Paper Preservation 101
Ford Conservation Center

Objects
Paper
Paintings
Preservation vs. Conservation

The goal is to **prolong the existence of our collections**

- **Preservation**: caring for collections by monitoring environmental controls, proper storage, safe handling, and leading display practices

- **Conservation**: the profession devoted to preserving cultural property. Includes examining, treating, and documenting artifacts
Paper Composition

- Cotton rag: strong, good aging characteristics, good color stability

- Mechanical wood pulp: wood is ground down into pulp. Produces weak, short fibers, discolors rapidly due to lignin content

- Chemical wood pulp: also from wood but chemically treated to remove lignin
Natural Deterioration

- Lignin occurs with cellulose in plant fibers

- Acidic 19th c. sizing agents like alum-rosin were used to reduce paper absorbency

- Acids in paper cause discoloration and embrittlement
Housing Materials

Boxes, folders, tissue, plastics, envelopes, and interleaving materials should be:

- 100% cotton rag
- Acid-free
- Lignin-free
- pH7 (neutral) or alkaline buffered
Plastic Storage

- Not all are safe in proximity to artifacts
- Can accelerate paper deterioration
Storage materials containing zeolites: absorbent minerals that act as scavengers to trap acids

MicroChamber® Artcare products:

- Interleaving papers
- Museum board
- Foam board
- Storage boxes
Stable Paper Documents

- Tissue, Mylar L Sleeves OR archival envelopes
- 10 pt folder stock
- Archival boxes
Damaged Paper Documents

- Mylar L sleeves OR archival envelopes
- 10 pt folder stock
- Archival boxes
Digitize and throw it away!

OR make it accessible to patrons by placing in Mylar L-sleeve

Store in MicroChamber® box
Maps and Oversized Items

- Store flat
- 10 or 20 pt folder stock
- Large paper items *in good condition* can be rolled
Stable Books

- Stable books can be stored upright on shelves
- Heavy and oversized books should lay flat, no more than three stacked high
Damaged Books

❖ Should be stored in custom books boxes
❖ 4-flap enclosures work well for most damaged books
Enclosures

Indiana University Libraries Book Repair Manual

Corrugated Clamshell Box

Treatment Criteria:

Like the phase box and standard wrapper enclosures, the corrugated clamshell box is primarily an enclosure for the housing of brittle books. The corrugated box is most commonly used for those that are heavy and/or oversize, both because it is a sturdy enclosure and because archival corrugated board is available in large (40" x 60") sheet. We use B-flute and E-flute corrugated that is acid-free and buffered to maintain an alkaline-side pH.

http://www.indiana.edu/~libpres/manual/treatments/corr/corr.html
Rehousing

Prioritize collection needs by:
- Highest intrinsic value
- Supports the core mission of the organization OR
- Demands the most immediate attention
- Get a pH pen

If you don't know, call me or send pics!
Temperature and RH

- High heat and high RH instigate chemical changes in paper
- 60-70 degrees F and 30 to 40% RH
  Check. This. Every. Day.
- **Consistency is key**
Light Exposure

- Intensity of light and duration of exposure

- **ALL LIGHT** is damaging; UV is the most harmful

- Weakens cellulose, darkens, or bleaches paper, fades ink. NOT reversible

- Long term display is not recommended; 3 months maximum

- UV filtering sleeves for fluorescent or incandescent lights and UV filtering films for windows

- Copies for display
Pests

They eat paper, size, and other organic materials
Environmental Fixes

- Keep doors and windows closed
- Maintain constant RH and temperature
- Get dehumidifiers and circulate air
- Sticky traps and door sweeps for buggies
- Store artifacts 4 inches off the ground and from exterior walls
Housekeeping

- Routine cleaning is key to keeping atmospheric pollutants from settling on artifacts
- Reduces chance for pests and mold formation
- Vacuuming with HEPA filtration
- Dusting with magnetic cloths
- Monitoring for pests
Online Resources

Resources & Links

NEW!!! CONNECTING TO COLLECTIONS GUIDES for museum, library, and archival collections.

- Connecting to Collections Guides updated by the Nebraska State Historical Society Ford Conservation Center with funding from the Institute of Museum and Library Services.

Emergency Preparedness

- Emergency Preparedness sample plans, local and national resources and helpful websites

Collection Management

- Collection Management Document Templates

Museum Resources

- Sustaining Places: Resources for Small Museums and Historic Sites
- National Park Service Conserve O Grams
- Canadian Conservation Institute Notes
- Northeast Document Conservation Center Preservation Leaflets
- Heritage Preservation Connecting to Collections
- Conservation Online (CoOL)
- AAM Developing a Collections Management Policy
- AltaMira Press Museum Studies Books and Publications

http://www.nebraskamuseums.org/links/