

# **WESTPAS PROTECTING LIBRARY and ARCHIVE COLLECTION**

## Emergency Response "Action Steps and Salvage Techniques"

Emergency Response and Salvage, the first 48 hours can make the difference. When a natural disaster or other emergency strikes, your collections can be lost. This Emergency Response and Salvage "Action Steps" will help you safeguard collections damaged by water, whether from flood, fire, earthquakes, severe storms or broken pipes. Use the "Action Steps" within 48 hours of an emergency when salvage steps are most critical. A lists of the Emergency Response Action Steps, and the Salvage information and tips for a specific collections are identified. These guidelines were developed by experts, but remember that this is an easy reference guide. After an emergency, consult with conservation or preservation specialist as soon as possible.

### **Emergency Response "Action Steps"**

#### 1. DISASTER ALERT: If you have advanced warning:

- People come first. Provide assistance. Note needs of people with disabilities.
- Move or secure vital records/high priority items if it can be done safely.
- Screw plywood over windows or use tape to reduce shattering.
- Verify master witch shut-off (water, gas, electricity) by trained staff.
- Move items away from windows and below ground storage into water-resistant areas:
  - Flooding: move items to higher floors.
  - Hurricane: avoid areas under roof.
- Wrap shelves, cabinets, other storage in heavy plastic sealed with waterproof tape.
- Move outdoor objects indoors or secure.
- Take with you lists of staff, institutional/public officials, insurance and financial data, inventory, supplies, and emergency plan.
- Appoint a staff contact to give instructions on returning to work.

#### 2. SAFETY FIRST!

- Remain calm, reassuring. Alert staff to potential hazards. Work in pairs.
- 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.
- Shut off water.
- 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.
- DO NOT REENTER THE BUILDING until declared safe by security or emergency management officials.

#### 3. GETTING STARTED OFF-SITE

- Gather staff off-site to assign tasks and review salvage priorities. Create a team big enough for the work.
- Establish a "Command Center" with office equipment (computers, photocopier) and communication tools (walkie-talkies, cellular phones).
- Create a secure salvage area with locks, fans, tables, shelves, plastic sheeting, drying materials and clean water.
- Notify emergency officials of the extent of damage. Contact peer institutions or professional groups for help.
- Appoint a media liaison to report conditions and need for help/volunteers. You may have to limit access to collections.

- Verify financial resources: amount and terms of insurance, government assistance, potential outside funding.
- Contact service providers for generator, freezer, drying or freeze-drying services and refrigerated trucking.
- Arrange for repairs to the security system.

#### 4. STABILIZE THE BUILDING AND ENVIRONMENT

- Some building contents may be contaminated. Do not enter without current tetanus shots, protective gloves/clothing, hardhat and NIOSH-approved respiratory mask.
- Identify and repair structural hazards. Brace shelves. Remove debris from floor.
- 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.
- If everything is soaked, use commercial dehumidification except in historic buildings.
- Purchase needed supplies.

#### 5. 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 collection and structure. Make sure images clearly record damage.
- Make notes and voice recording to accompany photographs.
- Assign staff to keep written records of contacts with insurance agents and other investigators, and staff decisions to retrieval and salvage.
- Make visual, written and voice records for each step of salvage.
- Make visual, written and voice records for each step of salvage procedures.

#### 6. RETRIEVAL AND PROTECTION

- Leave undamaged items in place if the environment is stable and area is secure. If not, move them to a secure, environmentally controlled area.
- If no part of the building is dry, protect all objects with loose plastic sheeting.
- When moving a collection, give priority to undamaged items and those on loan.
- Separate undamaged from damaged items.
- Until salvage begins, maintain each group in the same condition you found it; i.e., Keep wet items wet, dry items dry, and damp items damp.
- Retrieve all pieces and broken objects and label item.
- Check items daily for mold. If mold is found, handle objects with extreme care and isolate them.

#### 7. DAMAGE ASSESSMENT

- Notify insurance representative or risk manager. You may need an on-site evaluation before taking action.
- Make a rough estimate of the type of materials affected and the extent and nature of damage. A detailed evaluation can slow recovery now.
- Look for threats to worker safety or collections. Determine status of security systems.
- Look for evidence of mold. Note how long the materials have been wet and the current inside temperature and relative humidity.
- Repeat assessment as conditions change.
- SEE DOCUMENTATION SECTION. Documenting the damage is essential for insurance and will help you recover.

## 8. SALVAGE PRIORITIES

Establish salvage priorities by groups of materials, not item. A library might use subject areas or call numbers; an archives, record groups; and a museum, material groupings.

1. Vital instructional information; employee and accounting records, accession lists, shelf list and database backups.
2. Items on loan from individual or other institutions.
3. Collections that most directly support the institution's mission.
4. Collections that are unique, most used, most vital for research, most representative of subject areas, last replaceable or most value.
5. Items most prone to continued damage if untreated.
6. Materials most likely to be successfully salvaged.

## 9. HISTORIC BUILDINGS: GENERAL TIPS

- Contact architectural conversation, historic preservation agencies, FEMA, and/or structural engineers before cleanup, especially for buildings on the National Registry of Historic places.
- Follow the Secretary of the Interior's Standards for Treatment of Historic Properties (pp.17-59)
- Remove standing water from basement and crawl spaces. Contact a structural engineer before pumping water; pumping can collapse foundation when ground water is high.
- Remove flood-soaked instillation, wallboard and nonhistoric wall coverings. Support loose plaster with plywood and wood "T" braces.
- Clean historic elements first. Use nonabrasive household cleaners.
- If you treat nonhistoric features, do not harm historic elements.
- Inventory found items, loose decorative elements, furnishings and collections. Save and reuse or as restoration models.
- Air dry with good ventilation. Never use systems that pump in super dry air.

## Emergency Response "Salvage Techniques"

### NATURAL HISTORY SPECIMENS:

Use a respirator and protective clothing handle all collections. They may contain toxic materials.

- **Animal study skins and taxidermy mounts:**
  - Avoid direct handling. Air dry slowly or freeze.
- **Botanical specimens:**
  - Rinse only if necessary. Interleave and air dry herbarium sheets; use presses if possible.
  - Open specimen boxes and air dry.
- **Fluid-preserved collections:**
  - Place specimens in sealed polyethylene boxes with a small amount of alcohol.
- **Geological specimens:**
  - Rinse; air dry slowly. NOTE: Some specimens should be dried quickly; consult a conservator.
- **Paleontological specimens:**
  - Rinse; air dry slowly.
  - Fragile specimens and those with old repairs should be held together with ties during drying. Separate ties from specimens with waxed or freezer paper.

### FRAMED ARTWORKS:

- **Paintings:**
  - Carefully remove from frames in a safe, dry place. Do NOT separate painting 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.

#### PHOTOGRAPHS:

- Remove from plastic/paper enclosures of 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 adjacent surfaces or each other.
- If there is 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 wax paper.
  3. 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-degree angle; air dry.
  - Very wet: lay flat on clean surface; interleave less than 20% of book with absorbent material; 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 ¼". 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.

#### ELECTRONIC RECORDS:

- **General Advice:**
  - Avoid scratching surface.
  - Use distilled or very clean water rinsing.
  - Contact a data recovery firm for large jobs.
- **Audio/Video Tapes:**
  - If cassette or reel is damaged, disassemble case and remove it.
  - Rinse dirty tape while still wound; air dry on blotting material.
  - Reassemble and copy.
- **Computer Disketts:**
  - Remove diskette from casing; rinse and blot with lint-free cloth.
  - Insert dry diskette into new casing and copy.
  - Freeze diskettes that cannot be dried in 72 hours.
- **CDs and DVDs:**
  - Remove from enclosures and rinse.

- Air dry vertically on a rack.
- Do not freeze-dry disks.
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**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 item with freezer or waxed paper to prevent dye transfer. Then pack flat and freeze.

**FURNITURE:**

- **Wood Furniture:**
  - Rinse/sponge surface 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 weight from veneer with protective layer.
  - 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 when damp.
  - Blot wood sections and air dry slowly.

**CERAMICS / STONES / METAL:**

- **Ceramics:**
  - Identify ceramic type and consult a conservator on drying procedures.
  - If ceramic is broken, cracked or has mineral deposits or old repairs, place in clean, transparent polyethylene bag until it can be treated. Seal bag and monitor for mold.
- **Stone:**
  - If stone object is smooth-surfaced, blot gently. Air dry.
  - If object is rough-surfaced or has applied finish, do not blot. Air dry on plastic or clean towel.
- **Metal:**
  - Use gloves to handle.
  - Rinse/sponge and blot metal object. Air dry.
  - If object has applied finish, do not clean. Air dry; keep flaking surfaces horizontal.

**ORGANIC MATERIALS:**

- **Leather and Rawhide:**
  - Rinse/sponge with clear water to remove mud.
  - Drain and blot to remove excess water.
  - Pad with toweling or unlinked paper to maintain shape.
  - Air dry. To keep semi-tanned leather and fur supple, manipulate them often.
- **Baskets:**
  - Rinse.
  - Drain and blot to remove excess water.
  - Stuff with clean paper towels or cotton sheets to retain shape and absorb stains. Cover with clean towels. Air dry slowly.
  - Change blotting material regularly.

- **Bone, Shell and Ivory:**
  - Rinse.
  - Drain and blot to remove excess moisture.
  - Place on blotters on nonrusting screens. Air dry slowly.

## **SALVAGE GLOSSARY:**

**AIR-DRYING** – Use a cool, low-humidity area with good air circulation. Place absorbent material (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 towels, or waxed or freezer paper to keep items from sticking together and preventing dye transfer or running.

**FREEZING** – If objects cannot be drained within 48 hours, freeze them until action can be taken. Freezing stabilizing 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 material cool enough to slow mold growth.

**ON-SITE DEHUMIDIFICATION** – Super-dry air is pumped into the building and moist air drawn out. A useful method for rooms with high humidity; may be used in modern buildings to dry carpeting, wallboard and furnishings. Do not use for historic structures of wood or plaster or most museum collections.

**RINSING** – Rinse dry 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: 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 paper-based materials. A commercial service available throughout the U.S.