

# **GUIDELINES FOR WATER SALVAGE OF LIBRARY MATERIALS**

## **DRYING OPTIONS:**

### **Air drying**

- Small quantities of items to dry
- Best for damp or slightly wet items (water damage confined to edges)
- Effective for most types of library/archival materials
- Requires: supplies, space, people
- Labor intensive
- Damaged collections still accessible – usually done in-house

### **Freezing**

- Moderate to large quantities of wet items to dry
- Buys time when there is a delay in organizing salvage resources
- Prevents (but doesn't kill) mold
- Allows control in how much to dry at a time
- Requires: access to freezer space, packing/interleaving supplies
- Materials not accessible until they're thawed and dried

### **Freeze drying/vacuum freeze drying**

- Most efficient method for drying large quantities of material
- Requires: prior arrangement with vendor, arrangement for transport of collection to vendor, packing/interleaving supplies
- Cost for service offset by savings in staff time and resources to salvage, less need for follow-up conservation treatment after drying
- No access to collections until treatment finished

### **Choice of drying method depends on:**

- Degree of water damage (damp, slightly wet around edges, wet/submerged)
- Quantity of items to dry
- Resources available (staff, supplies, space, time)

## BOOKS

Can be air dried, frozen-thawed-air dried, freeze dried, or vacuum freeze dried

### Priority for salvage:

- Coated pages before uncoated textblocks
- Leather/vellum before cloth/paper covers

### Tips:

- Be aware that wet books are heavier and can easily fall apart
- Wet books and books with coated paper are best frozen or sent to freeze drying/vacuum freeze drying facility
- Leather and vellum are vulnerable to distortion and disintegration in water and are susceptible to mold – freeze ASAP

### How to prepare for drying:

Remove book jackets and plastic covers to speed drying and prevent mold growth on the covers

Generally, cleaning off dirt, mold, etc. after drying is easier, but if must clean –  
Hold tightly closed, dip in water, gently squeeze excess water, let drain, place on absorbent material, wrap to freeze or interleave to air dry

To pack for freezing –

Use wax paper or freezer paper to wrap around outside of covers, pack spine down in box, one layer of books

### How to air dry:

For damp books –

Stand/support upright on the drier of the top or bottom edges on absorbent material, fan pages, turn book over every 2-3 hours

For slightly wet (around the edges) books –

Place blotting paper inside covers (prevents color transfer); interleave every 25 pages with absorbent material, starting in back; interleave no more than a third of the book thickness, otherwise will stress binding; interleaving material should be larger than pages; stand book on edge; change absorbent material as it becomes wet; turn over book at intervals

Oversize, heavy, too wet to stand on edge – lay flat on absorbent materials, interleave as above

Damp or slightly wet books with coated paper – must interleave every page

Always check for mold growth during drying process

When dry but still cool to the touch – Lay book flat, gently reshape, and put under a light weight to prevent warping

## DOCUMENTS

Can be air dried, frozen-thawed-air dried, freeze dried or vacuum freeze dried

### Priority for salvage:

- Coated paper before uncoated
- Water soluble inks before more stable printed documents

### Tips:

- Paper easily tears when wet –always use caution when handling and provide support
- Watch for blurry inks – they are unstable or “bleeding” – freezing is best to halt solubility
- Don’t allow coated papers to dry in a clump – keep wet until treatment (air dry or freeze, best recovery if vacuum freeze dried)

### How to prepare for drying:

Remove from enclosures (esp. those in color), encapsulations, mats or frames

To pack for freezing – use wax or freezer paper to cover/interleave intact manuscript boxes or stacks of folders or documents (limit stacks to 2 inches thick)

### How to air dry:

Lay flat on absorbent surface, change absorbent material when wet, turn over documents at intervals

For items with water soluble media – dry face up, don’t blot

For items with coated (glossy) paper – important to separate sheets, if possible – press sheet of polyester film on top of stack, peel off with first sheet attached, dry document on polyester film or sandwich between 2 sheets of polyester material (like Hollytex, Pellon, or Remay)

Alternative air drying (for documents in good condition) – hang on line to dry vertically, using plastic clothespins and, if needed, sandwiching document between 2 sheets of polyester material for extra support

Expect papers will be distorted after drying, unless dried under weight

Expect dried papers will take more storage space

## PHOTOGRAPHIC MATERIALS

Can be air dried, some can be frozen-thawed-air-dried

### Priority for salvage:

- Color before black and white
- Cased or mounted photographs and glass plates before paper or film
- Prints before negatives
- Acetate and nitrate film before polyester based film

### Tips:

- Don't touch emulsion (image side) – hold by edges
- Cased photographs and glass plates should never be frozen

### How to prepare for drying:

Remove items from enclosures, including mats and frames, if possible – watch for sticking of emulsion onto enclosure material

For framed items – lay glass side down, remove backing materials, take item and glass out of frame, carefully remove item from glass, if sticking, leave on glass and dry as is

Keep stacks of photos wet until can separate them

If no time to separate photos – freeze

### How to air dry:

Air dry on absorbent material, emulsion/image side up; also applicable for cased photographs (open case but don't disassemble unless you know what you're doing) and glass plates

Alternative for film/prints in good condition – hang on line to dry vertically, use plastic clothespins on edges only (not over image)

Photo albums – lay flat in absorbent material, interleave pages with polyester material covering absorbent material (to prevent items from sticking to each other), change at intervals

## **FILM (MICROFILM, MOVIE FILM, NEGATIVE STRIPS & SHEETS)**

Can be air dried, frozen-thawed-air-dried, some can be freeze dried

### **Priority for salvage:**

- Acetate and nitrate film before polyester based film
- Color before black and white

### **Tips:**

- Avoid touching emulsion (image side) – handle by edges
- If can't air dry within 48 hours – freeze (negative sheets/strips) or keep wet until can get reprocessed (film on reels)
- Best to send reels wet to reprocessor for washing and drying

### **How to prepare for drying:**

Remove items from envelopes or sleeves, if possible – save enclosures for ID purposes

Wipe cans/boxes before opening – contents may be dry, even though enclosures are wet

Don't unwind or remove film from reel

For wet slides, if large quantity – remove from mounts to dry film chip

### **How to air dry:**

Prefer to dry sheets/strips vertically on line

Use plastic clothespins on margins, avoid pinning image

Alternatively, lay sheets/strips flat on absorbent material, emulsion side up

Prop reels vertically to dry – don't weight/press flanges against film

**CDs, DVDs**

Can be air dried

**Priority for salvage:**

- Unmastered originals before masters
- Masters before reference copies
- Older before newer

**Tips:**

- Avoid scratching the surface of disks – always handle by outer edges
- Keep away from heat
- Never freeze

**How to prepare for drying:**

Remove from enclosures – keep labels, enclosures for ID purposes

If need to clean – wipe from center outward in straight line (not circular) with dampened lintless cloth

**How to air dry:**

Prefer to dry vertically on racks

Alternatively, lay flat on absorbent material, label side down

After dried – make a copy

## **MAGNETIC MEDIA (CASSETTE TAPES, VIDEOTAPES)**

Can be air dried

### **Priority for salvage:**

- Unmastered originals before masters
- Masters before reference copies
- Older before newer
- Acetate before polyester based tapes

### **Tips:**

- Don't touch tape – wet tape easily stretched, handle by reel or cassette
- Keep away from heat
- Never freeze – tapes will stretch, lubricants in tape will migrate out

### **How to prepare for drying:**

Remove from boxes/cases, keep enclosures for ID purposes

Don't unwind or remove tape from reel

To clean (if needed, but not always necessary) – pour distilled water over tape or cassette

### **How to air dry:**

Empty excess water from cassettes

Prefer to dry vertically – with empty hub on bottom or reel supported on edge, so water can drain out

Alternatively, lay flat to dry on blotting paper

After dried – make a copy or have duplicated onto newer format