

HOW DO YOU PRESERVE AND STORE GOVERNMENT RECORDS?

Preserving and storing your records properly will not only add value to your collections, but will also allow you to better serve those who request access to your holdings. Good preservation and storage practices should be based on common sense, and you should use the best resources available to you. The Minnesota State Archives as well as many other archives around the country follow the practices described in this chapter.

In this chapter you will learn the important basics of storage environment and location, offsite storage, storage supplies, records retrieval, and the proper management of restricted records. You will also be presented with valuable information on preserving and storing all forms of records media, including paper, magnetic, photographic, and electronic media.

What are the preservation and storage issues common to all types of government records?

The most important issues you need to consider when preserving and storing your collections have to do with the quality of the storage environment and location. Other issues you should consider relate to use of offsite storage space, storage and handling supplies, ease of records retrieval, and access to restricted records.

Storage Environment

One of the most important issues you need to address when storing your government records is the stability of your storage environment. Maintaining a stable temperature and relative humidity, as well as protecting your collections from water and direct light, will greatly increase the quality and life of your collections. Use the State Archives' *Storage Checklist*¹ to help evaluate the storage conditions at your facility.

The ideal storage area has an environment that is maintained at a constant 65-70°F and 45-50% relative humidity. If you are unable to maintain such an environment, however, try to keep the temperature and relative humidity as constant as possible. Maintaining a constant temperature of 75°F and a constant relative humidity of 60% is better than allowing the storage environment to vary. Because of Minnesota's seasonal changes, you should have adequate control over the storage environment to avoid a storage area that is cold and dry in the winter and hot and humid in the summer.

Water poses a threat to the stability of your collections, for not only can water directly damage your collections, but it can also create a moist environment that promotes the growth of mold. In general, avoid storing your collections near water pipes. Arrange storage shelves and aisles so

¹ Minnesota Historical Society. *Storage Checklist*. State Archives Department. March 19, 2003.
http://www.mnhs.org/preserve/records/docs_pdfs/recordservices/stgchecklist.pdf

that any water pipes are located over the aisles, not the shelves. Also, try to avoid storing your collections in rooms that are below other rooms containing water pipes.

Try not to store your collections in basements and attics, as these areas are often poorly insulated, and are, therefore, very susceptible to water and weather-related damage. Avoid storing your collections directly on the storage room floor. This will help prevent collections from being damaged by any water that pools or floods. Keep your collections off the floor by storing them on shelves or on pallets if space permits. You can create simple and inexpensive shelving by using bricks and boards.

Properly maintaining the roof, windows, and foundation of your storage building is another means of maintaining a stable storage environment. This will minimize the possibility of weather-related damage to your collections.

Direct light, natural and artificial, can have an impact on the stability of your collections. Not only can direct light fade documents and artifacts, but it can also increase the temperature of your storage room. To reduce the amount of direct light in your storage areas, you can:

- Store collections in rooms that have no windows.
- Cover windows with shades or blinds.
- Turn the lights off when the room is not in use.

Storage Location

Another important consideration when storing your collections is the location of your storage areas. When evaluating building space for storage, you need to consider these issues.

Ease of Records Retrieval. The best location for storing your collections will allow you to easily retrieve records when they are needed. See the section entitled *Records Retrieval* later in this chapter.

Adequate Structural Support. Your storage area should be able to structurally support large quantities of boxes and artifacts. Items can be very heavy, and by locating them on weight-bearing floors, you can ensure that structural damage to the building, such as sagging floors, does not occur.

Available Space. When selecting a storage location for your collections, you should consider future storage space needs as well as current needs. It is best to use one large room for your collections, and the room should provide plenty of open area for future storage. As your collections grow, it will be much easier to maintain one storage environment rather than the environments of several closets or smaller rooms.

Ease of Maintenance. Select a location that is easy to maintain and clean. Limit non-collection items, such as trash and food, in the storage area to help prevent clutter and pests. A clean and open space will also make record retrieval easier. Limiting dust will protect your collections from damage caused by dust accumulation and small insects.

Effective Security. Keep building security in mind when selecting a storage area for your collections. You should also consider the security of your records by monitoring their use. The following tips provide guidance on keeping your collections secure:

- **Follow local fire and building codes.**
- **Perform routine maintenance and keep your building in good repair.**
- **Keep your storage areas separate from public areas.**
You can use controlled entrances, “Restricted” or “Staff Only” signs, or areas that are separate from public areas to keep your collections secure. Also, use staff and volunteers to monitor access to restricted areas.
- **Allow only staff or volunteers to retrieve records, and monitor the use of records.**
Allowing only staff members to retrieve records gives you greater control over the use of your collections. Your staff should also supervise researchers as they use the records they have requested. Some historical societies monitor the use of records, providing valuable information on future research needs.

Offsite Storage

Many organizations turn to offsite storage when space in their main storage facility becomes limited. Although you might feel reluctant to use offsite storage, it is an excellent option for storing certain types of records. You might want to consider offsite storage for records such as master copies, copies of inventories and collection locators, disaster plans. Offsite storage can keep your most important records safe in case your main storage facility is damaged. Infrequently used collections and records can also be kept offsite as the need for access is limited.

You should keep in mind that the records and collections you store offsite are as important as those stored in your main facilities. Therefore, all storage recommendations discussed in this chapter, particularly those having to do with storage environment, location, and security, apply to offsite storage areas as well. If you are thinking of using offsite storage, it is important to consider these questions:

- How far away is the offsite storage location?
- How will you record and inventory the offsite records?
- Who will keep the offsite storage area clean and secure?
- Who will retrieve the records?
- What means of transportation will you use to retrieve offsite records?
- How long will researchers have to wait for records?
- How often will you need to visit the offsite storage area?
- How secure is your offsite storage area?

Storage and Handling Supplies

Certain supplies can make record preservation, storage, and handling more convenient and can improve the life of your collections. We suggest using these supplies:

Boxes	Use boxes for preventing light and dust from damaging records. Box sizes should be limited to one or two for space economy. Try to limit the filled box weight to a maximum of 40 pounds to avoid personal injury when handling them.
Folders	Use folders for organizing records and making record retrieval easier. Folders are available in letter and legal size.
Pencils (not pens)	Use pencils for labeling and documenting. Pens should be avoided since ink can fade, bleed, and cause unwanted marks on valuable records.
White gloves	Use white gloves for protecting you and your collections. Use them for handling film, photographs, negatives, and dirty items.
Shelves	Use shelves to protect and provide easy access to records. They should be tall and deep enough to accommodate the box sizes you use. Metal shelves are preferred over wood shelves since the pitch, resin, acids, and gasses in wood can leach out and damage your collections. If you use wood shelving, be sure to seal the wood thoroughly. You might need to purchase access equipment such as stepstools, ladders, and forklifts to reach items on upper shelves.

You can purchase archival supplies from a number of suppliers in the United States. (The Minnesota Historical Society does not endorse any particular supplier.) Here are a few suppliers you can contact for more information:

- Conservation Resources International, LLC²
- Gaylord³
- Hollinger Metal Edge⁴
- University Products, Inc.⁵

Record Retrieval

It is essential to be able to retrieve records accurately and efficiently. A well-designed retrieval system can help you accomplish this, and can pay for itself in a very short period of time by

² Conservation Resources International, LLC. *Home Page*. <http://www.conservationresources.com>

³ Gaylord. *Home Page*. <http://www.gaylord.com>

⁴ Hollinger Metal Edge. *Home Page*. <http://www.hollingermetaledge.com/>

⁵ University Products. *Home Page*. <http://www.universityproducts.com>

freeing up your staff for other duties. First, store your records in an accessible storage area and in a manner that they can be easily reached. Second, maintain a well-designed retrieval system that uses box labeling and location inventories to help you locate boxes and know their contents. You can label your boxes in a couple of ways:

1. Label boxes with numbers and maintain a separate, corresponding content inventory, or
2. Include pertinent information about the box contents on the box label itself.

The information you record on the box or in the inventory might include the title or type of records or contents; date span or date of creation; records creator; records or collection source (donor); destruction date, if applicable; and access restrictions (public or private). For example, a box of birth records might be labeled like this:

Birth Records, 1875-1925
Department of Health
Permanent
Private

Or, a box of city council minutes might be labeled like this:

St. Paul City Council Minutes, 1998-2000
St. Paul City Council
Permanent
Public

Keeping a location inventory in the form of a map, index, or shelf list will allow you to locate boxes easily.

Restricted Records

Being a good public servant means providing users with the information they request as quickly and as efficiently as possible. It is equally important, however, to avoid possible legal problems and embarrassment by preventing access to restricted records. For this reason, it is important for you to clearly note access restrictions on your storage boxes, making it easy for you and your staff to follow the policies regarding restricted records. The policy on restricted records has been established by the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13⁶.

How should you preserve and store volumes and oversized documents?

In general, paper records are best stored in boxes. However, some paper-based materials might be of a size or packaged in such a way that makes box storage impractical. For this reason, you need to specifically address issues regarding volumes and oversized paper documents.

⁶ Minnesota Office of the Revisor of Statutes. *2008 Minnesota Statutes: Chapter 13. Government Data Practices*. <https://www.revisor.leg.state.mn.us/statutes/?id=13>

For example, you may need to store oversized documents such as maps, blueprints, posters, and architectural drawings, and they can be very inconvenient to store. These can be stored flat in large boxes, drawers, or on shelves in oversized folders (try not to make the folders too full or they might become too awkward to handle). Other options include using special containers if you need to store rare, valuable, and damaged volumes. These containers can be obtained from a number of suppliers such as those listed above or made in-house.

Documents can also be rolled. When using this method be sure to sandwich the documents between protective inner and outer layers, keeping the documents from resting directly on the tube and protecting them from the storage environment. Use fabric ties or string rather than rubber bands to hold the roll together (rubber bands can cause the documents to wrinkle and tear). Store rolls side-by-side rather than by stacking, as the weight of the rolls can easily crush the documents you are trying to protect. If you use a storage tube for housing documents, use a tube that is longer than the documents to keep the ends of the documents from wrinkling or tearing.

How should you preserve and store non-paper records?

The preservation and storage issues discussed so far apply to all types of records, whether they are paper or non-paper records. Certain record types such as microfilm, audio/visual, and electronic records (all referred to as *records media*), however, have special storage issues that you need to consider. And given their high susceptibility to damage, it is very important that you adopt special storage practices when storing records media. Some of the storage issues that all records media have in common are listed below.

You will need specialized equipment for records media.

Equipment, such as playback machines, computers, and headphones, can be space consuming, and might require a separate area for use by staff and researchers.

You will need to maintain your records media equipment.

Records media are particularly susceptible to dust, dirt, and scratches, and you will need to regularly clean and maintain the equipment and equipment rooms. Overtime, equipment may also become obsolete.

You will need to inspect your records media regularly.

Inspect samples of the media (audio and video cassettes, microfilm, and electronic records) annually for damage to records and machines and to make sure the media continues to work properly. If you find damaged media, you should migrate the record data to a new copy immediately. If you have recently upgraded a machine, be sure to test a sample of the medium on the new machine to be sure you can still read the old data.

Make copies of records media for regular use.

Store masters of records media in a safe location and make copies for everyday use. Someday you might need to make new copies or migrate data, in which case a reliable master is essential.

You should periodically migrate records media data.

To ensure that you can access old data, migrate records media to new media every five to ten years, depending on the media's expected lifespan. This also keeps you up to date with the latest standards in hardware and software.

You might need to adjust your storage environment for records media.

To increase the life expectancy and color stability of microfilm and audio/visual records media, consider lowering the storage environment temperature and relative humidity an additional 10°F and 10%, respectively.

You will need to budget for additional costs.

If you expect to use and acquire records media, be sure that your budget includes costs for equipment purchase and maintenance, data migration, new media, and environmental controls.

In addition to the common issues just discussed, specific types of records media have their own unique storage requirements.

Microfilm

Microfilm is commonly used in government offices and historical societies. When storing microfilm, mount it on stable reels and cores, and check the reels regularly to ensure that they are not falling apart and damaging the film. Store the film upright in storage containers such as boxes, cabinets, or drawers that protect the film from light and dust, and label the containers as you would storage containers for other media. Always rewind microfilm before you store it.

Audio/Visual Materials

Audio/visual materials include audio tapes, video tapes, film, photographs, and negatives. Because these records provide a unique witness to government activities by allowing us to see and hear government in action, it is important to know how to preserve these records properly.

In most instances audio/visual materials are protected in cases or on reels. Despite their protective casings, it is still possible to directly contact these media, and oils and dirt transmitted from human contact can add to their deterioration. Therefore, it is wise to wear gloves when handling this type of media, especially when working with film, photographs, and tape when they are out of their casings or off their reels. Keep these materials out of light to avoid heat damage and image fading.

Label all audio tapes, video tapes, and reel film with a date, title, length, creator, type of film or hardware brand, and location. It is best to store audio tapes, video tapes, and reel film vertically so that the tape in the cassette is resting suspended on its spool. Storing these records media horizontally causes the tape or film to rest on its edge, and might bend or warp the tape or film. You might want to consider removing the safety tabs on the cassettes to prevent accidental erasure of data. Be sure to rewind tapes before storing them.

Photographic materials have their own special storage requirements. When storing these media, store them individually in folders or envelopes. To help preserve the image, label the storage envelope rather than the photograph or negative itself. If possible, keep the original photograph in a safe storage area and use a copy of the photograph for exhibit displays.

Use as much identifying information as possible for labeling. Images that are identified are far more valuable than those that are not. Determine as much information as possible from the photograph or negative and include this information on the label. Label information might include photographer, subject, date, names, location, and donor.

Use special folders and storage support if required. Damaged or disintegrating photographs and negatives, as well as glass plate negatives, daguerreotypes, ambrotypes, and tintypes might require special storage folders and support. Evidence of photograph and negative disintegration includes cracking, breaking, buckling, shrinking, changing colors, and odors. You should use separate, nonplastic enclosures for each photograph or negative that is flaking or disintegrating (deteriorating photographic materials can stick to plastic enclosures). Store glass plate negatives upright and in individual enclosures; label the enclosures *Heavy* and *Fragile*.

The Minnesota Historical Society has more information on preserving and storing photographic material:

- “Basic Care of Photographic Materials, Part I”⁷
- “Care of Photographic Materials, Part II”⁸
- “Storage of Glass Plate Negatives”⁹

Additional resources:

- Caring for Your Family Archives Frequently Asked Questions, National Archives and Records Administration (NARA)¹⁰
- The Rochester Institute of Technology, Image Permanence Institute¹¹: A university-based, nonprofit research laboratory devoted to scientific research in the preservation of visual and other forms of recorded information. The web site offers publications covering the storage, care, and identification of photographic materials. The IPI also provides guidelines for film preservation.

Electronic Records

Government agencies and historical societies are constantly creating, using, and storing electronic records. While the best place to store your electronic records is on a backed-up hard

⁷ Wilson, Bonnie. *Tech Talk: Part One: Basic Care of Photographic Materials*. Minnesota Historical Society *Interpreter*. May 1998. <http://www.mnhs.org/about/publications/techtalk/TechTalkMay1998.pdf>

⁸ Wilson, Bonnie. *Tech Talk: Part Two: Care of Photographic Materials*. Minnesota Historical Society *Interpreter*. July 1998. <http://www.mnhs.org/about/publications/techtalk/TechTalkJuly1998.pdf>

⁹ Herskovitz, Robert. *Tech Talk: Storage of Glass Plate Negatives*. Minnesota Historical Society *Interpreter* July 1999. <http://www.mnhs.org/about/publications/techtalk/TechTalkJuly1999.pdf>

¹⁰ The National Archives. *Caring for Your Family Archives*. <http://www.archives.gov/preservation/family-archives/>

¹¹ Image Permanence Institute. *Home Page*. Rochester Institute of Technology. <http://www.imagepermanenceinstitute.org/>

drive or a network server, if you choose to use removable media such as CDs, DVDs, or magnetic tape, physical storage conditions become very important.

To avoid warping, store disks vertically in boxes or cases, and do not subject disks to pressure. Store compact discs in their jewel cases to prevent scratching and breaking.

Be sure to document the records adequately. When documenting the contents of electronic media, include information such as the system, hardware, and software used for creating the record; the date created and date modified; the name of the creator and the modifier; and any access restrictions.

For more information on electronic records, see *Chapter 4* of these guidelines (*What are the issues regarding information technology and electronic records?*). The Minnesota State Archive's *Electronic Records Management Guidelines*¹² is also very helpful.

Where can you get more information on preserving and storing government records?

Minnesota Historical Society, Conservation Department¹³

This web page provides information on book repair, photograph preservation, and caring for water-damaged items.

Minnesota Historical Society, Conservation Department, Lending Library¹⁴

This web page contains the bibliography of the Conservation Lending Library. This library is maintained by the Conservation Department, and library items are available for loan to cultural organizations free of charge. The books, articles, and videotapes contained in this library cover topics such as general preservation, environment, storage, disaster preparedness/recovery, security, pest management, and the conservation of specific records such as paper, photographs, and books.

Minnesota Historical Society, State Archives¹⁵

This web page contains information on disaster preparedness including prevention, plans, recovery, and links to resources with more information.

Minnesota Historical Society, State Archives, Storage Checklist¹⁶

This checklist is a tool to evaluate the storage conditions of your facility.

¹² Minnesota Historical Society. *Electronic Records Management Guidelines*. State Archives Department. March 2004. <http://www.mnhs.org/preserve/records/electronicrecords/erguidelines.html>

¹³ Minnesota Historical Society. *Conservation Home Page*. Conservation Department. <http://www.mnhs.org/preserve/conservation/index.html>

¹⁴ Minnesota Historical Society. *Conservation Lending Library*. Conservation Department. <http://www.mnhs.org/preserve/conservation/library.html>

¹⁵ Minnesota Historical Society. *Disaster Preparedness*. State Archives Department. <http://www.mnhs.org/preserve/records/disaster.html>

¹⁶ Minnesota Historical Society. *Storage Checklist*. State Archives Department. March 19, 2003. http://www.mnhs.org/preserve/records/docs_pdfs/recordservices/stgchecklist.pdf

Minnesota Historical Society, State Archives, *Preserving and Disposing of Government Records*¹⁷

Developed for Minnesota government agencies, this overview of the basic principles of records management includes chapters on preserving archival records, defining a government record, taking inventory of your records, developing records retention schedules, disposing of records, and setting up a records storage area. A list of resources for more information is included, as well as information about applicable state law regarding electronic records management. Originally published by the Minnesota Department of Administration in July 2000, the guide was updated jointly by the Minnesota Historical Society and the Minnesota Government Records and Information Network (MNGRIN) in 2008.

National Archives and Records Administration¹⁸

This site offers technical information, answers to FAQs, and provides many valuable links related to preservation, paper records, and records media.

Conservation OnLine (CoOL)¹⁹

CoOL specializes in the preservation and conservation of paper-based materials and records media, and offers numerous resources on and links to related topics.

Northeast Document Conservation Center (NEDCC)²⁰

The NEDCC specializes in the preservation and conservation of paper-based materials and records media, and offers numerous resources on and links to related topics.

Ogden, Sherelyn, ed. *Preservation of Library & Archival Materials: A Manual*. 3d ed. 1999²¹

This manual contains information on the preservation and conservation of paper-based materials and records media. It is available in print as well as online. The online version is on the Northeast Document Conservation Center webpage and is organized by topic as Preservation Leaflets. These leaflets have been updated as recently as March 2007.

Association of Moving Image Archivists (AMIA)²²

Association of Moving Image Archivists is a non-profit professional association established to advance the field of moving image archiving by fostering cooperation among individuals and organizations concerned with the collection, preservation, exhibition, and use of moving-image materials.

¹⁷Minnesota Historical Society. *Preserving and Disposing of Government Records*. May 2008.

http://www.mnhs.org/preserve/records/docs_pdfs/PandD_may2008.pdf

¹⁸The National Archives. *Preservation an Archives Professionals*.

<http://www.archives.gov/preservation/index.html>

¹⁹Conservation Online (CoOL). *Resources for Conservation Professionals, Home Page*. August 14, 2009.

<http://palimpsest.stanford.edu/>

²⁰Northeast Document Conservation Center. *Home Page*. <http://www.nedcc.org/home.php>

²¹Northeast Document Conservation Center. *Preservation Leaflets*.

<http://www.nedcc.org/resources/leaflets.list.php>

²²AMIA The Association of Moving Image Archivists. *Home Page*. <http://www.amianet.org/>

Conservation Center for Art and Historic Artifacts (CCAHA)²³

The Conservation Center for Art and Historic Artifacts is a non-profit regional conservation laboratory specializing in the treatment of art and historic artifacts on paper. The CCAHA web site offers treatment services, information on surveys and consultation, publications, and disaster services.

Library of Congress, Caring for Your Collections²⁴

Caring for Your Collections, a link from the Library of Congress Preservation web page, provides information on the preservation of several media, disaster recovery guidelines, and links to other preservation web resources. Also available are Frequently Asked Questions, publications, and workshop information.

Preservation and Storage, State Library of Victoria, Australia²⁵

The State Library of Victoria offers information sheets on the following topics: packing and storing books, pest control, dealing with mould, storing paper and newspapers.

Society of American Archivists (SAA)²⁶

The following resources as well as others are available in print from the SAA bookstore:

Forde, Helen. *Preserving Archives*. UK, Facet Publishing, 2007.

Gorman, G. E., and Sydney J Shep. *Preservation Management for Libraries, Archives and Museums*. UK, Facet Publishing, 2006.

²³ Conservation Center for Art and Historic Artifacts. *Home Page*. <http://www.ccaha.org/>

²⁴ Library of Congress. *Preservation*. April 30, 2009. <http://www.loc.gov/preserv/>

²⁵ State Library of Victoria. *Information Guides*.
<http://www.slv.vic.gov.au/services/conservation/guides/index.html>

²⁶ The Society of American Archivists. *Home Page*. <http://www.archivists.org/>