Preservation of Archival Records: Holdings Maintenance at the National Archives

by Mary Lynn Ritzenthaler
Technical Information Paper Number 6 (1990)
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FOREWARD

The National Archives, as the keeper of the records of the federal government from its beginning in 1774, has in its care the largest accumulation of original documents in the United States. Among the holdings are records on nearly every known recording medium: manuscript, typewritten, and printed text on paper; engrossed documents on parchment; printed maps with

pencil or pen and ink annotations; manuscript maps on paper, parchment, and bark; still pictures on paper, glass, metal, and plastic film; aerial photographs and lantern slides; architectural and engineering drawings and blueprints; watercolor paintings; motion picture film in black and white and color; sound recordings on nearly every medium since the copper wire; and machine-readable records from many electronic data processing systems.

As a result, the National Archives has encountered nearly every conceivable archival problem in one form or another, whether in the realm of description, preservation, archival control, or reference. We have learned much from other archives and libraries that have confronted the same problems and have reported their solutions in the professional literature, and we too wish to make available to other repositories the results of our experience with particular problems and their solutions.
Accordingly, from time to time, the National Archives issues Technical Information Papers (TIPs) describing work going on in its various departments, in the hope that our experience will be equally useful to others in the profession. Comments on the contents of any TIP will be welcome. If the TIPs generate dialogue in the profession, they will serve a good purpose.

DON W. WILSON Archivist of the United States 1988-1993

PREFACE

Holdings maintenance is the term used by the National Archives to describe a range of basic preservation procedures designed to prolong the life of archival records by providing a stable storage environment. The following guidelines provide information on storage containers, techniques for marking enclosures, methods for storing loose and bound records and oversize materials, techniques for removing fasteners, and preservation supplies. The National Archives is committed to improving the conditions under which archival records are stored and handled, both to meet long-term preservation goals for the safekeeping of permanently valuable records and to defer the need for expensive laboratory treatment.

The illustrations interspersed through the text were drawn by Elissa O'Loughlin.

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INTRODUCTION

The National Archives places strong emphasis on holdings maintenance as one important aspect of a systematic approach to preservation of the materials in its custody. Holdings maintenance is the term used to describe those preservation actions that are designed to prolong the useful life of records and to reduce or defer the need for laboratory treatment by improving the physical storage environment. These actions include replacing acidic storage materials such as boxes and file folders with materials of known quality that meet National Archives specifications, improving shelving practices, removing damaging fasteners, reproducing unstable materials such as Thermofax copies onto stable replacement materials, and dusting boxes and shelves.

The groups of records selected for holdings maintenance projects are chosen after weighing a variety of archival considerations, including intrinsic value, condition, and anticipated use of the records. In some instances it may be appropriate to do no more than rebox, or refolder and rebox a records series; in other cases, it will be appropriate to carry out the complete range of holdings maintenance actions. Such decisions reflect the informed judgment of archivists (who identify and plan holdings maintenance maintenance projects) and conservators (who consult regarding the condition and physical needs of records). The guidelines are intended to instruct archival staff in a full range of advisable preservation actions short of laboratory treatment. They are not meant to be hard-and-fast rules but rather a representation of the best practice for most situations. Common sense will reveal exceptions, as will archival judgments about the use, intrinsic value, condition, and space available for storage of the records being considered. The guidelines were developed to supplement training for non-conservation staff who perform holdings maintenance tasks. They reflect the collective insights of archivists, conservators, and managers of the National Archives.

When specific questions arise about the appropriateness of a course of action outlined in the guidelines, or when a situation occurs that does not seem to be covered, staff should consult the supervisor of the project, who will, if necessary, seek advice from conservators. Preservation is a partnership; it works best when there is active communication between archivists and conservators.

Appended to the guidelines is a list of basic materials and supplies needed to carry out holdings maintenance projects. The list does not include specific brand names or sources, because vendors do not always stock the same products, and because suppliers may change the basic composition of items they manufacture. Materials purchased for holdings maintenance should be evaluated to assure that they meet archival standards.
The following preservation procedures should be followed when implementing holdings maintenance actions. They will also provide a framework for basic preservation measures that can be incorporated into arrangement and description projects, preparation of records for microfilming, and other archival projects.

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Holdings Maintenance Procedures

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A. Boxes

1. 1. Boxes that are physically damaged (exhibiting such characteristics as broken hinges or missing flaps) and no longercapable of supporting or protecting archival records adequately should be replaced with new storage containers. Boxes of unknown or suspect quality should be tested for pH level and alkaline reserve, to determine whether they should be replaced with new acid-free or low-lignin boxes.
2. 2. The decision to use acid-free or low-lignin archives boxes should take into account the nature and value of the records.Some photographic materials and records of high intrinsic value, for example, should be placed in low-lignin storage containers which are more costly than acid-free boxes.
3. 3. When records are placed into archives boxes, care must be taken to ensure that boxes are neither overfilled norunderfilled. If too many records are placed in one box, damage will occur as they are forced in and out. On the other hand, if there are too few records in a box, they will bend and slump, and eventually become curved and distorted. Corrugated acid-free spacer boards should be used in partially filled archives boxes to keep records upright. (See Supply List.)
4. 4. Spacer boards should be folded along the score lines at each end and be positioned in the backs of boxes so that thefolders rest against the flat side of the board; the well created between a spacer board and the back of a box can be used to store three-dimensional or bulky items, such as medals or cased photographs, that must remain with textual files (See Figure 1 and Figure 2.)
5. 5. Records must be placed in boxes that are large enough to accommodate them without damage. Archives boxes in avariety of sizes and formats are available to meet the diverse storage requirements of archival records.

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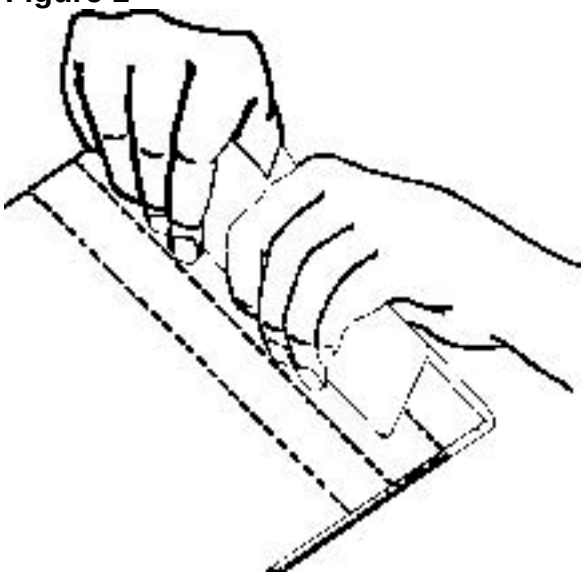
B. Folders

1. 1. Loose (i.e., unbound) records that are currently stored in boxes without folders should be placed in acid-free file foldersfor support and protection.
2. 2. Folders that are physically damaged and no longer capable of protecting or supporting archival records should bereplaced. Folders of unknown or suspect quality should be tested for

the pH level and alkaline reserve, to determine whether they should be replaced with new folders.

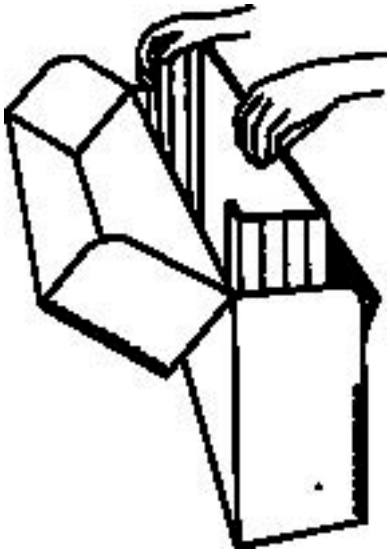
3. 3. Records must be placed in acid-free file folders or envelopes that are large enough to accommodate them safely. Thedocuments must be neatly aligned so they will support one another. If edges or corners of documents are out alignment of or extend beyond their filing enclosures, they are easily bent, broken, or torn.

Figure 1



Fold the spacer boards along the score lines on both ends. When choosing the score lines, consider the size of the box (letter or legal) and the number of records that need support. In some cases two folds will be required at each end, as shown in the illustration.

Figure 2



Fold the spacer boards so that they take up the excess space in a box and fully support folders and records. Orient the spacer boards so that the full length of the board rests against the folders and the folded edges of the board are placed against the back of the box.

1. 4. Folders and envelopes should not be overfilled, as records packed too tightly will not be properly supported andprotected during handling and storage Also, if filing enclosures become too heavy and unwieldy, records may fall out and be damaged; or they may be handled too roughly in attempts to use and transport them.
2. 5. The original score lines provided on a folder should be used as a guide to limit the number of items that can safely beplaced within the folder; the documents within should be no thicker than the broadest width (3/4) of the scored folder. Artificially produced score lines should not be created in an effort to make a folder accommodate more documents than intended by the folder design. Score lines must be sharply creased in order to provide a flat edge upon which folders can rest in a box. When folders are not sharply creased, they tend to slump and curl within a box. A bone folder can be used as an aid in scoring folders (See Supply List.)

6. Pencils must be used when folder labels are to be handwritten, since most commercially available felt tip or ball point

pens contain inks that are water-soluble, capable of fading, and acidic, and therefore do not meet archival specifications. They should never be used on storage enclosures. If permanent notations such as declassification markings are required by law or regulation, an archivally acceptable ink should be used.

3. 7. Non-record, loose, acidic inserts (such as cross-reference or withdrawal forms or blank place-holders) are often left infiles of archival records for many years, with the result that records can become stained and damaged. When encountered during holdings maintenance projects, such poor quality inserts should be evaluated to determine whether they are still pertinent. If they contain important archival information, either they should be reproduced onto archival bond paper, or the information they contain should be hand-copied onto stable paper or card stock. Staff should consult with project supervisors before removing, copying, or discarding any inserts or enclosures. Conservators can assist in identifying stable paper materials upon which to transfer information.
4. 8. Paper folders or wrappers of unknown quality that were formerly used to segregate records within file folders should bereplaced with archival bond paper. Most prevalent in this category are folders made of colored paper or Kraft paper. Generally, colored papers are acidic and contain water-sensitive dyes; various types of Kraft (brown wrapping) paper are also unstable. Questions regarding the suitability of specific papers for archival applications should be answered by conservators.
5. 9. Some highly acidic archival records (such as newspaper clippings and telegrams) are candidates for being copied ontoarchival bond paper. Alternatives that will achieve the goal of separating highly acidic materials from records on better quality paper include placing the highly acidic records in polyester sleeves or within a folded piece of archival bond paper. Established disposition procedures must be followed for any records that are identified for duplication and subsequent disposal. Supervisors should be consulted before any archival records are removed, copied, or discarded.

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Corrugated Folders (acid-free)

For use in handling and transporting oversize archival records. Such folders are lightweight and also provide rigid support. They can be fabricated in sizes up to 4' x 8', using gummed linen tape to hinge the two pieces of corrugated board together.

Cotton Gloves, White

Recommended when working with dirty materials, and to protect hands from paper cuts. Gloves also should always be worn when handling and sleeving photographic materials to avoid fingerprints, which permanently damage photographs. Gloves should be changed as soon as they become dirty to avoid transferring dirt to archival records.

Cotton Twill Tape, White (1/2", 3/4", 1")

To be used in tying bound volumes that are damaged or weak and to keep covers and spine pieces from being separated from text blocks. The width of twill tape selected should relate to the size of the volume being tied; 1" (or wider) tape should be used for large, heavy textbooks.

Cotton tape should not be used to tie bundles of loose paper records or rolled documents, since it can easily break, tear, or damage edges of unsupported records. Colored cloth tape should not be used with archival records due to problems associated with unstable dyes.

Dust Cloths

For dusting archives boxes, the exteriors of bound volumes, and shelves. Dust cloths should not be used to wipe or dust the surfaces of loose paper records, photographic materials, or pages in bound volumes.

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Dust Masks

Recommended when working with particularly dirty records, especially for people bothered by dust.

Ink

Ink that is not acidic, does not fade, and is not soluble in water should be used if the permanent marking of records is authorized. Pencils are recommended, however, for most archival applications, including writing notations on file folders and boxes.

Microspatula (stainless steel)

Thin and flexible spatulas that can be used to remove staples and similar fasteners.

Paper Clips (stainless steel)

To be used in conjunction with protective strips of archival bond paper, and then only when the documents are strong and flexible. Stainless steel paper clips should be used as the fastener of choice if records of high intrinsic value must be held together. Office or commercial quality paper clips readily rust and should not be used on archival records. Conversely, given the expense of stainless steel paper clips, they should only be used on archival records, not for office applications.

Polyester Sleeves

For enclosing and protecting fragile, brittle, and/or torn documents, as well as photographic prints and negatives that are filed among textual records. Sleeves with two adjacent sealed edges (L-sleeves) are recommended to maximize safe insertion and removal of fragile records.

Plastic enclosures or sheet protectors of unknown origin (that may have been used by the agency or person that created the records) should be tested, since many plastic materials are unstable and can damage records.

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Spacer Boards

To be used in partially filled archives boxes to keep records upright. Constructed of acid-free corrugated paperboard, the spacer boards are designed to fit standard letter and legal size archives boxes. There are score lines on each end of the board; folds should be made as necessary, depending on the size and contents of a box.

Staples (non-corrosive, rustproof)

To be used when paper records are strong and flexible. Staples should not be used on brittle paper, and they are not recommended for use on archival records of high intrinsic value because of the punctures they make. A small strip of archival bond paper should be folded in half and placed over the top edges of the records to be attached before applying the staple. Office or commercial quality staples should not be used on archival records.

Storage Containers

Archival storage boxes, file folders, envelopes, boxes and enclosures that meet archival specifications are available in standard as well as specialized sizes and formats to meet the storage requirements of a wide variety of archival records.

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Holdings Maintenance Supplies

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Supplies required for carrying out holdings maintenance actions are listed below, along with brief descriptions of their intended use. Paperboard, polyester film, and similar supplies should be subjected to ongoing quality control review. When the term "acid-free" is used in the holdings maintenance guidelines, it is merely for the sake of convenience in describing such items as

boxes and file folders; in fact, pH level is just one of many characteristics defined in specifications for archival supplies.

The commercial availability and composition of products used for preservation purposes change over time. Therefore, it is important to monitor, test, and make available supplies that are safe for use with archival records in performing holdings maintenance and other preservation work.
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Archival Bond Paper

For use in preservation photocopying, as interleaving sheets, as well as for tabs or cross-reference forms that are placed within files of documents or bound volumes. Also to be used as pre-cut protective strips to be positioned as a support under stainless steel paper clips and rustproof staples.

Bone Folders

Smooth, thin tool made of bone with tapered or pointed ends, used to make strong creases in file folders.

Brushes, **Dusting**

Suitable for dusting the exteriors of bound volumes, as well as enclosures that have been stored in open containers. Such brushes also may be used to dust shelves and archives boxes, but dust cloths are more effective in trapping dust in such situations. Stiff bristled brushes should not be used to dust the surfaces of paper records or photographic materials since they may damage records, force the dirt into paper fibers, and/or abrade fragile surfaces. Dusting brushes must be washed on a regular basis. (See Brush Care.)

Brushes, Photographic

Soft-bristled brushes designed for lightly dusting the surfaces of photographic prints and negatives before they are placed in storage enclosures. Brushes used for dusting photographs should be reserved solely for this purpose and not used on other archival materials.

Photographic brushes also may be designated for use in lightly surface dusting archival paper records. Brushes that are used for paper records should not be used on photographs.

Brush Care

Only clean brushes should be used when dusting archival records, to avoid simply transferring dirt from one surface to another. Since brushes will become dirty quickly when used with dusty records, a supply of several clean brushes should be kept on hand so that a fresh one is available when needed. Brushes should be washed as often as necessary, either in plain water or with

water and a mild soap. Brushes should be rinsed thoroughly (especially if soap is used) and hung to air dry. Brushes must be thoroughly dry before they are used on archival records.

Next page of supplies beginning with corrugated folders.

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C. Oversize Records

1. 1. Documents that do not properly fit into their folders, boxes, or other containers without being rolled or folded should beconsidered oversize. These include maps, drawings, blueprints, posters, large ceremonial documents, lengthy petitions, and other records that may have been previously folded or rolled to allow them to fit into a particular container, as well as documents whose edges are being broken or curved because they extend beyond the edges of folders. Oversize records may become curved, pleated, or otherwise distorted if they are housed in folders and boxes that are too small.
2. 2. Oversize records may not be trimmed, cut, or sectioned to allow them to fit into existing filing enclosures or storagecontainers.
3. 3. When possible, oversize records should be removed from their original containers and stored flat in folders within mapcases or in oversize document boxes that will fit on existing shelving. Appropriate cross-reference procedures should be followed for relocated oversize items.
4. 4. Ideally, oversize archival records should be stored flat, without folding or rolling. However, it is not always feasible toprovide separate oversize storage for records that are slightly larger than the box or container in which they are filed. When the paper is strong and flexible, it is acceptable to make a single fold in a document to allow it to fit within its container. Records having high intrinsic value, however, never should be folded; nor should brittle paper, photographic materials, posters, or original art work be folded. Questions regarding safe storage for oversize records should be discussed with a conservator.
5. 5. Large paper records are inherently awkward to handle and must be specially supported when they are retrieved in stackareas, made available for research use, or carried to other parts of a building for photography or other purposes. To reduce the possibility of damage, they should never be carried loose or unprotected. Satisfactory supports include oversize, heavyweight folders made from archival corrugated board that are specially constructed for transport. (See Supply List.)

Two people are often required to ensure safe handling and transport of oversize records.

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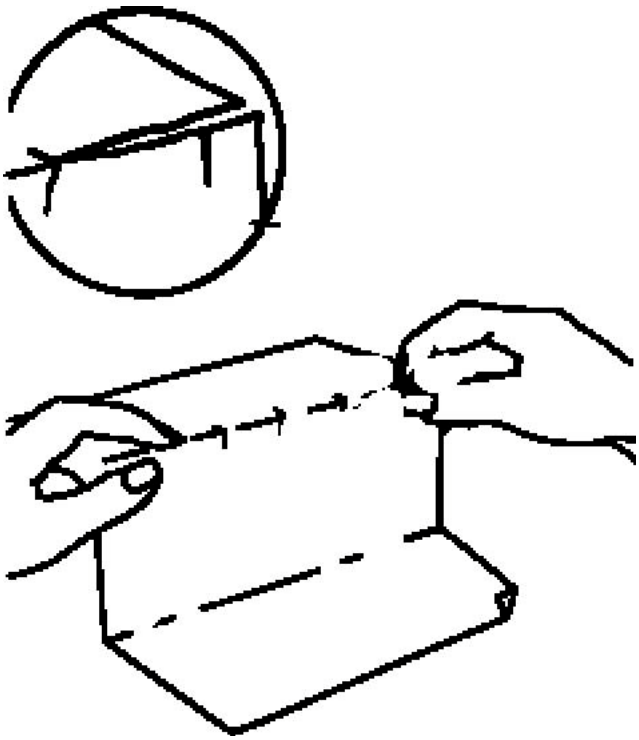
D. Folded and Rolled Documents

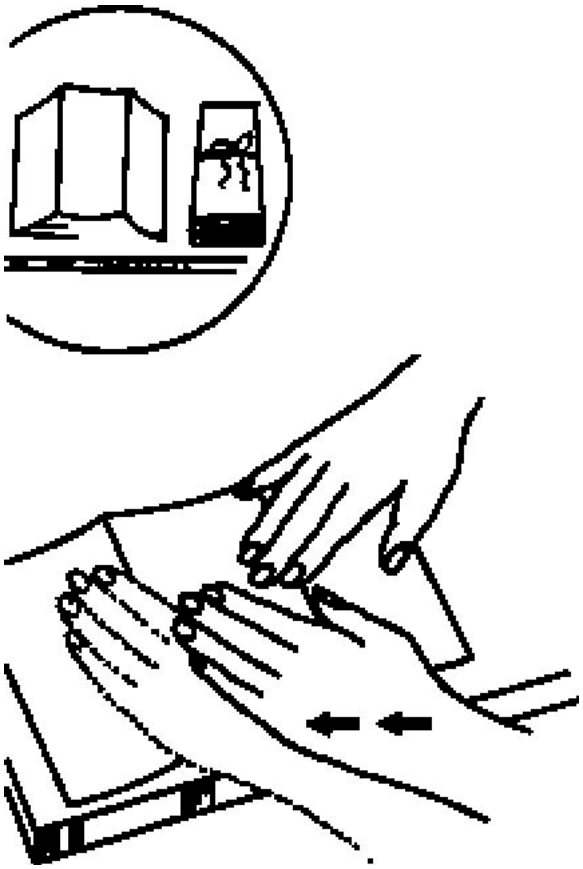
1. 1. Caution must be exercised when handling tightly rolled or folded records, especially if the paper is weak, stiff, or brittle.If such documents are forced open, they may break or tear. If records resist gentle attempts to open them, they should be left in their folded or rolled state until they can be safely humidified and flattened by a conservator.
2. 2. Folded documents may be carefully opened flat if the paper is strong and flexible and if it is clear that the documentswill not break or crack along fold lines during the process of opening them. Folded documents should never be back-folded in attempts to flatten them. Rather, a document should be opened on a table top and the crease gently smoothed flat with clean finger tips. (See Figure 3 and Figure 4.)
3. 3. No attempt should be made to humidify or press-flatten documents in a records storage area. Such treatment should bedeferred until records can be sent to a conservation laboratory, where it can be carried out safely with no damage to the documents. Records that appear to require conservation treatment should be noted and discussed with archival supervisors.
4. 4. Some rolled documents may be so large that flat storage is impossible. These documents must be rolled around aninterior support, such as a wide diameter acid-free tube, to prevent them from being crushed, torn, or otherwise damaged. The rolled document should then be wrapped with acid-free paper or tissue or a piece of polyester film to provide protection from dirt, light, and handling. The outer wrapper should be secured with a piece of cotton twill tape that is tied loosely enough to avoid crushing or crimping the document. Rolled documents should never be placed inside a tube for

Figure 3



Do not back-fold records along a crease or fold line in an attempt to open or flatten them; otherwise, weak, stiff, or brittle papers may tear, fracture, or break.

Figure 4



If folded paper records are strong and flexible ease them open on a flat surface. Once they are open, place them with the peaks of the folds facing up. Then gently smooth out the folds with clean hands. This technique will not flatten out the paper perfectly, but will permit the document to be placed in a file folder or polyester sleeve. Do not attempt to open folded records that resist this gentle action or that are stiff, brittle, or badly damaged Instead, leave the records folded, and plan to have them humidified and flattened under controlled and properly supervised conditions.

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E. Written Notations on Archival Records

1. 1. No marks or information should be written directly on archival records without authorization by supervisors.
2. 2. All authorized notations should be written as neatly and unobtrusively as possible, and they should be enclosed withinbrackets [ ] to indicate that the information was added by the archives rather than by the agency or person of origin.

3. 3. Any written notations recorded directly on archival records must be in graphite pencil (no. 2 or softer) and not in ink.Inked notations (and accidental markings) are often permanent and cannot be removed. Many inks are acidic; others are water-soluble and will bleed and run when exposed to moisture, such as that encountered in a water-related disaster.
4. 4. If ink is employed to stamp archival records with declassification notices, a non-acidic, non-bleeding ink should beused.

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Dusting

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F. Dusting

1. 1. Maintaining a clean storage environment is an ongoing responsibility that will do much to preserve archival records.Shelves, archives boxes, and the exteriors of bound volumes should be dusted as needed to prevent dirt from being transferred to records during handling.
2. 2. Great care must be exercised when dusting archival records that are brittle, fragile, or damaged. Bound volumes withloose covers, missing spine pieces, or delaminated covering material must be handled with special care as well.
3. 3. Before reboxing or refoldering archival records, the exteriors of storage boxes or envelopes should be dusted with a softcloth to avoid transferring dirt to documents during handling.
4. 4. Records that have not been protected by a closed container (such as those in wooden Woodruff boxes and some steelroller drawers or records resting on open shelves) should be lightly dusted with a soft brush before being placed in new, clean folders and boxes.
5. 5. Dust cloths should never be used to surface-clean or wipe textual records or photographs. Such action will work the dirtinto the paper fibers, abrade the surfaces of photographs, and possibly result in permanent damage. Dust cloths should be used only for wiping shelves and the exteriors of boxes or similar enclosures and bound volumes.
6. Documents that are dusty and dirty may be lightly dusted with a clean, soft brush of the same type recommended for

dusting photographs. (See Supply List.) Dusting should begin at the center of a document and extend out across its edges. Only documents that are in good condition should be dusted. Documents that are brittle or torn should not be subjected even to light surface dusting, since this action could cause or aggravate existing damage. Dusting only removes loose surface dirt and debris that have not become embedded in the paper; records with embedded dirt or stains that are obscuring textual information should be brought to the attention of a conservator.

6. 7. Photographs should be lightly dusted with a soft brush before they are inserted in polyester sleeves. (See section K Photographs, paragraph 2.)
7. 8. The exteriors of bound volumes should be dusted with a soft, dry cloth or brush to remove surface dirt that could betransferred to the pages during handling. The edges of volumes also should be dusted with a soft brush, making sure that the pages are held tightly together so that dirt will not sift into the interiors of volumes.
8. 9. Shelves should be cleaned before refiling storage boxes and bound volumes. It is meaningless to dust or replace boxesand clean bound volumes, only to reshelve them in a dirty environment. When cleaning shelves, work from the tops of shelves or compartments down to the bottom, to avoid transferring dirt from dirty to clean surfaces. To expedite dusting, it may be helpful to attach to book trucks small bags containing a supply of clean dust cloths. When shelves are extremely dirty, a damp cloth or sponge may be used effectively. Shelves must be completely dry before records are reshelved.
9. 10. Work areas should be kept clean. Dust cloths must be discarded when they become dirty, and brushes must be washed

with soap and water and air-dried on a regular basis to avoid transferring dirt from one surface to another. (See Supply List.)

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Scrapbooks and Albums

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J. Scrapbooks and Albums

1. 1. Scrapbooks and albums should be boxed and stored flat on shelves. Given their structure and the techniques used tomount items, scrapbooks and albums are often bulky and do not close tightly. For this reason, boxing is important to keep dust from sifting into the volumes. Flat storage also will keep loose items from falling to the bottoms of volumes, where they could become bent and damaged.
2. 2. Items that have become detached from scrapbook and album pages may either be placed in polyester sleeves andretained loose in their original file location or referred to a conservation laboratory for treatment. Loose items should not be re-adhered by archival staff using glue sticks, pressure sensitive tapes, or any other adhesives or fasteners.

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K. Photographs

1. 1. Photographic materials (prints and negatives) that are to be retained within files of textual records should be placed inpolyester sleeves. While good quality paper envelopes and sleeves provide appropriate storage for photographic materials in many situations, polyester film is more suitable in instances where photographs interfiled with textual records will be provided to researchers without gloves or other handling or viewing aids. Polyester film enclosures allow immediate visual access to images without the need for researchers to remove photographs as they must do from opaque paper enclosures. Polyester film also serves as a good barrier between photographic materials and adjacent textual records in the same file. The likelihood of photographs ferrotyping (i.e., taking on shiny patches, which sometimes results when gelatin comes into contact with a smooth surface under conditions of high relative humidity) in polyester film enclosures seems to be more a theoretical possibility than a reality in practice and the benefits of polyester film far outweigh the potential problems.

2. Ideally, each print or negative should be placed in an individual sleeve, and prints and negatives should be filed

separately. (See also section G, Damaged Records, paragraph 2.) Before they are sleeved, photographs should be lightly dusted with a soft brush. However, damaged photographs or those in poor condition (torn, with lifting emulsions, etc.) should not be dusted.

2. 3. Written notations on prints should be kept to a minimum. Any written notations that must be made on paper printsshould be lightly recorded on the back (in the border area) with a soft graphite pencil (no. 2 or softer). No attempt should be made to mark film negatives; rather, identifying information should be written on filing enclosures before the negatives are placed inside. Given the fact that it is not possible to write on polyester film, such sleeves containing negatives may be placed within paper envelopes, upon which necessary identifying information may be written in pencil.

3. 4. Fasteners used to affix photographs to one another or to textual records should be removed to avoid damaging emulsion(i.e., image) surfaces. Once photographs have been placed in polyester sleeves, they normally can be attached to paper records, if necessary, using stainless steel paper clips. In such cases, the photographs should be positioned within sleeves so that paper clips do not exert pressure on them.

4. 5. No attempt should be made to remove photographic prints from mounts, backings, or similar supports.

5. 6. Glass plate negatives, cased photographs (such as daguerreotypes), and other fragile or vulnerable formats requirecareful storage to protect them from damage or loss and to keep them from damaging adjacent paper records. A

photographic conservator should be consulted regarding storage and handling requirements of various photographic materials (including cellulose nitrate and cellulose diacetate negatives and color photographs), as well as for assistance in identifying unknown photographic media.

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Damaged Records

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G. Damaged Records

1. 1. Torn or exceptionally brittle records that are encountered during holdings maintenance activities should be placed inpolyester sleeves sealed along two adjacent edges to protect them during handling and to prevent further damage. Polyester sleeves must be larger than the documents being placed in them so that the records are fully enclosed and protected. Two or more sleeves should not be used in attempts to enclose a large document. Care also must be taken when inserting torn or brittle documents into polyester sleeves to avoid causing further damage.
2. 2. Polyester film generates static electricity. Therefore, to avoid alteration or movement of text or image areas, recordscontaining thickly applied, flaking, or loosely adhered media (such as charcoal, pastel, or damaged and lifting photographic emulsions) should not be placed in polyester sleeves.
3. 3. The sleeve should be placed on a clean desk or table before a document is inserted. Polyester sleeves must not be held inmid-air while documents are being placed in them. To help minimize the static electricity generated by the polyester film, the top sheet of film should be raised as far as possible (without lifting the bottom sheet) while the document is being inserted. When thin, tissue like documents are being sleeved, it is often helpful to position them on a support sheet of archival bond paper to help ease the documents into place. The paper support can be carefully removed after the sleeving operation is complete, or--if the document contains information on only one side--the support sheet can be left in the polyester sleeve to provide greater rigidity to the enclosure.
4. 4. Only one single-page document should be placed in each polyester sleeve. If several pages are placed together in asingle sleeve, researchers will try to remove them, and are likely to cause further damage to already fragile documents. Fasteners should be removed from multi-page documents that require sleeving, and each page should be sleeved individually. An exception to the single sleeving rule is presented by batches of photographs of low intrinsic value that are in good condition; groups of such photographs may be sleeved together to isolate them from adjacent textual records.
5. 5. If necessary, several polyester sleeves may be fastened together with a staple or paper clip to maintain records in theproper sequence. If this is done, documents should be placed within the sleeves so that the fastener comes into contact only with the sleeves, not the enclosed

records.
6. 6. Polyester sleeves should be used only on loose documents. Damaged pages in bound volumes should be protected bytying or boxing the volumes. Polyester sleeves are bulky and can damage binding structures if placed within volumes; they can also function as sharp edges against which vulnerable pages can break as they move and flex when the volume is handled. Volumes containing damaged pages should be scheduled for laboratory treatment.
7. 7. Documents should be oriented within polyester sleeves so that the two adjacent sealed edges are parallel to the left andbottom edges of the document. That is, when looking at the front of a sleeved document, the top and right edges of the sleeve will be open. This orientation assures the protection of the document during storage and handling, and minimizes the possibility of loose fragments falling out of the sleeve. Similarly, polyester sleeves should be placed in a folder with the long sealed edge positioned at the bottom of the folder.
8. 8. Damaged records should be noted in accord with appropriate record keeping practices in the custodial unit, withheldfrom research use when necessary, and scheduled for conservation treatment.
9. 9. Under no circumstance should various types of so-called archival or office pressure-sensitive mending tape be used toeffect repairs. These tapes do not meet conservation standards. Pressure-sensitive tapes disfigure and damage records.

While the aging behavior of different pressure-sensitive tapes vary, they frequently become discolored, cause inks to bleed, stain records, and locally embrittle or transparentize records. Removing pressure-sensitive tapes is not always possible or satisfactory because of the way in which the adhesive ages, the sensitivity of the media to the solvents required during treatment, or a combination of factors.

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Fastened Documents

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H. Fastened Documents

1. 1. No attempt should be made to separate documents that are held together by paper or wax seals or wafers, or that areadhesively attached with lines or dots of paste or glue. If such items must be separated to allow for the safe handling, use, or filming of the records, they should be sent to a conservation laboratory where the removal can be accomplished safely without

damaging the surface of the paper or losing written information. In some instances, a seal or wafer is integral to the integrity of a document and may contain important information and, therefore, should not be removed.

2. 2. Ribbon lacings or ties, which historically were used to unite sheets of paper and are sometimes associated with paper orwax seals, should not be removed.

3. 3. Metal slide fasteners (with a prong base, compressor, and two slide locks-such as Acco fasteners), office-quality paperclips and staples, rubber bands, spring or binder clips, straight pins, colored cloth tape, and similar devices used to unite permanently valuable archival records should be evaluated from a preservation perspective. Such fasteners often cause physical or chemical damage to records and should be removed when appropriate. Fasteners should be removed when records have high intrinsic value or are brittle, or when the fasteners have deteriorated and are causing obvious damage to records. Many metal fasteners rust, causing permanent staining and weakening of paper. Bulky fasteners, such as spring clips, can distort paper records and keep them from lying flat. Weak paper can break when it is flexed against the sharp, rigid edges of slide fasteners, paper clips, and similar devices, which function as cutting edges. Rubber bands lose their elasticity over time, become hard, and adhere to the surface of paper. Red cloth tape, often used to tie or wrap bundles of documents, can cause edges of brittle or weak paper to break; the red dye in the tape is also very water-soluble and can cause permanent staining of records in the event of a water-related disaster.

□.4. Stainless steel paper clips are the preferred fastener for holding archival records together, if the paper is strong and willnot suffer from the pressure of the clip. If stainless steel paper clips are used, small strips of archival bond paper (ca. 1" wide and 3" long) should be folded in half and placed over the top edges of the documents to serve as a support for the paper clip. (See Supply List.) Paper clips may be positioned at various points along the upper edge of documents, to avoid

□.excess bulk at corners and the lopsided distortion of folders. Plastic paper clips, though often made of a stable plastic, should not be used because they clamp too tightly and exert too much pressure on weak paper; they also break easily.

4. 5. Non-corrosive, rustproof staples are acceptable in instances when paper records are strong and flexible. They should notbe used on records of high intrinsic value or on records that are weak and brittle. Staples create small puncture holes in documents and since staples are removed and replaced periodically for photocopying or other purposes, a large number of holes can result, with the effect of weakening the paper. When staples are used, they should be positioned through strips of archival bond paper as described above, to help support and protect the documents.(See Supply List)

5. 6. Strips of archival bond paper serve a useful function in addition to the primary goal of protecting weak paper. Use of thestrips in conjunction with a fastener signifies that the paper clip or staple employed meets archival standards and does not have to be replaced. This becomes increasingly important with the passage of time as institutional memory fades, since it is often impossible to differentiate between office and archival quality fasteners on the basis of visual inspection.

□.7. In some instances, paper records are too fragile to safely bear the pressure of either paper clips or staples. In such cases,

□.groups of records should be maintained together through the use of folders or folded interleaving sheets (made of archival bond paper) placed within folders.

6. 8. Fasteners should never be placed on photographs, posters, or original art work, as they

can permanently damage theimage layer.

7. 9. In some instances, fasteners, such as grommets, may be so firmly embedded in the paper that it is best to leave them inplace. Attempts to remove such objects may result in a great deal of damage to the surrounding paper. If embedded or strongly-adhered fasteners must be removed for microfilming or other purposes, the records should be sent to a conservation laboratory where removal can be effected safely.

8. 10. Great care must be exercised when removing old fasteners to avoid damaging paper records. Fasteners that have rustedor become strongly adhered to paper surfaces must be gently lifted; before removal, the line of contact between the paper and any incrusted rust must be broken. (See paragraph 13.)

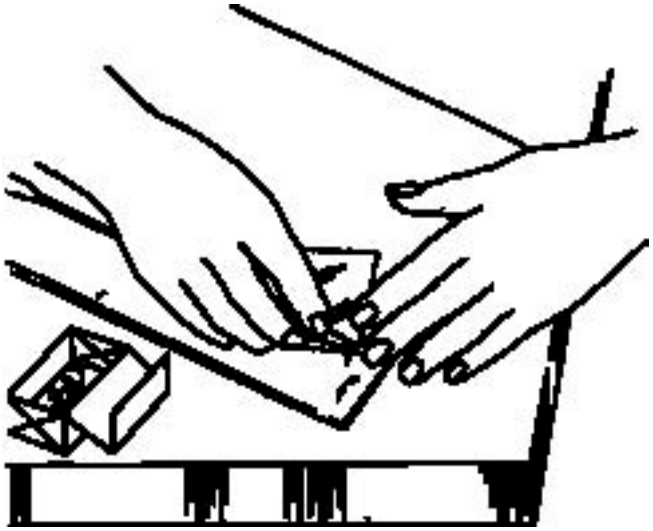
9. 11. When removing fasteners, the document should be fully supported on a table, and one hand should be placed on thedocument to hold it in position and support the paper while the fastener is being removed. If the procedure is conducted in mid-air, documents are likely to be torn and damaged.

10. 12. Staple removers should not be used on fragile or brittle documents, as they they easily remove an entire weak or brittlecorner with the intended staple. A staple remover can be used with care, however, on paper that is strong and flexible; this is often a practical necessity when faced with masses of archival records needing processing. When using a staple remover, the document must be supported flat on a table top. The staple remover should be used from the back to lift the shanks of the staple. Once opened, the staple should be carefully removed from the front.

11. 13. A microspatula should be used to remove fasteners from documents that are weak, thin, or brittle. Working from theback, a microspatula can be used to carefully lift the shanks of staples or similar metal fasteners, as well as paper clips. (See Figure 5.) As a precaution, it is advisable, when possible, to slip a small piece of polyester film under the staple

before removing it, to prevent the microspatula from slipping and cutting into the paper. Encrusted rust, which could impede removal of a fastener, should be removed mechanically if possible, carefully using a microspatula to gently chip away at the rust to break the line of contact with the paper. Hardened and encrusted rubber bands also can be removed in this fashion. Any flicking or lifting motion to remove encrusted particles from the surface of paper must be undertaken very cautiously to avoid tearing the sheet or skinning the surface of the paper.

Figure 5



When removing staples, keep the document flat on a table surface and do not allow it to hang over the table edge. Hold the document firmly in position with a clean hand to keep it from shifting. Working from the reverse of the document, place a small strip of polyester film under the staple to protect the surface of the paper from being torn or abraded. Carefully insert a microspatula under one shank of the fastener and gently lift it. Similarly, lift the other shank. Then turn the document over and remove the staple. Place the staples removed in a small container to prevent them from inadvertently puncturing other documents.
14. Paper cups or similar receptacles should be used to collect all fasteners as they are removed. This practice preventsaccidental damage that may result if records are placed at a work station covered with fasteners and miscellaneous debris.

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Bound Volumes

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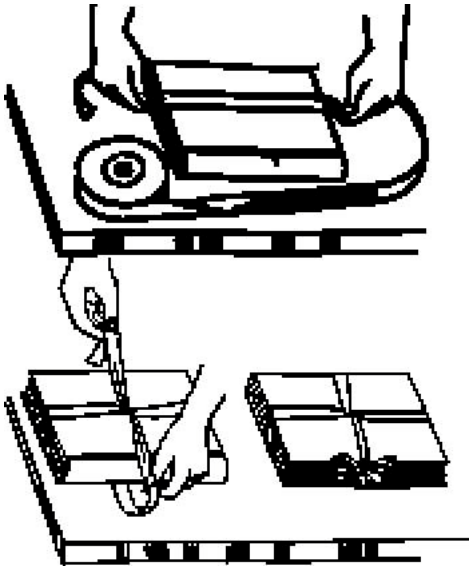
I. Bound Volumes

1. 1. Minimally bindings that are broken or weak should be tied with white, flat, cotton twill tape to keep the covers andspine pieces from being separated from the textblocks. A volume should be tied so that the bow or knot is positioned across the fore edge (opposite the spine)

rather than on the front or back cover, so that the resulting "bump" will not interfere with good shelving practices. The volumes should be tied securely (but not so tightly that distortion results), with the tape flat as it wraps around the volume. The cotton twill tape should be tied so that it can be easily untied (without being cut) and reused. (See Figure 6.)

2. 2. Boxing is an alternative for damaged volumes that provides greater protection than does tying. Bound materials that arevaluable and/or in poor condition should be scheduled for boxing and/or repair. A variety of phased and drop-spine boxes can be constructed or purchased, the type of box depending on the value and condition of the bound materials. Supervisors should be consulted regarding the need for laboratory treatment or boxing of bound records.

Figure 6



Tie weak or damaged volumes with white cotton twill tape as an interim preservation measure. Roughly measure the twill tape by eye so that it is approximately twice the length, width, and thickness of the volume. Wrap the twill tape around the length of the volume, cross it over on itself on the front or back cover, wrap it around the width of the volume, and then tie it across the fore edge. Tie the twill tape securely, but not so tightly that the volume is distorted or crimped at the edges. Make sure that the twill tape lies flat on all binding surfaces.

1. 3. Ideally, large, heavy volumes should be shelved horizontally rather than vertically, as this method of storage providesgreater protection and support for textblocks and binding structures. When possible, shelves should be adjusted so that oversize bound materials are stacked no more than three or four volumes high, depending on their thickness, to expedite safe retrieval and reshelving and to avoid the possibility of stacked volumes toppling. Oversize volumes in poor condition and those having high intrinsic value should be given priority for flat shelving.

2. 4. Non-record, loose, acidic inserts such as place markers or cross-reference forms are often left in bound volumes formany years, with the result that text pages can become stained and damaged. When encountered, such inserts should be evaluated to determine whether they are still pertinent. If they contain important archival information, either they should be reproduced

onto archival bond paper or the information they contain should be hand-copied onto stable paper or card stock. Staff should consult with supervisors before removing, copying, or discarding any inserts or enclosures.
3. 5. When bound records are dusted, textblocks should be held tightly closed to avoid damaging page edges or working dirtinto the interior of the volumes.

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Preservation Photocopying

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L. Preservation Photocopying

1. Systematic paper-to-paper copying of series or groups of archival records for preservation purposes should be made on
electrostatic copy machines using archival bond paper. (See: Archival Copies of Thermofax, Verifax, and Other Unstable Records)
2. 2. Caution must be exercised to ensure that records are not damaged, torn, or broken during photocopying. In mostinstances, loose archival records should not be run through automatic feed devices; records that are in poor condition (which generally will be the case when preservation photocopies are made) and/or on tissue stock are especially vulnerable in such situations. Damaged or fragile records that have been placed in polyester sleeves for physical protection should not be removed from sleeves before they are photocopied. Fasteners should be removed before copying to avoid having corners or top edges break off as pages are repeatedly folded back. Bound volumes should not be forced flat on copying surfaces; if bindings or their contents will break or suffer damage during electrostatic photocopying, another copying method should be chosen, such as still photography or microfilming.
3. 3. No attempt should be made to copy oversize records and bound volumes on photocopy machines with small copyingsurfaces. Records will be damaged as they are manipulated to piece together a complete image. Other options, including still photography, microfilming, and photostatting, should be explored for copying oversize records.

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M. Unstable Copies

Many early reproduction processes are unstable because of the quality of the paper stock used,

problems with the inks and chemicals used during processing, and poor fixing of the image to the paper. Archival records created by Thermofax, Verifax, mimeograph, ditto, and early xerographic processes are often very fugitive and should be copied onto archival bond paper. Consult a conservator or photographic technologist for assistance in identifying copies created by various processes.

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