BOUND VOLUMES WITH LEATHER OR VELLUM BINDINGS

Priority Action:

- Immediately air dry, or freeze (if large quantities)

- Books with leather and vellum bindings are a priority because
  - They distort and disintegrate in water
  - They are highly susceptible to mold growth

Recommendations:

- Leather bindings should be air dried (if quantities are small)
- Large quantities of volumes should be blast frozen, if possible, or frozen
- Thermaline or cryogenic drying is a new technique that looks promising for drying leather and vellum bindings
- To air dry wet or partially wet books –
  - Stand the book upright, on its head, on absorbent paper
  - Support the book by opening the covers, but not the pages
  - Once pages begin to dry, interleave with paper towels, unprinted newsprint, or thin blotter paper every 5-10 pages
  - Interleaving should extend beyond the edges of the text block, except at the edge on which the volume is standing
  - The sheets should not equal more than one third of the thickness of the volume, so the binding won’t be strained
  - Separate the covers from the text block with absorbent paper
  - Open the covers of the book and stand it upright
  - Change interleaving as soon as it becomes wet, alternating the location of the interleaving
  - Once books feel dry to the touch, remove the interleaves and reshape the bindings
  - Flatten each book under a sheet of plastic or covered board with a weight on top
  - Do not pile books on top of each other – they can distort
  - Keep air moving at all times using fans
  - Aim fans into the air away from the drying volumes
  - Use dehumidifiers as needed to keep humidity at or below 50% RH

- To air dry damp books or books with wet edges –
  - Stand books upside down
  - Support the book by opening the covers
  - Fan open the pages
  - Support books with damaged covers with bookends or weights
  - Refan the pages every few hours
  - Turn book over to dry tops of pages
  - When book feels dry, flatten under sheet of plastic or covered board with weight on top
- **Fragile and oversized books** should be laid flat with absorbent interleaving placed intermittently between pages.

- To pack leather bound volumes for freezing –
  - Do not open or close books, do not separate covers
  - Separate volumes with freezer paper to prevent sticking
  - Pack spine down in plastic crates or cardboard boxes 1 layer deep
  - Pack oversized volumes flat in containers 2-3 books deep
  - Do not stack large books on top of smaller ones
  - After boxes are packed, place on pallets if available
  - Do not stack boxes on pallets more than three high
  - Ship to a freezer facility as soon as possible
  - Mold will begin to grow after 48 hours if materials are not kept cold

- If leather bound volumes are freeze dried, note that they will likely suffer some distortion.

- A book conservator should be consulted for advice on drying rare and vellum bindings
  - Vellum bindings should be monitored carefully
  - Place blotters between the covers and text and on the outside of the cover
  - Place volume under weights or in a book press
  - As the binding dries, it may shrink and cause damage to the text block, and should be removed
  - Vacuum freeze drying should be avoided for vellum bindings

**Recommended Supplies:**

- Wax or freezer paper
- Plastic crates or cardboard boxes
- Newsprint
- Blotter paper
- Paper towels
- Fans
- Dehumidifiers

**Related media:**

*Volumes with Cloth or Paper Covers*
*Volumes with Coated Paper*

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