

## SALVAGE OF WATER DAMAGED MATERIALS

The following information is excerpted from the *Emergency Response and Salvage Wheel™*, used with the permission of Heritage Preservation, and is made available here by the Minnesota Historical Society.

### **PHOTOGRAPHS**

- Remove from plastic/paper enclosures or frames. Save all information about the photos.
- Carefully rinse with cool, clean water as necessary.
- Do not touch or blot surfaces.
- Air dry: hang with clips on non-image areas or lay flat on absorbent paper. Keep photographs from contact with adjacent surfaces or each other.
- If there are too many for immediate attention, either:
  1. Keep photos (except historic photos) in a container of clean water no more than 48 hours. Air dry.
  2. Freeze. If possible, interleave each photo with freezer or waxed paper. If historic photos cannot be air-dried immediately, interleave and freeze
- Do not freeze glass plate negatives.

### **BOOKS AND PAPER**

#### **Books:**

- If rinsing is necessary, hold book closed.
- Partially wet or damp: stand on top or bottom edge with covers opened to 90° angle; air dry.
- Very wet: lay flat on clean surface; interleave less than 20% of book with absorbent materials; replace interleaving when damp.
- If too many books to air dry in 48 hours:
  1. Wrap in freezer or waxed paper.
  2. Pack spine down in sturdy containers.
  3. Freeze.

#### **Paper:**

- Air dry flat as individual sheets or small piles up to 1/4". Interleave; replace interleaving when damp.
- Do not unfold or separate individual, wet sheets.
- If too many items for air drying:
  1. Interleave (by groups or individually) with freezer or waxed paper.
  2. Pack papers or files supported and standing up in sturdy containers; pack containers only 90% full.
  3. Freeze.

(OVER)

## ***TEXTILES***

- Provide adequate physical support when moving heavy textiles.
- Do not unfold delicate wet fabrics. Do not stack wet textiles.
- Rinse, drain and blot items with clean towels/cotton sheets to remove excess water.
- Block and shape each damp textile to its original form.
- Air dry textiles indoors using air conditioning/fans.
- If items cannot be dried within 48 hours, separate them with freezer or waxed paper to prevent dye transfer. Then pack flat and freeze.

## ***FRAMED ARTWORKS***

### **Paintings:**

- Carefully remove from frames in a safe, dry place. Do NOT separate paintings from their stretchers.
- Keep wet paintings horizontal and paint-side up elevated on blocks with nothing touching the surface. Avoid direct sunlight.

### **Art on Paper or Photos with Glass Fronts:**

- Remove from frames in a safe, dry place unless art is stuck to glass.
- If image sticks to the glass, leave it in the frame; dry glass-side down.
- Otherwise, dry artwork slowly, image-side up with nothing touching the surface.

## ***FURNITURE***

### **Wood Furniture:**

- Rinse/sponge surfaces gently to clean. Blot. Air dry slowly.
- Inspect painted surfaces. If paint is blistered or flaking, air-dry slowly without removing dirt or moisture.
- Hold veneer in place while drying with weights or clamps; separate the weight from the veneer with protective layer such as waxed paper.
- Finishes may develop white haze; this does not need immediate attention.

### **Upholstered Furniture:**

- Rinse off mud.
- Remove cushions, lift-out seats, and other separate pieces.
- Wrap upholstered materials in cloth (sheet, towels, etc.) to air dry, and replace cloth when damp.
- Blot wood sections and air-dry slowly.

### ***SAFETY FIRST!***

- DO NOT REENTER THE BUILDING until declared safe by security or emergency management officials.
- Look for loose or downed power lines. Avoid area. Report problems to local utility.
- Look for electrical system damage: sparks, broken/frayed wires, smell of burning insulation. Turn off electricity at main switch if you can without risk.
- If you smell gas or hear blowing or hissing, open a window and immediately leave the building. Turn off gas at main valve if trained to do so. Call gas company at once.

### ***STABILIZE THE BUILDING AND ENVIRONMENT***

- Reduce temperature and relative humidity at once to prevent mold outbreak. Ideal targets are less than 70°F/45% RH.
- If warm outside, use coldest air conditioning setting; cover broken windows with plastic.
- In cool, low-humidity weather open windows, use circulating fans.
- Do not turn on heat unless required for human comfort.
- Remove standing water and empty items containing water; remove wet carpets and furnishings.

### ***DOCUMENTATION***

- Once it is safe to enter the building, make a preliminary tour of all affected areas. Wear protective clothing.
- Do not move objects or collections without documenting their condition.
- Photograph or videotape conditions of structure and contents. Make sure images clearly record damage.

### ***SALVAGE GLOSSARY***

**Air-Drying:** Use a cool, low-humidity area with good air circulation. Place absorbent materials (see interleaving) under objects; replace it when wet. If possible, air dry materials on plastic racks (commercial bread trays or rust-proof screens) to increase evaporation. Exposure to light may reduce threat of mold, but prolonged sunlight can cause fading.

**Interleaving:** Use blotter paper, uninked newsprint, paper towels, or waxed or freezer paper to keep items from sticking together and prevent dye transfer or running.

**Freezing:** If objects cannot be dried within 48 hours, freeze them until action can be taken. Freezing stabilizes collections; it stops mold growth, ink running, dye transfer and swelling. A sub-zero commercial freezer is best, but a home freezer works. A refrigerated truck keeps materials cool enough to slow mold growth.

(OVER)

**Rinsing:** Rinse dirty or muddy items under a gentle stream of clean running water or gently agitate in containers filled with water. Do not scrub; it drives dirt in deeper. Use a sponge/soft cloth to blot off mud and debris.

**Vacuum Drying:** Also called “thermal drying.” Items are dried in a vacuum chamber, often at temperatures above 100°F. Caution: this method accelerates aging and causes damage to many materials: animal skins (leather, vellum), film media. Widely available; slower than vacuum freeze-drying, but less expensive.

**Vacuum Freeze-Drying:** Items are dried in a vacuum chamber at below-freezing temperatures to minimize swelling and distortion. Generally provides the most satisfactory results; recommended for historical collections and glossy papers. A commercial service available throughout the U.S.

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