the back that could stick to paper. Hang to dry carefully on a line with plastic clips, or dry films emulsion side up on polyester web covered absorbent paper.

Glass negatives – Dry vertically by propping them up on their long sides or in racks. If broken, cracked, or with flaking emulsions, dry flat.

Color slides in plastic or paper mounts – Remove slides from plastic sleeves and pages. If a small amount, slides may be dried in their mounts if in a controlled environment. Otherwise, unmount slides, keep and dry the mounts if they have information on them, and hang slides on a line by edges with paper clips.

Deteriorated nitrate- and acetate-base negatives – The recovery rate is low. Dry these emulsion side up on sheets of polyester web over absorbent paper, and change paper as it becomes wet. If they are in an early state of deterioration they may be hung on lines with plastic clips to dry, but do not let them touch each other.

Motion picture film - If film is in cans, check if water has gotten inside. If only the containers are wet, dry them and relabel if necessary. If film is wet, fill the can with cold water, close the can, and pack into plastic bags and immerse bags in plastic pails filled with cool water. Add ice to keep cool, especially for shipping. Ship to a film processor for rewashing and drying as soon as possible.

Microfilm - Salvage master films. Consider leaving copy films if they can be replaced.

If water has gotten inside film rolls, keep rolls wet and in their boxes (add water into boxes if needed to ensure keeping them wet). Hold cardboard boxes and their labels together with rubber bands. Pack them into sealed garbage bags and immerse the bags in plastic pails filled with cool water. Add ice to keep them cool, especially for shipping. Send to a film processing lab as soon a possible.

If only a few rolls of film have gotten wet, they can be dried by winding over film rewinds (used for inspection) and cleaning with a film cleaner, which contains a solvent that encourages even drying.

Microfiche (silver-gelatin, diazo, and vesicular) – dry gently with a soft, lint-free cloth.

III.B. 3. Salvage Procedures - Magnetic Tape (video, audio, computer)

III.B.3.a. Magnetic tape priorities and precautions

Priorities

- Salvage older tapes before newer ones, cellulose acetate before PET
- Salvage master and unique tapes, leave those for which back-up copies exist.
- Some very old tapes used a paper substrate. Treat these as paper rather then as plastic film. They should be dried as soon as possible.

Precautions

If the water is dirty or salty, do not allow tapes to dry out. Rinse them in clean water as soon as possible. Magnetic tape that gets wet in a disaster is not in immediate danger unless the water is dirty, or contains corrosive agents (e.g. sea water). If the water is clean, tapes can remain wet at room temperature for several days.

Avoid recovery methods that use extreme heat or cold--both can damage tapes. Acceptable methods are air drying, dehumidification, and vacuum drying without heat.

III.B.3.b. Magnetic tape salvage and recovery procedures

Tapes on open reels (reel to reel audio, open reel computer tape)

- Remove tape from canisters and remove wrap-arounds. Then,

Tapes contaminated with mud or sewage:

- Rinse as soon as possible in clean water, then proceed as below
- If necessary to remove mud or sewage, add as little as possible of a mild dishwashing liquid (perfume and dye free) to the cleaning water

Properly wound tapes:

- Rinse in distilled water
- Blot carefully with a lint-free towel
- Air dry vertically at room temperature

If edges of the tape are fragile (due to poor tape pack) do not blot.

If tape is not properly wound and water has gotten inside the tape pack:

- Separate the reel flanges from the tape using a rubber grommet. This allows air flow and keeps the tape from sticking to the flange
- Air dry vertically--do not use heat
- When the tape looks dry on the outside, run the tape over [cleaning tissues or felt pads]
- Copy the tape

Tape cassettes or cartridges (video and audio cassettes, computer cartridge tapes)

If cassettes or cartridges are wet only on the outsides, air dry them on absorbent materials. If tape is wet inside the cassette or cartridge, dismantle and treat as open reel tapes.

III.B. 4. Salvage Procedures - Floppy Diskettes

III.B.4.a. Priorities and precautions for floppy diskettes

Priorities

If back-up files exist, use them as the new originals and make new back-ups. Discard the damaged diskettes

Handling precautions

- Do not use heat to dry diskettes
- Do not freeze
- Do not touch the surface of a diskette

III.B.4.b. Salvage and recovery procedures for floppy diskettes

Damp but clean diskettes

- Dry using a hair dryer on the “air” setting (no heat)
- Holding the jacket slightly apart, circulate air through it until both sides of the diskette and jacket lining are thoroughly dry
- Copy the data onto a new diskette

Wet diskettes

Remove diskettes from their jackets, being careful not to touch the diskette surface

Removing 3 ½ " diskettes from their jackets:

- If the jacket has screws remove them
- Hold the diskette with the metal door side down
- Remove the door, letting the spring fall outward
- Open the jacket at the side using a microspatula

Removing 5 ¼ " diskettes from their jackets:

- Move the diskette to one side of the jacket
- Carefully cut the opposite side of the jacket (diskette is 1/16” from the edge)

Washing

- Wash diskette in a tray of distilled water
- Blot dry with a soft, lint-free cloth OR air dry if they can be propped up or hung by their holes so that their surfaces do not come in contact with anything
- Use a jacket from an undamaged diskette to copy the dried diskette:
  - Open the jacket and remove the diskette
  - Insert the dried diskette and tape it shut so it won’t get caught in the drive
  - Copy the diskette
  - Discard diskettes after checking that copying was successful
  - Use the jacket again for copying each affected diskette
- Clean the computer’s floppy drive heads

III.B. 5. Salvage Procedures - Compact Disks

III.B.5.a. Priorities and precautions for compact disks

Priorities

Treat CDs affected by mud, sewage, or sea water before those that are only wet Paper enclosures and inserts are usually coated paper. Handle separately as coated paper.

Handling precautions

Do not scratch either side of CDs. When drying them wipe radially from the center to the outer edge. Do not wipe in a circular motion.

III.B.5.b. Salvage and recovery procedures for compact disks

Mud or sewage affected CDs

- Wash in soapy water at room temperature
- Rinse in distilled water
- Air dry at room temperature or wipe gently with a clean, soft, lint-free cloth using a radial motion (straight line from the center to the outer edge)

Sea water affected CDs

- Immerse in clean tap water as soon as possible
- Rinse in distilled water
- Air dry at room temperature or wipe gently with a clean, soft, lint-free cloth using a radial motion (straight line from the center to the outer edge)

Fresh water affected CDs

- Rinse in distilled water
- Air dry at room temperature or wipe gently with a clean, soft, lint-free cloth using a radial motion (straight line from the center to the outer edge)

III.B. 6. Salvage Procedures - Phonograph Recordings - (vinyl, shellac, acetate discs)

III.B.6.a. Priorities and precautions for phonograph recordings

Priorities

- Salvage shellac and acetate before vinyl discs
- Freeze or dry enclosures within 48 hours (handle as paper)

Handling precautions

- Acetate and shellac discs are sensitive to water. Keep water contact to a minimum.
- Hold discs by their edges. Avoid touching the surfaces.

III.B.6.b. Salvage and recovery procedures for phonograph recordings

- Remove discs from sleeves and jackets
- If labels have separated, mark the centers of the discs with a grease pencil
- Dry separated labels, jackets, and sleeves as other paper materials
- Wash discs exposed to unclean water on a record cleaning machine, if possible. If not available, wash in trays of distilled water and 1% non-ionic wetting agent
- (Kodak Photo or Lissapol TN450)
- Set discs vertically in a rack to air dry

IV. Local Emergency Contact Lists

IV.A. UD Library Disaster Coordinating Team

Name	Work	Home
Paul Anderson, Library Administrative Services	6910	(302) 368-2423
Susan Brynteson, Director of Libraries	2231	(302) 234-6775
Susan Maguire – Acting Head of Coordinating Team	6919	(302) 738-6313
Susan Davi, Collection Development	6948	(302) 453-8179
Chad Maring, Library Facilities	6940	(302) 286-4739
Tim Murray, Special Collections	6952	(610) 255-5650
Nancy Nelson, Access Services	8136	(302) 764-4239
Craig Wilson, Collections	6908	(302) 453-7454

IV.B. UD Library Disaster Response Team

Name	Work	Home
Elise Calvi -- Team Leader, Preservation	0196	(610) 543-0306
Jacqueline Carter, Preservation	1729	(302) 765-2299
Carol Eichinger, Serials	1122	(610) 869-3453
Sandy Farmer, Access Services	3122	(610) 869-9221
Fritz Getze, Branch Libraries	2530	(302) 731-0680
Theresa Hessey, Preservation	1729	(302) 368-9532
Susan Maguire, Preservation – Acting Head of Response Team	6919	(302) 738-6313
Xiaolan Meng, Preservation	1729	(302) 832-3409
Marlene Osborne, Administration	2231	(302) 731-7833
John Stevenson, Acquisitions	8671	(302) 764-4239
Anita Wellner, Special Collections	2229	(302) 731-5249

IV.C. UD Library Area Specialists

To be contacted if collections in their areas are affected

Area	Name	Work	Home
Administration	Paul Anderson	6910	(302) 368-2423
Access Services	Nancy Nelson	8135	(302) 764-4239
Acquisitions	Dina Giambi	2829	(302) 633-1207
Bibliographic Control	Deborah Rae	8887	(302) 378-4906
Bibliographic Control	Susan Agent	2964	(302) 834-1597
Branch Libraries	Margaret Welshmer	6944	(410) 392-3132
Branch Libraries	Fritz Getze	2530	(302) 731-0680
Government Documents	John Stevenson	8671	(302) 764-4239
Government Documents	Jeffrey Boys	2238	(302) 368-7631
Media	Francis Poole	8461	(302) 456-9033
Microforms	Shelly McCoy	6363	(610) 255-4314
Reference	Shirley Branden	2432	(302) 454-1624
Reference	Demaris Hollembeak	6945	(302) 731-0549
Special Collections	Rebecca Johnson Melvin	6089	(302) 738-1887
Special Collections	Iris Snyder	2229	(302) 239-3254
Systems	Mark Grabowski	3310	(302) 292-0624

IV.D. UD Library Executive Council

Name	Title	Work	Home
Paul Anderson	Asst. Director for Library Administrative Services	2231	(302) 368-2423
Susan Brynteson	Director of Libraries	2231	(302) 234-6775
Dina Giambi	Asst. Director for Library Technical Services	2231	(302) 633-1207
Julia Hamm	Asst. to the Director	2231	(302) 737-8389
Sandra Millard	Asst. Director for Library Public Services	2231	(302) 999-8859
Gregg Silvis	Asst. Director for Library Computing Services	2231	(302) 292-1736
Craig Wilson	Asst. Director for Library Collections	2231	(302) 453-7454

IV.E. UD Telephone Numbers

Department	Phone
Fire, medical emergency, or other life-threatening emergency	911
Public Safety	(302) 831-2222
Occupational Health and Safety	(302) 831-8475
University Freezers - Dining Services	(302) 831-6761
University Facilities	(302) 831-1141
University Movers	(302) 831-1110
Custodial Services	(302) 831-8649
Central Stores	(302) 831-2157
Electrical Services	(302) 831-2621
Director of Insurance	(302) 831-2971
Chemistry Department	(302) 831-2462

V. Disaster Supplies

The disaster supplies that are kept on hand are listed below. The Current Supply Inventory, which includes storage location, quantity in stock, date of last inventory, and the source for restocking, is maintained in the Disaster Plan on the Web. See section VII.A, Upkeep Activities, Stocking and Monitoring Supplies, for the frequency of restocking.

V.A. Contents of Disaster Trunks

There are trunks containing disaster supplies in Circulation under the light panel, in the Mail Room, and in Preservation outside the Women's Room on the Lower Level. Each trunk contains the following emergency supplies:

Batteries
Bucket
Disaster Plan
Extension cord
Flashlight
Gloves - latex
Gloves - rubber
Jackets - Tyvek
Markers
Newsprint paper
Paper towels - folded
Paper writing pads
Pencils
Pens
Plastic sheeting
Safety goggles
Scissors
Sponges
Tape - strapping

V.B. Supplies Stored in Preservation

The following disaster supplies are stored in Preservation, in cabinets outside the Women's Room on the Lower Level.

Blotter paper
Blow dryer
Cameras (one-time use)
Cheesecloth
Clothesline
Clothespins
Crates (Rescubes)
Disaster Plan
Flashlights
Flashlight batteries
Freezer paper
Gloves - latex
Gloves - rubber
Hard hat
Mylar sheets
Newsprint paper
Paper towels
Paper writing pads
Pens, pencils, markers
Plastic sheeting
Plastic bags (grocery store)
Plastic trash bags
Plastic trays
Rags
Reemay
Respirators
Respirator replacement filters
Safety goggles
Scissors
Sponges
Tape - strapping
Tools (screwdrivers, etc.) - in Conservation Lab
Zip ties

Dehumidifiers are stored in Room 012, the shelving storage room on the Lower Level near the Preservation Department. There is a key to Room 012 in the Circulation Unit.

VI. Emergency Resources Outside the University of Delaware Library

VI.A. Freezing Facilities

University of Delaware Campus Dining Services
153 Perkins Student Center
Newark, DE 19716
Susan Bogan, Director - (302) 831-6761 (W); (302) 235-7453 (H); sbogan@udel.edu
Robin Moore, Director of Catering and Board Operations - (302) 831-4145 (W); (302) 218-7757 (Nextel)
Ron Rescigno, Director of Retail Operations - (302) 831-6761 (W); (302) 218-7872 (Nextel)

Louis Dreyfus Distribution Center
P O Box 7398
Newark, Delaware 19714
Phone: (302) 738-7150
Fax: (302) 738-7166
E-mail: kimhession@dca.net
3 million sq. ft. freezer space @ approx. 0 degrees F or a little below

International Directory of Public Refrigerated Warehouses
http://www.iarw.org

VI.B. Salvage Firms

Freeze Drying

Blackmon-Mooring-Steamatic Catastrophe, Inc. (BMS CAT)
303 Arthur Street
Fort Worth, TX 76107
(800) 433-294024-hour hotline
http://www.bmscat.com

Disaster Recovery Services, Inc.
414 Blue Smoke Court West
Fort Worth, TX 76105
(817) 535-6793
(800) 856-333324-hour hotline

Document Reprocessors
5611 Water Street
Middlesex, NY 14507
(800) 437-9464
http://www.documentreprocessors.com

Munters Moisture Control Services
Philadelphia District Office
100 Naamans Road
Unit 5H
Claymont, DE 19703
(610) 604-0560
(800) 959-7901 National Headquarters, 24-hour hotline
http://www.munters.com

Dehumidification

Munters Moisture Control Services
Philadelphia District Office
100 Naamans Road
Unit 5H
Claymont, DE 19703
(610) 604-0560
(800) 959-7901 National Headquarters, 24-hour hotline
http://www.munters.com

Blackmon-Mooring-Steamatic Catastrophe, Inc. (BMS CAT)
303 Arthur Street
Fort Worth, TX 76107
(800) 433-294024-hour hotline
http://www.bmscat.com

Disaster Recovery Services, Inc.
414 Blue Smoke Court West
Fort Worth, TX 76105
(817) 535-6793
(800) 856-333324-hour hotline

Fire Damage Salvage

Astrocare Restoration
50 South Center Street Unit 22
Orange, NJ 07050
(973) 677-1234
astro@nac.net
http://www.astrocare.com

Firedex of Phila. Metro
611 County Line Road
Huntington Valley, PA 19006
(215) 357-6000

Computer Data Recovery

Excalibur Data Recovery
101 Billerica Avenue, Building A
North Billerica, MA 01862
(800) 726-3669

Film and Video

Vidipax
920 Broadway, 15th Floor
New York, NY 10010
(800) 653-8434
vidipax@panix.com
http://www.panix.com/~vidipax

Recorded Sound

Smolian Sound Preservation Studios
1 Wormans Mill Court #4
Frederick, MD 21701
(301) 694-5134
smolian@erols.com -- http://www.soundsaver.com

Microfilm Processing

Preservation Resources
9 S. Commerce Way
Bethlehem, PA 18017
(800) 773-7222
presres@oclc.org -- http://www.oclc.org/oclc/presres

VI.C. Sources of Supplies and Equipment

Office Max
3001 Frost Road
Bristol, PA 19007
(800) 572-6473
www.officemaxsolutions.com

KMart
301 College Square Shopping Center
Newark, DE 19711
(302) 738-7290

Home Depot
Rte. 896 and Rte. 40
Newark, DE 19702
(302) 838-6818

Protext
3515 Leland Street
Bethesda, MD 20815
(301) 718-1659 -- protext@protext.net
http://www.protext.net

Thomas Scientific
99 High Hill Road at I-95, Box 99
Swedesboro, NJ 08085-0099
(856) 467-2000
www.thomassci.com
value@thomassci.com

VI.D. Consultants

Conservation Center for Art and Historic Artifacts (CCAHA)
264 South 23rd Street
Philadelphia, PA 19103
(215) 545-0613
http://www.ccaha.org (Disaster assistance; advice; mold remediation; disaster supplies)

Debbie Hess Norris
Director, Art Conservation Department
(302) 831-3696
dhnorris@udel.edu (Photographic materials)

Lois Olcott Price
Conservator for Library Collections
Winterthur Museum and Library
(302) 888-4633 (Books and unbound paper)

VII. Upkeep Activities

VII.A. Stocking and Monitoring Supplies

The Disaster Team Leader is responsible for stocking and monitoring supplies. Inventory and restock supplies annually, including testing supplies that have a limited shelf life (e.g. batteries). In addition, supplies should be replenished after a disaster. Disaster response should be evaluated to determine if other supplies would have been useful to have, and should be added.

Last inventory and restocking February 2003.

VII.B. Updating the Disaster Response Plan

Staff contact information: Should be updated immediately upon changes. Disaster Coordinating and Response Team members should notify the Disaster Team Leader when changes occur. Last update December 23, 2002.

Other contact information: Verify annually. Last update February 2002.

Content. Review annually and following a disaster. Last update February 2003.

Distribution List

Disaster Coordinating Team
Disaster Response Team
Library Executive Council
Disaster Trunks
Public Safety
Occupational Health and Safety
Dining Services

VII.C. Record of Incidents

Note: Lists of damaged materials and maps showing their locations are accessible from the web version of the disaster plan.

4/21/2006 – When chillers were turned on for the first time of the season, there was a leak of coolant (apparently water in this case) onto books in the DS area on the 3rd floor. Approximately 50 books got wet are were air dried. The Library Administration will ask to be notified of the date and time when chillers are to be turned on each year.

10/9/2005 - As a result of heavy rains over the weekend, water came in the building on the south side in numerous places:

* Third floor, affecting about 10 faculty studies
* Second floor, affecting several faculty studies and 3 rooms in the Administration office area
* First floor, south end of the Periodicals Room

Edward Moyse of the Stacking Unit first reported on Sunday morning that carpeting was wet outside the faculty studies on the south side of the building. Edward notified Circulation staff. Barbara, the student employee in Circulation, began calling the library staff on Circulations's emergency contact list, and was able to reach Nancy Nelson. Nancy notified Paul Anderson and Elise Calvi. Barbara also called University Facilities (ext. 1411) requesting they send someone over with wet vacuums. However no one from University Facilities responded on Sunday. Paul and Elise worked along with four staff from the Stacking Unit from about 1:00 to 6:00 p.m. on Sunday to assess the damage, move materials out of harm's way, and stabilize the condition of the faculty studies on the 2nd and 3rd floors. The problems in the Administrative Office and Periodicals Room were not discovered until Monday.

Fortunately, very few books or papers in the Faculty Studies actually got wet. Two books in one study got wet, and one pamphlet, which had been on the floor under a cardboard box, also developed mold. The wet books were air dried in the Conservation Lab, and the moldy pamphlet was photocopied and sewn into a new pamphlet cover by Susan Maguire.

The carpeting was very wet in the affected faculty studies, and water also seeped into the walls from the floor up. Even though the contents of the rooms was not wet, they could not be left in the rooms because of the high humidity from all the water in the carpet and walls. Mold would very likely begin to grow on books and papers left in such a humid environment with the doors closed and no ventilation. The contents of the rooms had to be secured, so leaving the materials in place with doors open was not an option. Four staff from Stacking--Edward, Tom, Denis, and Valerie all worked to move the contents of the wet studies to dry rooms across the hall.

Since University Facilities did not respond to the Library's call on Sunday, the small group of library staff volunteers had to try to dry the rooms. Although the custodian's closets, where wet vacuums are stored, are normally locked (and the library doesn't have keys), Edward found one closet unlocked. He and Tom (also from Stacking) figured out how to operate the wet vacuums, and worked for several hours extracting as much water as possible. Tom and Edward also moved many heavy file cabinets off the wet carpeting, and had to be inventive about how to empty the water from the wet vacuums (since we did not have access to any of the floor-level custodial sinks). All available fans were brought to the 2nd and 3rd floors to keep air circulating in the hope of avoiding a mold outbreak.

On Monday morning, Paul Anderson and Chad Maring worked with Mark Golden of Facilities Management--Structural Services to identify the cause of the leaks. Joe Miller of Occupational Health and Safety was also called to assess the damage and help determine whether walls and carpeting will need to be replaced. The faculty studies disaster that occurred a year ago was on the north end of the building. The damage then was much more extensive (both the contents and building), but the pattern of water damage looks very similar. In the previous event, Facilities determined three causes for the entry of the water: flashing on the roof was inadequate, water came in around the window seals, and water came in through the mortar between the bricks. Windows were resealed and bricks were repointed, but only on the north face of the building.

Monday morning Jesse Rossa checked the Special Collections spaces and reported no that no problems were found. The Mark Samuels Lasner Rooms were also checked, as they are on the south end of the first floor. The carpeting near the south side outer wall felt very slightly damp compared to the the rest of the carpeting in the room, but it did not appear that any water had come in there. The inner doors to these room were left open to allow the air to circulate a little better.

Staff in the Administration Office worked to move wet and endangered materials out of the wet offices, and custodians extracted water from the carpeting with a wet vacuum. Mandi Townsend removed computer equipment from the floor. Two carpet drying

"hurricane" fans were brought to dry the wet carpets further. Dehumidifiers were put in place in the Administrative offices and in some of the studies on Monday.

It was determined that the the damage was far less than in the disaster of the previous year (9/28/04) due to the quick response. Only small parts of walls needed to be cut out and replaced. Preparedness actions taken as a result of this disaster are to purchase additional fans and dehumidifiers (done), and for the Library Administration to obtain a key to the custodial closets where wet vacuums are stored.

7/19/2005 - Plumbers were fixing a problem with the sink in the janitor's closet next to the staff Men's Room on the 1st floor, south end of the building (across the hall from Room 111) which resulted in a leak in the Conservation Lab below. A large quantity of water poured from the ceiling directly above a truck of books waiting for repair, and also above the area where supplies used to dry wet books are stored. Approximately 25 books had to be salvaged by a combination of interleaving and air drying with fans. In 1999(?) sewage poured into the Conservation Lab from the same spot in the ceiling. The spot corresponds to the floor drain in the Men's Room on the first floor.

Library Facilities contacted the plumbers to find out where the water came from and how it came though to the Lower Level. They told us that when they were fixing the problem in the janitor's closet, it had caused water to back up in the urinals. They flushed them to clear them out, but the flushing mechanism stuck "on" until water overflowed and ran on to the floor and to the floor drain. On further investigation, the plumbers found that a piece of piping near the floor drain, called a trap primer, had been disconnected long ago but was never capped. The overflow water ran through this uncapped pipe through to the Conservation Lab below. The plumbers capped the trap primer so that this should not occur again.

1/13/2005 - A small number of wet books were found on the third floor in row 3098 (DS 207 .S) during or after rain on 1/13 - 1/14. It was not clear how water came through because there were to stains on the ceiling, but there is a vent directly above. Plastic sheeting and drip collection buckets were put out when the leak was discovered. On 1/18 no drips were seen and the plastic was taken down. See the list of damaged materials.

9/28/2004 - Heavy rain from the former hurricane Jeanne on 9/28 caused many leaks in Morris Library (all floors) and leaks in the Agriculture and Chemistry branch libraries. Library collections were not damaged, but there was significant water damage and some mold developed in faculty research studies on the second and third floors along the north side of Morris Library. Leak drip buckets were in place in 3rd floor Morris stacks (DS and B) caught the water. The chronic leaks in Special Collections office on the 2nd floor and in room 323 were noticed right away. In Chemistry plastic sheeting was put up. In the Agriculture Library on the evening of 9/28, a student employee acted quickly to remove a range of reference works from shelves when a leak occurred, which avoided materials getting wet. Leaks have been identified as follows:

Morris Library third floor leaks--

- AP 30 (row 3012) -- plastic sheeting put up on 9/29
- DS 35 (row 3095) -- leaks caught in the plastic tubs put up there in July
- DS 267 (row 3099) -- leak close to the books, but in the aisle -- plastic sheeting put up on 9/29
- Leaks in the B class in the aisles between row 3028A and 3027B, 3026A and 3025B
- Faculty research studies and graduate carrels area. The disaster response team was activated on Thursday 9/30. Thirty five studies--those with room numbers starting with 228, 229, 328, and 329--got very wet, probably due to rain pooling on the roof, not draining quickly enough, and getting between the roof surfacing and the flashing on the parapet wall along the north facade (according to University Facilities--Structural Shop). Carpets were soaked, water wicked up into the walls, and contents of the studies got wet. Most of the water damage was to materials on the floor and window sills. Six rooms had wet papers, books, computers, and other objects. One room--the worst hit--had mold growing on papers and on one book by 9/30 when the disaster team was able to gain access. Moldy materials were removed first, then wet materials were collected and brought to the Lecture Room to be air dried, and then the dry contents of all of the study rooms were packed and removed (stored in Room 104), because of the danger of mold growing in the warm, humid, closed studies. Occupational Health and Safety assessed the condition of the rooms. Mold had grown on walls in some rooms. A mold abatement contractor was brought in to clean some rooms; in other rooms carpeting will be removed and replaced; in some rooms the affected parts of drywall will be removed and replaced. Mold-affected

papers are being replaced by library staff with copies obtained through Interlibrary Loan or by photocopying. The room clean up and renovations are expected to take two weeks. The problem that caused the leaks is still to be addressed.

Other leak locations--

- Special Collections -- chronic leaks in the 2nd floor office and in room 323; a new leak in the back corner of the office, over the computer and flatbed scanner. Systems responded and worked to dry out the equipment this morning.
- Room 057, Systems, Library Data and Server Support -- wet carpeting, wet walls, some ceiling tiles were soeaked and came down
- Lower level, R stacks in the north east corner, the area north of Systems room 057. Several leaks from the ceiling at the end of rows 5 and 6, and wet carpet and walls along the east and north walls. Faculty studies along the north wall, although no damage to the contents of the studies there.
- Chemistry Library - chronic leak, but precautions were taken yesterday (plastic was put up) so nothing got wet.
- Agriculture Library -- new leak over the range of the Ag Ref. collection. Around 9 pm lon 9/28 the student working there pulled all the books off the shelves, avoiding any books getting wet. Also leaks in the office area, but buckets had been put out yesterday.
- Carpet wet two offices in Reference staff area and a large soaked area by the back door that leads to the hallway between Ref. and Reserves
- Reserve Room -- Wet carpeting all along the window and by the door that exits to the north.

Maps showing the locations of leaks throughout Morris Library:
1st floor map
2nd floor map
3rd floor map
lower level map

8/11/2004 - There was a water leak in Instructional Media. Window washers spilled water on the floor above when they hooked their hose to the sink in the cafe. Water came through the ceiling into Media onto the tops of the closed stack shelving and also onto a table where some posters had been placed. A sheet of binder's board had been placed on top of the posters to protect them, but there was enough of a leak to penetrate the board and several posters got a little bit damp. The water that landed on the compact shelving did not affect the collections stored there. The posters have been set out to air dry in the Map Room.

8/9/2004 - Mold re-occurred on the walls of the atrium, on the south end of the west wall.

8/1/2004 - The recurring leak over row 3095B on the 3rd floor--over the DS stacks-- has leaked again following heavy rain on 8/1 (Sunday). While the previous occurrence on 7/15 was over one section only, this time there were several drips over a three to four foot area, and the water dripped on books on the top shelf of two sections--the second and third sections in from the rest room side. See the list of damaged materials. On 8/10 the roofers patched the roof in two areas: two hinges on a roof fan, where there was some space in between it and the sheet metal around the base of the fan. They also patched where the base of the fan met the roof.

7/15/2004 - The recurring leak over row 3095 on the 3rd floor--over the DS stacks-- has leaked again following heavy rain on 7/12 and 7/14. The ceiling tiles and metal border of the light fixture were wet, and a puddle of water could be seen on the inside of the light's plastic cover. A few books on the top shelf, third section in from the rest room side of 3095B, were slightly wet (DS 41s). The last occurrence was on 10/27 and 10/29/2003 (see below). The roofers did some patching on 7/15.

7/13/2004 - A new water stain was found on ceiling tiles above row 3027 on the third floor by Library Facilities staff as they checked for leaks following very heavy rain on 7/12. The stained area on the ceiling was dry, and a couple of dozen volumes and the shelf surfaces below it were water stained and spattered, but also dry. Three volumes in BD 426 were moldy. The roofers were called and they patched the roof over this spot on 7/13.

Week of 2/3 - 2/5/2004 - Standing water covering a large area in the NE corner of the Media Dept (room 004A) on 2/3. Weather conditions early in the week were rain and melting snow. On Friday there were heavy rains, and the leak re-occurred.

2/2/2004 - Moldy and water-damaged books (BL 51, in row 3038A) were discovered during stacks cleaning. All were dry and were the result of a past leak over stack row 3039. BL 51 is no longer under the leak area, as a result of a collection shift in about 2002. Books now in row 3039 were checked and several water damaged and moldy (but also dry) volumes were found (BL 1201, BL 1202). The leak over row 3039 is at one of the "seams" between the original building and the addition.

10/27/2003 - Heavy rain on 10/27 and again on 10/29. Leaks occurred in multiple places over the stacks in the DS class--row numbers 3095 through 3099. Books in row 3095 and 3099 were wet. Two books, dry, but distorted and moldy from a prior leak, were also found at this time. (Roofers attempted patching the roof on 10/28 and again on 10/29. Map showing location of leaks.

9/23/2003 - There was heavy rain several times over a week (9/15; 9/18-19 (Isabel); and 9/23/2003). Isabel caused 3 leaks in Special Collections areas--two in locations of recurring leaks, and 1 new over the sink in the 2nd floor office area. Precautions had been taken, and there was no collection damage. The recurring leaks were 3rd floor, Room 323, and directly below in the 2nd floor office area. On 9/23, leaks and damage to collections were found in four locations in the general collections stacks on the 3rd floor. In all, 35 volumes were wet. moldy, or both.

August 2003 - Mold re-occurred on the walls of the atrium, spreading farther than during August 2000. Mold on east and west walls, and on the beams that go from the east to the west walls.

3/10/2003 - A valve on the sprinkler water supply (which allows diverting the water flow to outside the building for use with fire hoses) leaked over Government Documents materials housed on the Lower Level south side, opposite the rest rooms. The ends of three ranges of shelving were affected. This was a day when work was being done to the sprinkler system related to renovations of the rest rooms. Constructions workers did something that caused a small leak from the valve in the morning. The leak was noticed by a staff member. Plastic was put up and 19 damp books were taken to the Conservation Unit to dry. The water supply to the sprinkler system, which was shut off so that modifications related to the bathroom renovated could be done, was restarted at 2:00 p.m. Staff were in place to monitor the sprinkler heads for leaks. The valve at that point leaked quite a lot. Buckets were brought and additional plastic was put up. The carpeting got soaked in between two rows, an area about 3 ft. square. Library Facilities made arrangements with University Facilities to change the location of the valve from over the stacks to over a Mechanical Room nearby. Preservation staff off-loaded books from the four sections right under the location of the fitting, both to inspect them for wetness and to avoid further water exposure when Facilities works on the fitting. One sprinkler head outside of Room 056 leaked and wetted the ceiling tile.

2/24/2003 - One sprinkler head leaked (REF PE row, east end) when the sprinkler system was turned off for maintenance then turned back on. The work was part of the bathroom renovation of the 1st floor N bathrooms. Staff was in place to monitor the north half of the 1st floor when the water supply was turned back on. UD Facilities staff in charge of the fire suppression systems on campus said that the sprinkler heads in the Library addition were more susceptible to leaks than those in the original parts of the Library.

2/22/2003 (Saturday) - Media Services leak in the northeast corner of Room 004A, an office area. About 1/2 inch of water on the floor soaked several boxes of papers, headsets, and electronic parts. Cause still to be determined, but could have been because of the heavy rain on 2/23/2003, when there was a great deal of snow on the ground from storms the previous week. A large puddle of water was also seen on the floor in front of the Cafe on the floor immediately above.

3/22/2002 - Media Services leak from the lavatory on the floor above. A stopped up and overflowing urinal caused damage to 350 videotapes. Damage was limited to the boxes and paper inserts that bear information and illustrations.

2/1/2002 - Sprinkler heads leaked when water was shut off then turned back on when modifications were made to add new sprinkler heads in new group study rooms throughout Morris Library. Leaks were small and most were not over collections. One leak dampened 28 books (QA1 .M - QA1 .Q), which were brought to Preservation to be dried, then returned to the stacks. Facilities staff performing the maintenance work said that the last time that the water supply for the sprinkler system was shut off and turned back on, there was also minor leakage.

September 2000 - Media Services leak from the lavatory on the floor above. A stopped up and overflowing urinal caused damage to 59 videotapes. OHSA was contacted regarding health precautions in handling materials. Disaster Plan was modified to include precautions for staff to take regarding potentially contaminated water. Additional safety supplies were added to the Disaster Trunks (safety goggles and Tyvek jackets). The 59 videotapes were withdrawn, and replacements were obtained for those available.

September 2000 - Mold grew on the west wall of the Atrium of Morris Library as a result of an HVAC system problem, which was corrected by Facilities. The walls were cleaned and repainted in October.

9/1999 - Tropical Storm Floyd. 48 books water damaged. Water came in on the third floor (near LC class DS--North side wall). Vents were left open on air handlers. Five books were withdrawn, 18 returned to stacks after drying, 5 repaired, 17 rebound, 3 other undetermined.

VIII. Other Sources of Information

Philadelphia Area Emergency Response Resources List. Compiled by the Conservation Center for Art and Historic Artifacts (CCAHA). Philadelphia, PA, January 2001.

This publication provides contact information and guidance on obtaining supplies, equipment, services, advice, and information. Information is geared for the greater Philadelphia region. Regional and national resources are also included. A copy is in the Preservation Unit.

Conservation OnLine (CoOL). Web page on disaster preparedness and response provides links to online sources of information including bibliographies of print resources.

This plan is maintained by Elise Calvi, Preservation
Also on the Web at http://larned.lib.udel.edu/preservation/preservation/disasterplan.htm.
Questions or comments to ecalvi@udel.edu
Last modified 7/25/2006