



AMERICAN
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University
Libraries

CONSERVATION AND PRESERVATION POLICIES AND PROCEDURES

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SCOPE

This policy applies to the preservation and conservation of the University Libraries' collections and to all staff involved in their care, handling, storage, assessment, and treatment.

POLICY STATEMENT

In support of the University Libraries' mission to preserve knowledge and provide access to its distinctive collections, the Conservation and Preservation Section (CPS) is responsible for the conservation and long-term preservation of the UL's collections, ensuring continued access to materials of historical, cultural, and scholarly significance. These include general circulating collections, archival materials, manuscripts, maps, posters, and photographic materials.

OBJECTIVES AND FUNCTIONS

- A. Implements preventive measures to prolong the life of library materials, including environmental monitoring, the implementation of appropriate storage and handling practices, the design and fabrication of protective enclosures, and participation in emergency preparedness and response planning.
- B. Performs conservation treatments to stabilize, preserve, and extend the usability of collection materials.
- C. Prepares condition assessments of individual items and collections and provides recommendations regarding conservation needs, treatment priorities, and preservation options.
- D. Supports digitization initiatives through the preparation, assessment, and stabilization of collection materials prior to, or during, imaging activities, as required.
- E. Supports exhibition initiatives through the preparation and stabilization of collection materials to ensure their safe display and handling during exhibition.

PRESERVATION PRINCIPLES AND ETHICAL FRAMEWORK

- A. CPS activities are guided by internationally recognized professional ethics and best practices. Conservation and preservation interventions adhere to the principles of transparency, reversibility, documentation, minimal intervention, and respect for the historical and material integrity of collections
- B. These principles are applied in relation to the specific characteristics of each item, including its rarity, condition, significance, usage, and requirements for safe handling and long-term preservation.

PROCEDURAL WORKFLOW

1. Collection Assessment and Prioritization

- A. Collection assessment and conservation prioritization are guided by the approved treatment plan, the established workflow for incoming conservation requests from ASC and CMS, the physical condition of items, and the presence of active lending or access requests.
- B. Collection assessments and condition surveys are conducted on current holdings as well as incoming materials following requests from ASC and the Acquisitions Department.
- C. These assessments include the systematic evaluation of physical condition, identification of preservation and conservation needs, and determination of appropriate actions.
- D. Based on assessment outcomes, CPS provides recommendations for suitable housing, preventive measures, or conservation treatment. Where necessary and in accordance with institutional policy and Acquisitions Department guidelines, recommendations may also include deaccessioning or withdrawal of items that are beyond preservation or use thresholds.

2. Archives and Special Collections

- A. One of the primary responsibilities of CPS is the stabilization and restoration of materials held within Jafet Library's Archives and Special Collections (ASC). Specialized conservation measures and treatments are undertaken for rare and early printed books, manuscripts, photographs, archival documents, records, maps, posters, and other heritage materials.
- B. Conservation treatment of ASC materials is carried out with particular consideration for preserving the historical, aesthetic, evidential, and physical integrity of the original materials. Conservation activities also adhere to archival principles, including *respect des fonds*, ensuring that preservation and restoration procedures do not interfere with or alter the original order, context, or archival relationships of materials.
- C. Items requiring conservation treatment are identified and listed by ASC staff and subsequently transferred to CPS for condition assessment and treatment. Upon completion of treatment and prior to returning materials to ASC, the CPS Librarian documents all conservation procedures performed on the item, including treatments performed and completion dates, within the library management system. Pre- and post-treatment item status modifications are conducted by ASC and CMS staff.

3. General Circulating Collections

The Conservation and Preservation Section is responsible for the pre-shelf preparation, binding, repair, stabilization, and rebinding of the University Libraries' circulating collections. Materials requiring repair are identified by Access Services and branch library staff during circulation activities, shelving operations, inventory projects, or routine collection maintenance.

- A. Items identified as damaged by Access Services through circulation or collection maintenance activities are forwarded to CMS, where the item status is updated in the library system to indicate repair or restoration processing.
- B. CMS transfers the damaged materials to CPS for assessment and treatment.

- C. Upon completion of conservation or repair work, CPS returns the treated materials to CMS.
- D. CMS updates the item status to reflect availability and returns the materials to circulation.
- E. The same workflow applies to branch library collections.

CONSERVATION TREATMENTS

1. Materials Standards

- A. Adhesives, boards, paper repair tissues, enclosures, and hinging materials used in conservation and preservation procedures shall meet accepted conservation standards for permanence, chemical stability, and pH neutrality.
- B. Surface cleaning of photographic materials shall be carried out using antistatic, non-abrasive materials and appropriate conservation-grade photographic cleaning agents when necessary. Photographic encapsulation is performed using polyester sleeves.
- C. Water used in conservation treatments and material preparation shall be distilled and deionized or otherwise suitably purified for conservation use.

2. Stabilization and Restoration

- A. Conservation treatment may include dry cleaning, aqueous washing, solvent-assisted cleaning, deacidification, humidification, flattening, and stabilization treatments, provided that the materials are determined to be suitable for such procedures following condition assessment and media testing.
- B. Remedial conservation treatments may include, but are not limited to, jacket affixing; structural repair of damaged hinges and board corners; mending of tears, cuts, and losses in paper; reattachment of detached or partially detached leaves or gatherings; tipping-in and hinging-in of loose pages; recasing of text blocks; spine restoration; rebacking of case bindings; resewing of text blocks; stabilization of water- or mold-damaged materials; and removal of non-archival attachments and inserts. Additional interventions may include leaf casting and lining.

3. Housing

Custom-designed archival storage containers – file folders; clamshell, drop-front, and modular boxes – are manufactured to provide protection and support for rare, fragile, and light sensitive items, including manuscripts, documents, and photographs.

4. Permanent Damage

- A. Volumes stored at the General stacks that are too brittle to be repaired are sent to Acquisitions Department for decision making. Custom-designed archival storage containers are directly manufactured for the ones stored in the Archives in Special Collections.
- B. In case newer editions are available at the library, the Acquisitions Librarian is informed for decision making.

- C. Acquisitions Department prepares an authorized list of discarded items stating the reason for item withdrawing such as outdated, duplicate copy, etc. for more information check the Acquisitions Department policy
- D. The CMS will note the reason for withdrawing and then suppress the copy and Bibliographic record- or both- as appropriate.
- E. Volumes with special/scarcity value and out of prints should be digitized. The original copy should be stabilized and preserved.
- F. Priority is given to general circulating collections.

5. Textual Loss and Loss Compensation

A. Archives and Special Collections

Archives and Special Collections materials received for conservation treatment that are found to contain missing original page(s) shall undergo the following procedures:

- i. If copies of the missing pages are provided separately with the item, the copies shall not be attached, adhered, or sewn into the original item. Appropriate archival housing, such as an archival box or folder, shall be prepared to house both the original item and the supplied copies separately.
- ii. If no copies are provided, CPS shall consult with ASC to confirm and document the status of the missing pages. Appropriate archival housing shall likewise be prepared to accommodate the item and any future surrogate or reference copies that may later be acquired.
- iii. A blank acid-free placeholder sheet may be inserted at the location of the missing page(s) when necessary for collation, handling, or structural stabilization. The placeholder sheet shall be clearly distinguishable from the original material and shall contain a written note indicating the missing page number(s).
- iv. If the text block is detached, unsewn, or the folios are separated and require resewing for structural stabilization, the placeholder sheet(s) may be sewn together with the text block as part of the conservation treatment.
- v. Materials exhibiting substantial textual loss shall be stabilized to preserve all surviving original material while minimizing further deterioration. Conservation treatment shall avoid reconstructing missing original text or imagery directly onto the artifact.

B. General Circulating Collection

- i. Modern circulating materials lacking page(s) or exhibiting substantial textual loss may undergo replacement of damaged or missing text through the insertion of reproduced pages, or replacement leaves to restore usability and facilitate continued access. Replacement copies are provided by CMS and may be reproduced from another copy or surrogate source and integrated into the text block through tipping-in, hinging, or sewing.
- ii. Replacement pages shall be clearly identifiable as reproductions where feasible.
- iii. If replacement is impractical or the extent of loss is substantial, the item may be withdrawn, replaced, or otherwise managed in accordance with collection management policies.

6. Conversion (Reformatting) and Replacement

- A. Digital reformatting is the process of converting analog materials into digital surrogates. To ensure long term, undisruptive access and use of library print volumes that become too brittle to repair or utilize, the preservation strategies will be to replace and/or reformat these volumes after assessing their condition, value, and availability of reprint.

- B. For volumes from the General Circulating Collections that are too brittle to be repaired, a reprint can be purchased, when available.
- C. Brittle volumes shall be reformatted while intact whenever feasible to support continued access and handling. Volumes with significant artifactual or binding value may be housed in custom archival enclosures for additional protection. Materials that have deteriorated beyond practical use prior to reformatting may be withdrawn from the collections after an appropriate surrogate copy has been created.
- D. Volumes with particular scarcity value and out of prints should be digitized. The original copy is repaired and preserved.
- E. Digital preservation activities, including digitization and metadata creation, shall be carried out respectively by the Digital Initiatives and Scholarship, and CMS.

ENVIRONMENTAL MONITORING

1. Temperature and Relative Humidity

- A. The environment in which library materials are stored has a significant impact on their long-term preservation and life expectancy. Inappropriate temperature, relative humidity (RH), light exposure, airborne pollutants, and poor ventilation can accelerate the deterioration of library and archival materials.
- B. Maintaining a stable environment and minimizing fluctuations in temperature and relative humidity are of primary importance. Proper ventilation and air circulation shall be maintained to prevent air stagnation and to support appropriate environmental conditions within storage and use areas.
- C. Mixed collections containing paper, parchment, leather, photographs, and related materials should generally be maintained at a temperature of $18^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a relative humidity of $45\% \pm 5\%$, unless material-specific requirements necessitate otherwise.
- D. Dehumidifiers, air-conditioning systems, and Heating, Ventilation, and Air Conditioning (HVAC) systems shall support the control of internal air quality through appropriate filtration, the controlled introduction of fresh air, and the maintenance of stable temperature and relative humidity levels within collection storage areas.
- E. Thermohygrometers and Building Management System (BMS) readings shall be used to monitor temperature and relative humidity conditions.
- F. Regular environmental inspections and round checks conducted by circulation staff, facilities personnel, and Conservation and Preservation staff shall assist in identifying environmental fluctuations, water intrusion, equipment malfunctions, or HVAC failures. Any identified issues shall be promptly reported to the Facilities Management Unit for appropriate maintenance.

2. Light

- A. Unnecessary exposure of stored collections to artificial or natural light shall be avoided whenever possible. The use of blinds, curtains, UV-filtering films, and switching off lights in unoccupied areas should be implemented to reduce cumulative light exposure.
- B. Collection materials should be exposed to light only during retrieval, shelving, consultation, exhibition, conservation treatment, or other active use.
- C. The use of mobile phone flashlights, camera flash, or other direct high-intensity light sources on collection materials shall not be permitted.
- D. Light-sensitive materials — including newsprint, dyed organic materials, photographs, textiles, manuscripts, and watercolors — shall be subject to stricter light-control

measures. Their display and exposure periods should be limited and should generally not exceed three consecutive months.

3. Pollutants

The Library minimizes pollutant exposure through a sealed storage strategy, multilevel spatial partitioning to limit pollutant movement, and biannual HVAC filter replacement (by Facilities Management Unit) to maintain effective air filtration. Storage and work areas are routinely inspected and cleaned to prevent dust and particulate accumulation.

MOLD AND INTEGRATED PEST MANAGEMENT CONTROL

Mold and pests pose a significant risk to library and archival materials. The implementation of comprehensive preventive and response measures is essential to mitigate infestation risks, support early detection, and minimize damage to collections.

1. Mold

- A. Mold growth is primarily controlled through environmental management. Collection materials should be stored in conditions not exceeding 21°C and maintained at a relative humidity between 45% and 50%, with adequate air circulation to discourage fungal growth.
- B. If mold is detected within a collection, affected materials shall be promptly isolated from unaffected items to prevent cross-contamination. Where feasible, the environment should be stabilized and RH reduced to below 45% to inhibit further growth. The affected space should be well-ventilated, and air movement may be increased using controlled mechanical ventilation or fans, where appropriate.
- C. Mold remediation on collection materials shall be carried out using methods that minimize spore dispersal. HEPA-filtered vacuuming may be used by trained personnel under controlled conditions. Dry cleaning methods (e.g., soft brushing or HEPA vacuum micro-attachments) may be employed where appropriate and safe for the material.
- D. The use of chemical treatments such as ethanol shall be avoided on collection materials, unless specifically approved by conservation professionals for exceptional cases.
- E. Surfaces, shelving, and surrounding non-collection areas in affected zones should be cleaned using approved disinfectants.
- F. Staff handling mold-affected materials shall wear appropriate personal protective equipment (PPE), including gloves, masks (e.g., N95 or equivalent), and protective clothing, as required by risk assessment.

2. Integrated Pest Management Control

- A. Insects and rodents can cause severe and irreversible damage to library and archival collections. To mitigate these risks, the CPS implements an Integrated Pest Management (IPM) strategy that prioritizes prevention, monitoring, and environmental control, with the objective of minimizing or eliminating the need for chemical insecticide use.
- B. The IPM approach is based on preventive conservation principles and good housekeeping practices. The following measures shall be observed:

- i. Implement regular housekeeping routines to ensure the cleanliness of stacks, storage areas, and floors, including routine removal of dust and debris.
- ii. Prohibit eating, drinking, and storage of food in all areas where library and archival materials are housed or handled.
- iii. Ensure proper hand hygiene by staff and users prior to handling collection materials, and require the use of gloves when handling sensitive materials such as photographs and other vulnerable media, where appropriate.
- iv. Seal all unnecessary openings in the building envelope, including gaps around water pipes, drainage systems, electrical conduits, and service penetrations.
- v. Repair and fill cracks in interior walls, floors, and storage infrastructure to eliminate potential insect harborages and entry points.
- vi. Maintain doors and windows closed whenever possible; where ventilation requires opening, install fine mesh screens to prevent insect ingress.
- vii. Utilize non-toxic monitoring and control methods, such as sticky traps and pheromone traps, to detect and reduce insect activity as part of ongoing monitoring programs.

3. Treatment of Infested Materials

A. Freezing Treatment

- i. For isolated or occasional infestations, affected materials may be treated through controlled freezing. Items should be sealed in polyethylene (PE) bags and placed in a freezer at approximately -25°C for a minimum period of 10–14 days, depending on infestation severity and material type.
- ii. After treatment, materials should be allowed to acclimatize gradually at room temperature in a controlled environment while still sealed, to prevent condensation and moisture-related damage. Once thawed, items should be inspected and gently cleaned under controlled airflow.
- iii. Freezing is not recommended for materials sensitive to low temperatures or moisture fluctuations, including items with unstable media (e.g., certain photographic processes, water-sensitive media, coated papers, waxes, adhesives, and fragile bindings). Each case should be assessed prior to treatment.

B. Anoxic Treatment (Oxygen Reduction Methods)

- i. Oxygen deprivation methods using oxygen absorbers in airtight or vacuum-sealed environments may be employed as an alternative non-chemical disinfestation method. They are used for rare, bound, or delicate materials requiring non-invasive treatment and are sensitive to freezing.
- ii. When properly applied, oxygen levels are reduced below 0.1%, creating an anoxic environment that eliminates insects at all life stages over a period of approximately 2–3 weeks.
- iii. This method is particularly suitable for materials that are sensitive to low temperatures or moisture fluctuations and is preferred over freezing for vulnerable or complex heritage objects. It is especially appropriate for rare and delicate materials, including manuscripts and bound volumes composed of paper, leather, parchment (vellum), and other sensitive organic materials.

EMERGENCY AND DISASTER PLANNING

Refer to the *Emergency and Disaster Planning Policy* in the *General Library Policies and Procedures* section