

## CHAPTER 4

---

### DIRECTORY OF PERSONS RESPONSIBLE FOR RECOVERY

---

**PRIMARY:**

NAME	OFFICE PHONE	HOME PHONE
1. Constantia Constantinou	7236	Contact Maritime College Administration
2. Elizabeth Leschinsky	7232	Contact Maritime College Administration
3. Heath Martin	7229	Contact Maritime College Administration
4. Shafeek Fazal	7230	Contact Maritime College Administration
5. Johanna Devlin	7231	Contact Maritime College Administration
6. Craig Franklin	7257	Contact Maritime College Administration
7. Pat Weissert	7237	Contact Maritime College Administration

**VOLUNTEERS and EXTRAS:**

NAME	OFFICE PHONE	HOME PHONE
1. Director of Fort Schuyler Museum	x2856, x7218	Contact Maritime College Administration
2. Mona Wasserman (Part-time Librarian)	x 7231	Contact Maritime College Administration
3. Geri Hebert	x7231	Contact Maritime College Administration
4 SUNY Purchase Library Director	914 251-6436	Contact Maritime College Administration
5. FIT Library Director	212 217-5599	Contact Maritime College Administration

---

This section of the Disaster Plan Workbook includes recovery procedures for the following materials:

- Recovery Procedures for Damp Books and Minor Emergencies
- Recovery Procedures for Wet Books and Paper
- Recovery Procedures for Photographic Prints
- Recovery Procedures for Magnetic Tape Materials
- Recovery Procedures for Computer Equipment

In the event of a major disaster, the Disaster Preparedness Committee will direct a recovery operation using the procedures contained here. Minor emergencies and small scale disasters where fewer than 200 Library materials are affected should be reported to Library Director will provide assistance in properly following the instructions in this chapter.

---

## **RECOVERY PROCEDURES FOR DAMP BOOKS AND MINOR EMERGENCIES**

**DAMP BOOKS** are defined as books that are not dripping water. They can be wet around the edges or wet half-way through or just cool to the touch. These materials can be **AIR DRIED**.

### **CAUTION:**

1. All air drying **MUST** take place in a cool, dry place. Warm humid air encourages mold and mildew growth which can be more damaging than the original emergency. Try to keep the temperature below 70 Fahrenheit and the relative humidity below 55%. Use fans and dehumidifiers if needed. Keep the air in the area circulating.
2. Keep the drying area clean by removing wet debris such as wet carpeting and furniture as soon as possible because they contribute to a humid environment.
3. Never try to reshape or force damp volumes open as this will cause harmful distortion. They can be treated **AFTER** drying.
4. Sponge off mud and debris using clean water but **ONLY** if material does not have water soluble components such as watercolors, runny inks, tempera and dyes. Instead, air dry materials and brush off debris when completely dry.
5. Minimize handling of water damaged books. Paper and bindings are very fragile when wet.

### **PROCEDURES:**

If books can be dried in immediate area, see #8 and #9 below for air drying instructions.

If books must be packed up and moved to drying area:

1. Keep a written record of what volumes are in which box (by floor, range number and call number) and remember to clearly label each box.
2. Use 1 and 1½ cubic foot, 200 test lb. cardboard boxes to pack-out and transfer damp books to the drying area. A one cubic foot box will hold about 15 volumes and weighs about 50 pounds when loaded.
3. Wrap each book in one piece of unprinted newsprint; this will prevent colors bleeding into one another. Precut sizes to save time.
4. Pack books **SPINE SIDE DOWN IN A SINGLE ROW ON THE BOTTOM OF THE BOX**.

---

**THIS ARRANGEMENT IS VERY IMPORTANT! DO NOT STACK BOOKS OR OTHER MATERIALS ON TOP. WATER DAMAGED MATERIALS WILL SAG AND DISTORT ESPECIALLY UNDER PRESSURE, CAUSING PERMANENT DEFORMITIES.**

---

5. Seal box with packing tape and label contents with marker on all four sides as well as the top.
6. Stack 24-30 boxes (heaviest on the bottom, lightest on the top) on a shipping pallet. Shrink wrap entire pallet. Try to wrap same classification materials together.
7. Keep a record of what books are drying where.
8. Stand books upright (head to toe) in well ventilated drying area with fans or air conditioners to keep the air circulating. A book is completely dry when it is no longer cool to the touch.
9. While air drying, in the manner described above, the pages of some books may start to pull out of their covers under the extra water weight. Turn these books over (head to toe, toe to head) every 30 minutes to evenly distribute the pull.
10. Especially damp books can be interleaved to remove additional excess moisture. Place unprinted, clean flat paper towels every 20 or 30 pages; be sure to change toweling and alternate pages every 15 minutes to prevent distortion. **DO NOT USE FOLDED TOWELS AS THEY WILL PERMANENTLY DISTORT PAPER.**
11. Some books will dry distorted and misshapen. This can be greatly reduced **AFTER** completely drying by placing volumes under light pressure or, in extreme cases, rebinding.

**SUPPLIES:**

Pens  
Dehumidifiers  
Note paper  
Large strong trash bags  
Fans  
Sponges  
Clean water source  
Unprinted paper towels

**To pack up and move materials to drying area include:**

Markers for labeling  
Uniform 1 and 1½ cubic foot, 200 test lb. cardboard boxes  
Unprinted newsprint  
Wooden shipping pallets  
Large size shrink wrap

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE LOCATION OF LOCAL HARDWARE STORES

---

## **RECOVERY PROCEDURES FOR WET BOOKS AND PAPER**

WET BOOKS (as opposed to DAMP BOOKS) are defined as books that are dripping water. They are extremely fragile and must be handled carefully as pages can easily fall out and covers can separate from the text block.

WET BOOKS should be vacuum freeze dried by a professional in the case of a major emergency (see Appendix C, "Vacuum Freeze Drying Services"). Vacuum freeze drying dries the material with the least distortion as the water goes directly from the liquid to gaseous state (vapor) without passing through the solid state, i.e., ice never forms. Meat freezers and household freezers do allow ice to form and consequently are not adequate.

### **CAUTION:**

1. Control the environment. Warm humid air encourages mold and mildew growth which can be more damaging than the original emergency. Try to keep the temperature below 70 Fahrenheit and the relative humidity below 55%. Use fans and dehumidifiers if needed. Keep the air in the area circulating.
2. Before starting any pack out procedures, know what the damaged materials are. Specifically, glossy paper (like magazine paper, art books, etc.) is not salvageable after 5-6 hours in water as the inks run and the pages become irrevocably stuck together. Move on immediately to concentrate on salvageable material. Leather and vellum bindings are extremely fragile and should be rescued early or not at all.
3. NEVER try to reshape or force wet books open as this will cause harmful distortion or further mechanical damage. Do not remove damaged covers; books can be rebound or treated AFTER they are dry.
4. Sponge off mud and debris with clean water but ONLY if the material does not have any water soluble components such as watercolors, runny inks, tempera or dyes. Such material should be freeze dried and cleaned when dry.
5. DO NOT OVER PACK BOXES!
  - The box will be too heavy to move
  - The freezing process works well only if it is slow and uniform
  - Over packed boxes will prevent books on the inside from drying at the same rate as those near the outside
  - Books must have room to swell during freezing
  - Minimize handling of wet books. Paper and bindings are very fragile when wet.

### **PROCEDURES:**

1. Keep a written record of what volumes are in which box (by floor, range and call number) and remember to clearly label each box.
2. Use 2 and 1½ cubic foot, 200 test lb. cardboard boxes to pack out and ship books to the freezer. A one cubic foot box will hold about 15 volumes and weighs about 50 pounds when loaded with water-logged books.
3. Wrap each book in one piece of unprinted newsprint; this will prevent colors from bleeding into one another and books from freezing together. Precut sizes to save time.
4. Pack books SPINE SIDE DOWN IN A SINGLE ROW ON THE BOTTOM OF THE BOX.

---

**THIS ARRANGEMENT IS VERY IMPORTANT! DO NOT STACK BOOKS OR OTHER MATERIALS ON TOP. WATER DAMAGED MATERIALS WILL SAG AND DISTORT EXPECIALLY UNDER PRESSURE, CAUSING PERMANENT DEFORMITIES.**

---

5. Seal box with packing tape and label contents with a marker on all four sides as well as the top.
6. Stack 24-30 boxes (heaviest on the bottom, lightest on the top) on a shipping pallet. Shrink wrap entire pallet. Try to wrap same classification materials together.
7. Ship books to vacuum freeze dry facility (see Appendix C, "Vacuum Freeze Drying Services") in refrigerated or freezer trucks to prevent mold growth. Keep careful records of shipment contents and dates.

**SUPPLIES:**

Pens  
Note paper  
Markers for labeling  
Uniform 1 and 1½ cubic foot, 200 test lb. cardboard boxes  
Unprinted newsprint  
Wooden shipping pallets  
Large size shrink wrap  
Garden hoses  
Sponges  
Clean water source

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE LOCATION OF LOCAL HARDWARE STORES

---

**RECOVERY PROCEDURES FOR PHOTOGRAPHIC PRINTS**

Most photographs can be saved from water and smoke damage but not fire damage as the emulsion layer will melt from the heat. The following salvage procedures apply to photographic prints only. See PACK-OUT PROCEDURES FOR PHOTOGRAPHIC FILM for photographic film procedures including microfilm.

**CAUTION:**

1. Only freeze photographs if they can be professionally dried as ice crystals may rupture the emulsion layer leaving marks on the film.
  2. If you must freeze, use a BLAST FREEZER (see Chapter 7, "Supplies" and Appendix C, "Vacuum Freeze Drying Services") which will freeze quickly forming small crystals. Small crystals will cause less damage than large crystals in the drying process.
  3. When handling photographs, always do so at the edge as the emulsion layer will suffer damage easily.
-

## **DRY PHOTOGRAPHS SHOULD ALWAYS BE HANDLED WITH WHITE COTTON GLOVES TO PREVENT FINGERPRINTS.**

---

### **MINOR EMERGENCIES**

If a small number of photographs are water damaged, they can be treated in-house; if the situation is more serious, like severe smoke damage or staining, consult a professional photo conservator (see Appendix D, "Photograph and Sound Conservation").

### **PROCEDURES:**

1. Retain all bibliographic information.
2. Try to separate photographs from one another **ONLY** if the emulsion layers (image side) are not sticking to each other.
3. If a damaged photograph is in a frame, attempt to remove it only if the emulsion layer is not stuck to the glass; if so, leave the photograph in place and contact a professional photograph conservator (see Appendix D, "Photograph and Sound Conservation").
4. Rinse muddy photographs in **COLD CLEAN RUNNING** water. Because items must remain wet prior to air drying or blast freezing, some damaged items may need short term immersion in **COLD CLEAN RUNNING** water contained in trays, or large **PLASTIC** (not metals as the chemicals may react) garbage containers. Agitate the water periodically and remove to dry after 30 minutes. If necessary, most non-color photographic processes can withstand immersion in water for up to 72 hours without serious damage. Color photographs can only be immersed in water up to 48 hours before the colors start to separate.
5. Remove photograph from the clean water and place it **IMAGE SIDE UP** on a rigid support like plexiglass, glass, or stiff cardboard.
6. Tilt the photograph (on the support) to allow excess water to run off.
7. Spread the photographs out face up on clean blotting paper or paper towels to air dry in a clean dry area. Some photographs will curl when drying. Consult a photograph conservator to flatten them after they are dry (see Appendix D, "Photograph and Sound Conservation").

### **SUPPLIES:**

Pens  
Clean water source  
Note paper  
Blotting paper or paper towels  
Large plastic garbage containers  
White cotton gloves  
Plexiglass sheets  
Sponges  
Garden hoses

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE LOCATION OF LOCAL HARDWARE STORES

---

## **MAJOR EMERGENCIES**

### **Black and White Prints**

#### **PROCEDURES:**

1. Retain all bibliographic information and labeling.
2. Try to separate photographs from one another ONLY if their emulsion layers (image side) are not sticking to each other.
3. If a damaged photograph is in a frame, attempt to remove it only if the emulsion layer is not stuck to the glass. Otherwise, leave the photograph in place and contact a professional photo conservator (see Appendix D, "Photograph and Sound Conservation").
4. Rinse muddy photographs in COLD CLEAN RUNNING water. Because items must remain wet prior to air drying or blast freezing, some damaged items may need short term immersion in COLD CLEAN RUNNING water contained in trays, or large PLASTIC (not metals as the chemicals may react) garbage containers. Agitate the water periodically and remove to dry after 30 minutes. If necessary, most non-color photographic processes can withstand immersion for up to 72 hours without serious damage.
5. Remove photograph from the clean water and place it IMAGE SIDE UP on a rigid support like plexiglass, glass, or stiff cardboard.
6. Tilt the photograph (on the support) to allow excess water to run off.
7. Spread the photographs out face up on clean blotting paper or paper towels to air dry in a clean dry area. Some photographs will curl when drying. Consult a photograph conservator to flatten them after they are dry (see Appendix D, "Photograph and Sound Conservation").
8. Or, contact a professional photographic reprocessing plant ASAP for cleaning and drying prints (see Appendix D, "Photograph and Sound Conservation" and Appendix E, "Document Reprocessing Services").

### **Color Prints**

#### **PROCEDURES:**

1. Retain all bibliographic information and labeling.
2. Try to separate photographs from one another ONLY if their image sides are not sticking to each other.
3. If a damaged photograph is in a frame, attempt to remove it. If the print is stuck to the glass frame, do not remove it. Leave the photograph in place and contact a professional photograph conservator (see Appendix D, "Photograph and Sound Conservation").
4. Rinse muddy photographs in COLD CLEAN RUNNING water. Because items must remain wet prior to air drying or blast freezing, some damaged items may need short term immersion in COLD CLEAN RUNNING water contained in trays, or large PLASTIC (not metals as the chemicals may react) garbage containers. Agitate the water periodically and remove to dry after 20 minutes. If necessary, color prints can remain immersed in water for 48 hours before the colors start to separate.
5. Remove photograph from the clean water and place it IMAGE SIDE UP on a rigid support like plexiglass, glass, or stiff cardboard.
6. Tilt the photograph (on the support) to allow excess water to run off.

7. Spread the photographs out face up on clean blotting paper or paper towels to air dry in a clean dry area. Some photographs will curl when drying. Consult a photograph conservator to flatten them after they are dry (see Appendix D, "Photograph and Sound Conservation").
8. Or, contact a professional photographic reprocessing plant ASAP for cleaning and drying prints (see Appendix D, "Photograph and Sound Conservation" and Appendix E, "Document Reprocessing Services").
9. If necessary, blast freeze until arrangements can be made with professional reproducers (see Appendix E, "Document Reprocessing Services").

#### **SUPPLIES:**

Pens  
Note paper  
Large plastic garbage containers  
Garden hoses  
Clean water source  
White cotton gloves  
Sponges  
Plexiglass sheets  
Blotting paper or paper towels  
White cotton gloves

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE LOCATION OF LOCAL HARDWARE STORES

---

#### **RECOVERY PROCEDURES FOR PHOTOGRAPHIC FILMS**

PHOTOGRAPHIC FILMS include all types of processed films such as microfilm, microfiche, photographic film, slides and movie reel film. In most cases of fire, the extreme heat of the flames will damage microforms beyond repair, i.e., they will melt. Smoke and water damaged materials, however, can be salvaged. For major and minor emergencies, follow the instructions below. In extreme cases, the instructions below will stabilize the material until professional help is available. Microfilm and movie reel film are very difficult to handle and are best handled by a photographic film reprocessing company (see Appendix D, "Photograph and Sound Conservation" and Appendix E, "Document Reprocessing Services").

#### **CAUTION:**

1. Never let water-damaged photographic materials dry out
2. Handle wet photographic films very carefully, touching only the edge of the film. When wet, the emulsion layer of photographic films softens and are very fragile and can be easily damaged
3. Handle dry photographic films with white cotton gloves.

## **PROCEDURES:**

1. Remove microfilm and roll film from their containers and their reels. Remove format films from their sleeves. If film cannot be separated from sleeves, enclosures, or each other, soak them as instructed below before trying to separate them. If possible, try to retain labeling/cataloguing information for identification purposes later.
2. Transfer the film into large PLASTIC (not metal as the chemicals in the film will react) garbage containers filled with COLD CLEAN water, preferably running water. If running water is not available, agitate water periodically. Change the water when it becomes warm or dirty. Wash for 30 minutes. If necessary, photographic films can stay in water for up to TWO DAYS without damage.
3. Black and white films should be dipped, or rinsed in a wetting solution such as Kodak Photoflo. Color slides and transparencies should be rinsed for 10 to 15 seconds in Kodak E6 stabilizer. Color negatives should be rinsed for one minute in Kodak C41 stabilizer.
4. After rinsing, dry at room temperature in a dust-free area.
5. Or, contact a professional photographic film reprocessing company as soon as possible (see Appendix D, "Photograph and Sound Conservation" and Appendix E, "Document Reprocessing Services").

---

**MICROFORMS MUST BE SHIPED SUBMERGED IN WATER AND IN SEALED CONTAINERS USUALLY PROVIDED BY THE REPROCESSING COMPANY.**

---

## **SUPPLIES:**

Pens  
Note paper  
Large plastic garbage containers  
Small buckets  
Garden hoses  
Clean water source  
White cotton gloves  
Sponges

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE LOCATION OF LOCAL HARDWARE STORES

---

## **RECOVERY PROCEDURES FOR MAGNETIC TAPE MATERIALS**

MAGNETIC TAPE materials include audio and video cassettes, DVDs.

Most magnetic tape material is fairly heat resistant, able to withstand up to ONE HOUR in 200 Fahrenheit without severe damage. Prolonged exposure to water, however, is very damaging as it

causes leaching of the chemicals that adhere the tape to the film base. It is possible but very difficult to clean a dirty, damaged tape and the quality will be severely sacrificed.

**CAUTION: Never try to run damaged or wet tape/disc on electrical equipment.**

#### **PROCEDURES FOR FIRE AND HEAT DAMAGED MAGNETIC TAPES:**

1. Clean dirt, ash, and smoke residue from containers and wraparounds before opening the container.

#### **PROCEDURES FOR WATER-DAMAGED MAGNETIC TAPES:**

1. Move all tapes out of standing water.
2. Check labels to be sure they are legible. Replace those that are not legible, or use a wax crayon to identify them..
3. Quickly open, check and drain any water that may have entered the tape canisters.
4. Wet tapes must be hand dried and stored for 48 hours in a stable environment before running or winding on a tape drive.
5. When dry, tapes should be run against a felt pad (without the tape contacting the heads) to remove dried particles. Re-record as soon as possible. (See Appendix D, "Photograph and Sound Conservation").

#### **SUPPLIES:**

Pens  
White cotton gloves  
Wax crayon  
Note paper  
Non-metallic scissors  
Lint-free towels  
Distilled water

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE LOCATION OF LOCAL HARDWARE STORES

---

#### **RECOVERY PROCEDURES FOR PHONOGRAPH RECORDS**

Not much can be done to save fire or water damaged records and LPs. The heat from the fire will melt the plastic quickly and prolonged exposure to water will warp them beyond repair. To a large extent, these materials are considered NOT SALVAGEABLE. However, undamaged records with surface dirt can be carefully cleaned. Cleaning is best when performed by a sound conservator (see Appendix D, "Photograph and Sound Conservation"). If necessary, the following procedures may be followed.

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

**PROCEDURES:**

1. Wash record in a 1% solution of non-ionic wetting agent such as Kodak Photoflo. Use a soft brush to dislodge particles.
2. Rinse phonograph record with distilled water.
3. Place on a vertical rack, such as a dish rack, and let dry slowly away from heat.

**SUPPLIES:**

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

---

SEE CHAPTER 7 OF THIS BOOK FOR ORDERING INFORMATION AND THE  
LOCATION OF LOCAL HARDWARE STORES

---

**RECOVERY PROCEDURES FOR COMPUTER EQUIPMENT**

Call computer services to report failure of individual office workstations or an emergency in an office area which jeopardizes computer equipment.

In the event of a central system failure or any emergency (electrical, plumbing, etc) that could cause the failure of a central system, contact facilities. It is their responsibility to contact the appropriate staff.

If the building is being evacuated, the following actions should be taken:

**PROCEDURES:**

1. "Save" work being done on systems and close files.
2. Turn off workstation and peripherals.