

Works on Paper

Conservation of Art and Archival Materials

SALVAGING WET BOOK COLLECTIONS

HELPFUL FACTS ABOUT BOOKS

- Books are usually made of paper (bast, cotton, hemp or wood fibers).
- Fibers can vary in quality, can be coated, calendared, sized or unsized.
- Books react differently to water depending on their material composition, use, and current condition.
- Paper is 90% air and is very absorbent.
- —Paper expands and contracts.
- —Surface texture of paper can be very smooth to very rough; some are clay-coated.
- —Fillers are added to paper to increase weight, density and strength.
- —Paper has a “grain direction”.
- —Books are often made of different types of materials and complex in nature.
- —Books can be constructed of parchment or other unusual materials.
- —Books are usually shelved in a specific order that should be maintained when possible.
- —Book covers can be made of a wide variety of materials including paper, cloth, leather and plastic. These materials can react differently than the paper inside.

WHAT TO EXPECT WHEN BOOKS GET WET

- —Books can be very heavy when wet and difficult to pick up without support.
- —Books on a shelf are likely to swell and may be dangerous or difficult to remove.
- —Bookshelf may also be damaged – check first before removing any books.
- —Printing inks, dyes and other media may bleed.
- —Old repairs and some bindings (particularly rare books) will release if adhesives are water soluble.
- —Capillary action in the paper fibers will wick up any moisture and create tidelines when dry. Staining is likely to occur.
- —Pages will cockle (warp and wrinkle).
- —Coated papers will stick together permanently if not frozen immediately. Even with freeze-drying, the page may remain stuck or damage to coatings may still occur.
- —Mold growth is possible if books are not dried quickly in a controlled environment or frozen.

TIPS FOR DRYING WET BOOKS

- —Use carrying supports such as a milk crate, Plexiglas sheet or other support that remains rigid when wet.
- —Blot off excess water with paper towels, blank newsprint, white cotton towels, or blotter. Be careful of sensitive media.
- —Isolate media that is bleeding or running from other objects or pages using wax paper or freezer paper. Make a temporary “book jacket” to protect from bleeding cover dyes.
- —For small number of wet books, air dry by fanning out pages. Rotate spine direction at least once a day until dry.
- —Help increase air drying by circulating air with fans. But, don’t aim fans directly at books since this can cause them to blow over.
- —For larger scale disasters or when it isn’t possible to air dry small numbers of books, freeze the books ASAP to buy time and prevent mold outbreak.

Drying Wet Books – 2 Techniques for Air Drying

Interleaving with paper towels and air drying with fans



“Fanned” books drying on a table



Drying Wet Books – How to Pack for Freezing

- If packing books in patterned crate (i.e. milk crate), put paper or board on all interior sides to prevent transfer of pattern.
- To make packing easier, turn crate on its side.
- When possible, wrap each book in freezer or wax paper.
- Pack spine down.
- Pack in a single row.
- Do not pack too tightly or leave extra space. To prevent extra space, pad out gaps with crumpled paper or toweling.
- Pack flat **ONLY** when there is no other option (weight will damage bindings of books on the bottom). Place largest books on bottom.

Pack all books spine down.



Pack books in single row.



Pack books snugly.



Pack oversize books flat with largest on the bottom.

